

## Building New Insights Out of Heritage Through Interdisciplinary Collaboration

At the 2023 AIUla World Archaeology Summit, hundreds of archaeologists and interdisciplinary experts gathered to discuss the past, present, and future of archaeology—including delving deep into discussions about how collaborating with experts outside the field can help carve out exciting new spaces for heritage in general and archaeology in particular in a world with countless challenges and competing interests.

In a world that is increasingly interconnected and under the pressure of competing interests, the place for archaeology can feel marginalised. It is often forced into the cracks and crevasses between urbanisation, agriculture, modern development, and other urgent contemporary considerations.

Finding a place for heritage—and a place for ruins—in the modern world is a challenge that archaeologists and interdisciplinary experts discussed during the first AIUla World Archaeology Summit, hosted in AIUla, Saudi Arabia. The concept of ruinscapes examines the material remnants of past societies, such as buildings, artefacts, and infrastructure, and works to understand their significance and value within the context of contemporary society. It also addresses the physical and emotional impacts on its practitioners.

Through this framework, we can explore the potential for a more holistic understanding of human history and its relevance to our current challenges. The idea of "life in the ruins" not only emphasises the need to study and interpret ancient civilisations, but also recognises the role of archaeology in contributing to the construction of new worlds in the face of present-day environmental, social, economic, and political issues.

It can be argued that there is a need to prioritise ruins that have a higher perceived value, such as those that provide unique insights into the past, offer potential economic benefits through tourism, or have a strong cultural and symbolic significance to a community or nation. Experts at the summit posed these compelling questions: How can archaeology ensure its ongoing relevance in the modern world? How can archaeologists decide what to prioritise—and what to preserve—in a world that has growing constrictions on space, land, funding, and attention spans? And how can experts in the field mitigate the toll that their work often takes on their own wellbeing?

Over the course of several days and extensive discussions, an underlying theme emerged in response to these inquiries: bringing interdisciplinary voices and perspectives into archaeological conversations can help guide and inform how the field evolves, and can give new meaning and insight to age-old archaeological sites, artefacts, and heritage. Interdisciplinary cooperation can help guide archaeological inquiries in meaningful directions, allow archaeologists to gain enlightening perspectives on how to prioritise their work, and help ease the physical and psychological stresses placed on those working in the field.

In fact, many participants in the summit recognised that archaeology already holds an innate capacity to be interdisciplinary. As Parker Nanzer, a student at Calvin University, explained, "Everybody knows what a doctor does, what a lawyer does. Everybody thinks of an

archaeologist as Indiana Jones. But if we could change that... explaining that it is multidisciplinary: chemistry, geology, art history, literature—anything can be part of archaeology, as long as you have a passion for the human story.”

Archaeology has a long history of embracing interdisciplinary approaches, integrating various academic disciplines into its research and methodology. From incorporating methods and theories from the natural sciences, social sciences, and humanities, to collaborating with fields such as anthropology, epigraphy, and history, archaeology has continuously expanded its scope and knowledge base to provide a more comprehensive understanding of the past and its relevance to the present.

Archaeology's understanding of past human responses to modern challenges provides valuable insights that inform present-day decision-making processes with a focus on sustainability and cultural sensitivity. Through an interdisciplinary approach, modern archaeology is exploring new methodologies and perspectives, collecting, and analysing new data points, and being pushed into new, meaningful directions—all of which are allowing the world to view heritage through a broader, more holistic lens.

## Applying Interdisciplinary Insights to Archaeological Sites and Relics

The processes and techniques employed by archaeologists when dealing with heritage sites and relics have been carefully refined over time. In the past, the field of archaeology has often followed familiar lines of questioning, leading to a consistent direction of inquiries. This observation can be made of many academic fields: work has the potential to be insular, seen primarily from the viewpoint of experts who are often deeply entrenched in the traditional value systems of their own field. Major developments in the world of academia often happen because people with new, different perspectives enter the conversation.

In the world of archaeology—as in other fields and disciplines—often the question of interdisciplinary integration is largely a question of, ‘who leads?’ As the University of Oxford’s Dr. Shadreck Chirikure framed it during a conversation at the summit, “Who has the power in interdisciplinary research? Archaeologist? Funder? Site owner?” Undoubtedly, archaeologists in the modern world must strike a careful and diplomatic balance between various interests—especially where local communities are concerned. “One of the mistakes that we make is to assume that people in their own villages and in their communities are waiting for us archaeologists to discover them,” says Dr. Chirikure. “So the first thing we need to do is to learn from those people... then we combine with what we have and cascade that into policy.” Encouraging local ownership and conservatorship of heritage sites is an important step to enable more collaborative work.

Within the world of academia itself, archaeologists are increasingly engaging in a wide range of interdisciplinary endeavours and inquiries. By integrating other disciplines into archaeological work—both in the field and in the lab—archaeologists are gaining incredible new perspectives on sites and relics that were thought to have been fully explored and analysed. Rather than

working in siloes, today, academics from diverse fields and backgrounds are joining forces to create unprecedented opportunities for collaboration. And the outcomes tend to be exceptionally rich and enlightening.

One example is the sub-field of bioarchaeology, which studies the flora, fauna, and human remains found at archaeological heritage sites. By engaging biologists, botanists, zoologists, osteologists, and experts in other related fields, archaeologists and their interdisciplinary partners are deriving meaningful new insights about the past from heritage sites around the world. In AIUla, Saudi Arabia, these collaborative efforts are actively enhancing our understanding of the region's ancient civilisations. The Dadan Archaeological Project, for example, analyses vegetal and animal remains in order to provide insights into the local biodiversity during the time of the Dadanite and Lihyanite civilisations, shedding greater light on the agricultural economy and diet of these civilisations and their populations. The multi-disciplinary Bioarchaeology in the Kingdom of Saudi Arabia (BAKSAU) team, commissioned by the Royal Commission for AIUla, comprises forensic anthropologists and specialists from Australia, Saudi Arabia, the United Kingdom, and the UAE. BAKSAU's most recent excavation season aimed to organise and study human skeletal remains at the AIUla Museum while participating in excavations and analysing skeletal material from burial sites across AIUla county.

Cultural anthropology is yet another field that offers extraordinary potential for meaningful collaboration. In an effort to imbue archaeological work with more anthropological context, especially when dealing with sites from the more recent past, experts have been taking a more community-inclusive direction in their work. At the summit, Dr. Tracy Ireland, Professor of Cultural Heritage at the University of Canberra, highlighted that much of the land on which archaeologists work in Australia was taken without treaty. Indigenous-led research has thus been a crucial move towards a more equitable and inclusive approach in archaeological study. According to Dr. Ireland, "This is when archaeologists go to a community and say, 'What do you want us to research? What questions do you have around the past that are important for your community going forward?' This has led to some of the most important recent archaeological discoveries," she explained.

The oral traditions and cultural practices passed down through generations provide a unique perspective on the history of a place and its people. By incorporating oral histories into archaeological excavations, researchers can validate and complement the data obtained through traditional archaeological methods.

Ethnoarchaeology is hardly a new practice. It goes beyond relying solely on material remains to provide a more comprehensive and nuanced understanding of the past. But incorporating oral histories into archaeological investigations is an innovative approach that enhances our understanding of the past by providing a more holistic and nuanced perspective.

Integrating oral histories adds invaluable depth and insight to archaeological excavations, like in AIUla's Old Town, where archaeological investigations have been enriched by the inclusion of local community members who share their knowledge, stories, oral histories, and other aspects of intangible heritage. In fact, Rawis (or storytellers) serve as local guides in the region, providing in-depth knowledge of its fascinating history.

Employing local guides can enhance the storytelling experience for visitors, providing unique insights into the region's cultural heritage and historical events. This approach supports local communities by creating economic opportunities for guides and preserving cultural traditions. It also aligns with responsible tourism practices, promoting cultural understanding and preserving the heritage of the area. By including these guides, tours can offer a more inclusive and respectful representation of regional history and culture.

Overall, the discoveries made by archaeologists contribute to our understanding of cultural and historical developments, allowing anthropologists to analyse and interpret the practices, beliefs, and social structures of past societies.

In a truly innovative collaborative effort, experts in AIUla have also engaged in studies that combine archaeology with cultural astronomy. Archaeoastronomy, as a sub-field of archaeology, examines ancient societies' perceptions of the sky and the influence of these perceptions on their culture, worldview, architecture, and monuments. The significance of spatial connections between land and sky highlights how cultural astronomers contribute new depth and insights to archaeological research.

A multidisciplinary team of astronomers, archaeologists, and heritage specialists recently conducted an archaeoastronomical fieldwork campaign in the AIUla valley and Hegra plain. The AIUla Archaeoastronomy Project, which commenced in February 2023, focused on studying the ancient Nabataean and Dadanite civilisations in Hegra and Dadan, respectively.

Historically, societies often attached profound cultural and religious significance to celestial bodies and their movements. By studying alignments of architectural features, rock art, and other archaeological evidence, cultural astronomers can decipher ancient societies' understanding and perceptions of the sky. This approach of studying cosmological belief systems enhances archaeological interpretation by providing a broader understanding of spiritual and cultural practices of past peoples.

The integration of diverse technologies is yet another way that archaeologists are bringing in outside perspectives. Technological advancements have revolutionised archaeology, allowing for more efficient data collection, analysis, and visualisation. Technologies like remote sensing, LiDAR, 3D scanning, photogrammetry, and GIS (Geographic Information Systems) are being applied in modern archaeological practices, and the possibilities they offer for a deeper understanding of a region's archaeological landscape are limitless.

Technology has transformed the way archaeologists approach their research and analysis. Remote sensing techniques, such as study of satellite imagery and conducting aerial surveys, provide ability to establish an overview of archaeological resource in a study area, allowing for better site selection for targeted ground surveys and excavations. LiDAR technology enables detailed mapping and visualisation of topographical features, revealing otherwise hidden structures and landscape modifications.

Furthermore, 3D scanning and modeling techniques facilitate the preservation and virtual reconstruction of archaeological artefacts and structures. This allows for enhanced analysis, interpretation, and dissemination of archaeological findings. The integration of technology into archaeological practice has significantly expanded our understanding of history and heritage.

3D modelling also plays a role in engaging and educating the public about the important archaeological findings made in AIUla County. For example, the advanced model constructed of Hinat—an ancient Nabataean woman whose remains were found in a tomb at Hegra—is on display at the Hegra Welcome Center to interact with visitors.

A knowledge session at the World Archaeology Summit explored how to bridge the gap between what technology can provide and what archaeologists need.

While some may see the reliance on technology as a threat to traditional archaeology, as Reem Al Alawi, a master's student at the Sultan Qaboos University in Oman sees it, technology also has the power to reduce "the impact of archaeology on destruction and [enable us to] gain more knowledge without even touching the soil."

The real challenge, of course, often lies in finding the balance between using technology and 'feeling' the soil. For example, using instruments like GPS, and portable precision compasses and clinometers to conduct research can help archaeologists collect the necessary data, without the need to carry out any excavation, leaving the landscape virtually unaltered.

## **Balancing Diverse Priorities and Interests with Archaeology in the Modern World**

In the modern world, archaeology must strike a balance with many other interests. Some of these interests are complementary, while others compete with archaeologists' goals of conservation and preservation.

For example, with fast-paced urbanisation and development happening around the world the tug-of-war between heritage and development can be extremely contentious. During the summit, Dr. Assaad Seif from the Lebanese University recounted his experiences with this struggle in the years after the Lebanese Civil War, and the need to toe this line between archaeological preservation and modern construction/urban development. In this context, the interdisciplinary applications of archaeology outlined earlier become even more crucial, in order to navigate the tensions between conservation and development.

Establishing and mandating robust legal frameworks is another important step when it comes to balancing the preservation of heritage with other interests and considerations. While international legal frameworks surrounding heritage preservation are fairly limited and somewhat toothless in terms of enforcement, according to Dr. Zaki Aslan, Founding Director of ICCROM-Sharjah, these laws have been steadily advancing. From the second half of the 20th

century onward, international conventions have steadily “expanded the definition and perception of heritage,” including both tangible and intangible heritage. Today, definitions of heritage include more than just antiquities: they include cities, underwater heritage, and even intangible cultural heritage—all of which are now widely considered worthy of preservation.

As Professor Toshiyuki Kono—Emeritus Professor of Private International Law at Kyushu University—explained, it is “extremely difficult to create international conventions with binding power.” He suggests that, on an international scale, a softer approach is necessary, such as establishing guidelines or principles that are promoted through diplomatic engagement and mutual cooperation.

Experts agreed that robust national legislation is urgently needed. As Dr. Aslan explained, “A national legal system gives continuity and stability for the protection and prevention of the fundamental changes of heritage from influences outside.” But pushing for national legislation requires archaeologists to step outside of their traditional roles, and into the world of policy. According to Professor Kono, “heritage experts need a capacity for consensus making”—engaging with diverse stakeholders in order to push for positive change. Professor Kono reminded audiences at the summit that heritage not only provides “cultural and historical value, but social value, too.” After all, preserving and protecting heritage is not only important for its intrinsic value, but also for the positive effects it can have on local communities and on society as a whole.

The importance of robust legal frameworks cannot be understated: Dr. Adnan Adas, Founder and Managing Director of Al-Maqsur Center for Urban and Architectural Heritage, argued that, in Beirut, establishing clear legal methodologies enabled the “integration of the past during development,” allowing urbanisation and cultural preservation to coexist harmoniously.

Of course, there’s no denying that heritage legislation is complex: translating discussions between public authorities, archaeological experts, and local communities into law is by no means a straightforward process. There will always be grey areas and communication challenges. But for Dr. Aslan, policies need help in the process of gaining political will: “[the real challenge is] how we can also make it happen from policy to legislation to practice. And this participatory approach is key.” This is where entities like Saudi Arabia’s Royal Commission for AlUla (RCU) can share their experiences and insights with archaeologists around the world, having brought together various heritage stakeholders to coexist within a single entity, all working towards the same, shared development goals.

#### Enhancing Archaeologists’ Wellbeing Through Outside Perspectives—and Enriching Other Disciplines Through Archaeology

There’s no question that a career in archaeology is far from traditional academic pursuits—and a considerable departure from the average office-based job. The complex lab work and rigorous field work of archaeology can be physically, mentally, and emotionally taxing. Archaeologists often work in challenging environments and conditions that put stress on the body. Meanwhile, the mental and emotional toll of dealing with delicate, irreplaceable relics—not to mention the added challenges of working at sites sometimes associated with tragedy and trauma of the local inhabitants—only compounds the difficulties faced by those working in the field.

During the AIUla World Archaeology Summit, archaeologists and other experts discussed many of these challenges, offering up a variety of solutions. In particular, many highlighted that taking a big-picture view of their work and its place in the modern world can help provide motive and a sense of purpose. As one practitioner explained, “It was all about motive for me... also, finding a need where you can bring some clarity to a situation—whether that’s archaeological, legal, heritage, or all three combined.”

Important ways to imbue archaeology with even greater resonance, meaning, and relevance in the modern world include looking at the ways that the field can inform work being done in other areas and disciplines or how it enhances the economic prospects of the local community.

Activities that encourage tourism—through the promotion of archaeological sites—help generate revenue and create job opportunities for local residents. The preservation and interpretation of archaeological sites can also stimulate the growth of related industries, such as heritage and cultural tourism, museum development, and archaeology-based education and research programs.

Archaeology, as an interdisciplinary field, has the potential to contribute to and shape other disciplines. For example, the impact of archaeology is evident in fields like public health, where understanding ancient diseases and medical practices can inform modern healthcare.

Furthermore, archaeology provides valuable insights into human-environment interactions, land-use practices, and responses to climate change throughout history. By analysing past cultural responses to environmental challenges, archaeologists offer insights for contemporary society. Sustainable land-use practices, resource management, and adaptation strategies can all be informed by the long-term perspective that archaeology provides.

Overall, interdisciplinarity can help to promote scientific and academic advancement, deepen our understanding of the world, and ultimately lead to more effective and sustainable solutions to complex problems. Importantly, interdisciplinary research can also facilitate the translation and dissemination of research findings across different fields and to the general public.

In order to create effective laws for heritage protection, it is important to involve the population in the decision-making process. Specifically, engaging with local communities allows for a different perspective that goes beyond academic or international viewpoints. This approach recognises the value of community knowledge and promotes a more inclusive approach to heritage preservation. And in the context of museums, Marika Sardar, Museums and Heritage Consultant, commented at the summit that, “working with our audiences is pushing our field and our scholarship in different directions.”

Collaborative efforts among experts from different disciplines allow for a comprehensive exploration of archaeological sites and the generation of new interpretations. It promotes a holistic understanding of the past and enhances the overall knowledge and scholarship in the field.

Interdisciplinary innovation has opened up new avenues for understanding the past and its implications for the present and future. The contributions of non-archaeologists, local communities, technology, and interdisciplinary approaches have advanced archaeological inquiry, providing valuable insights across various fields and disciplines.

These efforts will further advance our knowledge and lead to a more comprehensive understanding of our shared past and present. By examining past civilisations, we can gain insights into sustainable practices and social dynamics that are applicable today.

It is of the utmost importance to advocate for continued collaboration and innovation in future archaeological endeavors. Embracing interdisciplinary perspectives and involving diverse stakeholders in archaeology can lead to innovative solutions for contemporary challenges. The world's archaeological landscape can be further revolutionised, leading to a deeper understanding of our shared, rich human heritage.