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Pathways to Inclusive Digital Archaeological Archives

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Abstract

This article addresses the historical and ongoing exclusion of descendant and local communities, particularly in the Middle East and North Africa (MENA), from digital archaeological archives. We contend that current digitization practices often perpetuate colonial-era biases through limited, monolingual metadata that fail to reflect or engage with local histories and knowledge systems. Noting the insufficiency of current FAIR (Findable, Accessible, Interoperable, Reusable) and CARE (Collective Benefit, Authority to Control, Responsibility, Ethics) data frameworks for this specific context, we propose a shift toward reparative, co-stewardship models. Drawing on practice-led pilot projects within digital archaeological archives using Linked Open Data (LOD) and community-facilitated annotation, this article demonstrates practical pathways for integrating diverse, multilingual perspectives to enrich archive metadata. In so doing, it demonstrates how digital interventions have the potential to destabilize power dynamics and work toward reparative practice. Ultimately, we advocate for conscious professional collaboration and institutional reform to transform archives from static repositories into dynamic spaces of equitable engagement, actively combating digital colonialism.

ملخّص

تتناول هذه المقالة الإقصاء التاريخي والمستمر للمجتمعات المحلية والمجتمعات المتحدّرة من أصحاب التراث ولا سيّما في منطقة الشرق الأوسط وشمال أفريقيا، من الأرشيفات الأثرية الرقمية. ونجادل بأن ممارسات الرقمنة السائدة كثيراً ما تُعيد إنتاج تحيّزات الحقبة الاستعمارية عبر بيانات وصفية محدودة وأحادية اللغة، بما يعجز عن عكس التاريخ المحلي أو الانخراط مع منظومات المعرفة المحلية بجدية. وإذ نلاحظ قصور أطر البيانات الحالية عن الاستجابة لمتطلبات هذا السياق تحديداً، نقترح تحوّلاً نحو نماذج ترميمية تقوم على الرعاية المشتركة.
واستناداً إلى مشاريع تجريبية قائمة على الممارسة داخل أرشيفات أثرية رقمية، توظّف البيانات المترابطة المفتوحة والتعليق التشاركي المُيسَّر مجتمعياً، تستعرض المقالة مسارات عملية لإدماج رؤى متعددة اللغة والمنظورات بما يثري البيانات الوصفية للأرشيف. ومن خلال ذلك، تبين كيف يمكن للتدخلات الرقمية أن تُزعزع علاقات القوة القائمة وتدفع باتجاه ممارسة إصلاحية. وفي المحصلة، ندعو إلى تعاون مهني واعٍ وإصلاح مؤسسي لتحويل الأرشيفات من مستودعات ساكنة إلى فضاءات دينامية للانخراط العادل، بما يُسهم على نحو فعّال في مناهضة الاستعمار الرقمي.

Keywords: archaeological ethics; archives; community archaeology; digitization; Middle East and North Africa

الكلمات الدالة: الأرشيفات،علم الآثار المجتمعي،أخلاقيات علم الآثار،الرقمنة،الشرق الأوسط وشمال أفريقيا

The archival turn has meant increasing use of, and attention to, archaeological archives in recent years (Baird and McFadyen 2014; Bobou et al. 2022; Wolfhechel Jensen 2024) and a growing recognition by archaeologists that archives are not simply neutral repositories of information but are themselves sites of memory, knowledge, and power (Schwartz and Cook 2002). Archaeological archives originating from the Middle East and North Africa (MENA) region have been the focus of much collection

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digitization activity in recent years. In particular, ongoing conflicts and political instability in the region have increased demand among researchers in the West for access to legacy records from old excavations as a means to maintain research on sites and landscapes where physical access for those researchers is limited by geopolitical conditions. The archives were already owned and managed in the Global North owing to practices and frameworks that enabled Western institutions to export archaeological documentation made as a result of foreign expeditions (Baird 2022:164–166), although this asymmetry has had less attention than the artifacts that were similarly removed from their places of origin. Coupled with the embedding of the open access agenda in guidelines and policies, an increasing demand for access has meant a proliferation of digitization projects that aim to make archaeological archives available online in a variety of formats (Bala'awi et al. 2021; Pütt 2018). However, the digitization of archives sometimes re-creates old problems: for instance, when access is inherently limited by language (Albayrak-Aydemir 2020) or technological ability, through unreflective dissemination of potentially sensitive data (Heitman 2022), and through fossilizing potentially problematic or exclusionary metadata (Baird 2023; Chen 2024; Chen et al. 2026).

Recent years have also seen archaeology become increasingly attentive to communities, both in its practices (Atalay 2012) and its histories (Mickel 2021). Despite this growing interest, local and descendant communities have rarely been attended to by archival archaeology in analog or digital forms (Beale 2012; Lorenzon et al. 2022). While there are genuine aspirations for, and rhetoric about, the democratization of access, the digital turn for archaeological archives has turned its back on many stakeholder communities (e.g., without even basic language access, such as that of Antioch [De Giorgi et al. 2024]; see also Brusius and Rico 2023). This lack of attention on stakeholders beyond institutions and Western academic users matters, not only because the stewardship and curation of such material bestow an incumbent duty of care for those whose histories and heritages are held in the archive (Agostinho 2019) but also because community engagement has the potential to underpin a more critical and more inclusive approach to digital archaeological archives (Baker et al. 2021). The relationship between community and archaeological archives within cultural rights is about equity, access, representation, repair, and benefit in the contemporary world. Ensuring that descendant and local communities have a role in shaping, accessing, and benefiting from archaeological archives is essential for justice, heritage sustainability, and meaningful engagement.

Drawing on recent pilot efforts related to the MENA region, this article points forward to ways in which we might capitalize on the affordances of new technologies—while being sensitive to the digital divide—to develop approaches to archaeological archives that engage with and serve communities that have a stake in the material. In particular, we reframe the digitization of archival collections not as an endpoint but as a beginning from which to transform collections entangled with archaeology's problematic past into sites of engagement, reparation, and collaboration. The work of decolonizing such collections and better serving long-marginalized stakeholders cannot be done in isolation (Chen et al. 2026);[1] we argue that digitized archives are under-tapped as tools for building the networks of diverse, globally situated colleagues necessary to grapple with the legacies of colonial excavations (inequities in access, epistemic biases, local alienation, etc.) of early archaeological practice.

After clarifying the complex relationship between descendant communities in the MENA region and archival collections stemming from archaeological "Big Dig" sites, we draw attention to the ways such communities fit uncomfortably with existing data stewardship guidelines. We highlight pitfalls in archival digitization practice that risk perpetuating exclusionary frameworks that determine *who* can access digital resources, and *whose perspectives* and histories are made visible in the online environment. Using examples grounded in recent practice-led research, the article closes with reflections on how emerging digital methods and digitized collections can be productively paired to build relationships with globally situated colleagues and underserved descendant communities with ties to Big Dig sites. While digital surrogates might begin to make resources more equal across the Global North and South, there is nothing inherently neutral, equalizing (Putnam 2016:401), or emancipatory (Gupta et al. 2020, 2023; Nicholson et al. 2023) about making them available online: necessary care and attention to archaeological archives and digital solutions need to be coupled with care and attention to communities. We believe that such care and attention might enable archives to act reparatively, creating inclusive spaces

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for marginalized communities and voices in MENA (Hughes-Watkins 2018), by enabling archives to be modified by, and made more relevant to, stakeholders.

Descendant Communities and Archaeological Archives Derived from the MENA Region

Our concern in this article focuses on digital practice related to "legacy" archaeological archives, the archives of past excavations, and not the creation of new archives. In the MENA region this includes the era of the Big Dig: the large-scale excavations of major archaeological sites that occurred largely in the late nineteenth and first half of the twentieth century and that defined archaeology as a discipline. We focus on archives of past archaeological projects because we have an incumbent disciplinary responsibility to deal ethically with the content of those archives, particularly when their contents or results remain unpublished. While contemporary practices of digital archiving of born-digital data have been considered in detail (Richards et al. 2021), the practices surrounding legacy archaeological archives are extremely varied, often specific to national contexts, institutions, and sites, and sometimes dispersed across multiple locations. To even call particular collections of archaeological documentation "archaeological archives" is to stabilize a diverse form. They are often not formal, organized, or fixed archives, instead being comprised of (for instance) documentation arising from archaeological practice held at an institution such as a museum, sometimes only retained in support of artifacts that are formally registered, or as personal collections, or as the product of fieldwork. Similarly, archaeological archives might be held by a variety of types of institution, and in state, public, or private domains. While diverse in form, stewardship, and holder, archaeological archives share their origins as one of the products of unequal and extractive practices, if less visibly so than the artifacts that filled museums.

The legacy archaeological archives generated by the Big Digs represent a heterogeneous body of documentation—field notes, photographs, and records—that often reside in distant Western institutions (Cobbing 2017; De Giorgi et al. 2024; Leitch and Nikolaus 2015), physically and epistemically alienated from their region of origin. While recent work has engaged with the potentials of using such data to reinvestigate sites, and to examine the history of archaeology (Bobou et al. 2022; Frey and Raja 2024; Raja 2023), work on archaeological archives has tended not to be *from, by*, or *for* MENA communities (adapting a formulation put forth in Rico 2021). Unlike North America, where descendant and Indigenous communities have increasingly played a role in shaping archival discourse and management, postcolonial contexts in the MENA region lack an equivalent framework. While there is growing scholarship on the role of colonialism in shaping archaeological practice in the region, there has been little direct engagement with the question of who should have agency over these archives and how they should be used today.

The specific context of creation and stewardship of digitized legacy documentation related to early excavations has established a complex, imbalanced relationship with key MENA descendant communities that are the inheritors of cultural landscapes containing archaeological sites that have long been of interest to foreign researchers. In the words of Hughes-Watkins (2018:3), "Archives that are rooted in biases and oppression that maintain the subjugation of vulnerable communities cannot be transformed, they can never morph into justice-oriented social assets, but can mainstream archives repair the praxis of suppression?" Communities living proximate to such sites are vital stakeholders tied to the archives through historical connection and local knowledge, yet they frequently lack ownership, control, or meaningful access to the documentation (or even knowledge of its existence), which remains governed by the holding institutions' priorities. Digitization processes have not been used as an opportunity to address such injustices and have instead come with what have been recognized as "profound losses" (Odumosu 2020:S298), including the limits of understanding inherent in problematic metadata. This current state is especially problematic, given that archives related to archaeological sites frequently hold more than just dry scientific documentation: they contain faces and traces of untold stories and forgotten labor, and of familial and regional histories that have been deprioritized for generations (Ausdahl 2025; Baird 2014, 2018:39–62; Cradic and Pfister 2021). This problematic dynamic creates an ethical imperative to transform these materials from archives *about* MENA communities to resources *by and for* them, a task made increasingly urgent by the shift to digital platforms, which, while promising greater access, are often searchable exclusively according to Western epistemologies and languages and thus

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merely reify existing power imbalances in the absence of robust ethical guidance. Legal and intellectual property restrictions further complicate access and use, making it challenging for communities to utilize digitized archives for educational or cultural projects, or to gain from knowledge of local and personal histories currently stored as "archaeological data."

Current Data Stewardship Frameworks

Work over the last decade has established key data stewardship guidelines, including the FAIR (Findable, Accessible, Interoperable, Reusable) principles to promote better information-sharing and digital collaboration (Nicholson et al. 2023; Wilkinson et al. 2016), and the CARE (Collective Benefit, Authority to Control, Responsibility, Ethics) principles developed specifically for Indigenous data as a corrective to FAIR's technical focus (Carroll et al. 2020), and both have had far-reaching impacts (e.g., Collins and Dasgupta 2025). MENA descendant communities, however, fit uncomfortably within these existing data stewardship frameworks, exposing gaps in existing guidance and the need for more concerted thought and attention to define respectful and inclusive practices relative to legacy archaeological archives.

The FAIR principles are crucial for maximizing the technical utility and scientific reuse of data. However, recent critiques have questioned the "emancipatory narrative" of the open data movement (Gupta et al. 2023:77) that has become orthodoxy in science, academia, research, and government. The push for open data often overlooks cultural sensitivities, respect, privacy, consent, and rights (Carroll Rainie et al. 2019). There is notable pushback against the assumption that open science, inherent within the FAIR principles and the Open Data Charter (ODC) adopted in 2015, is universally applicable and beneficial (Carroll Rainie et al. 2019:394).

While these frameworks provide valuable guidance on data quality, access, discoverability, interoperability, and reproducibility—all of which are essential for research practice, publishing, and reuse across various disciplines (Kansa and Kansa 2022; Nicholson et al. 2023)—they do not exist in a vacuum. They are shaped by the social, political, and historical contexts from which data are derived and transformed into the digital ecosystem (Carroll et al. 2021:3). Open data frameworks like FAIR and ODC, with their emphasis on free and open (re)use and distribution of data—often referred to as "openness by default"—have a tendency to neglect "relationships, power differentials, and the historical conditions of data collection" that contribute to long-standing data biases and imbalances in equity and benefits-sharing that tip in favor of researchers, governments, and institutions (Carroll et al. 2021:3). Additionally, these frameworks have not incorporated non-Western worldviews and Traditional Knowledge systems into their "open data practices" and guidance (Carroll Rainie et al. 2019:403). Therefore, while FAIR guidance is an important piece of the puzzle for the ethical stewardship of culturally sensitive collections from the MENA region, it is insufficient on its own.

The CARE principles provide a necessary corrective to FAIR's technical focus. Developed by the International Indigenous Data Sovereignty Interest Group to guide Indigenous Data Governance, CARE prioritizes sovereignty, self-determination, and the community's right to control data access and sharing (Carroll et al. 2020:1, 2021:1).[2] As a "people- and purpose-oriented" set of guiding principles (O'Brien et al. 2024:2), the CARE principles are intended to shift the benefits of, and access to, data by supporting and empowering communities and building capacity to govern data by, for, and about Indigenous peoples (Taitingfong et al. 2024:81–82). These data include several categories of cultural heritage and archaeology-related data, including "information and knowledge about the environment, lands, skies, resources, and non-humans with which they have relations," as well as "traditional and cultural information, oral histories, ancestral and clan knowledge, cultural sites, and stories, belongings" (Carroll et al. 2020:3). Since their initial development, the CARE principles have been recognized by local, state, national, and international organizations such as the United Nations Educational, Scientific, and Cultural Organization (UNESCO; see *Recommendations on Open Science* [UNESCO 2021]) and other leading organizations that govern heritage collections and that emphasize open data (Taitingfong et al. 2024:80–81). However, major gaps in acknowledgment of this guidance persists across the globe—with the United States, in particular, lagging behind—and across sectors, with universities proving slow to take up these changes (Taitingfong et al. 2024:81).

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Allison Mickel's (2021) critical study of archaeological knowledge production in twentieth-century Jordan serves as a useful case study in the context of the postcolonial Middle East. Mickel's work surfaces the historical and pervasive marginalization of stakeholding and local communities from the research process by foreign-led research teams. She analyzes the disconnect between team leaders who wield knowledge and resources, on the one hand, and those local workers at the trowel's edge, on the other hand, from whom basic explanations of research rationales, methods, and results are often withheld. Mickel argues that research structures and project hierarchies alienate local communities that contributed to the projects from the heritage data and resources that they produced. These local communities—those that directly contributed to archaeological knowledge production and claim historical, cultural, or other connection to the archaeological site and materials—represent a stakeholding group who could benefit from heritage data. Within a model of co-stewardship, they and similar communities are entitled to access and control over the materials, including the documentation produced and its digital offspring.

While the spirit of CARE—its focus on collaborative governance and benefit-sharing—is highly relevant to redressing historical injustices in archival practice related to the MENA region, the principles map imperfectly onto this context owing to a crucial legal and political distinction. Indigenous groups are generally recognized as *rights*-holding groups under international instruments, such as United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP; United Nations 2007), granting them sovereign claims over their heritage and data. According to researchers from the Native Nations Institute (Carroll Rainie et al. 2019:394), "Indigenous data sovereignty refers to the right of Indigenous peoples to govern the collection, ownership, and application of data about Indigenous communities, peoples, lands, and resources." These rights apply to heritage, archaeological, and archival data. In contrast, the descendant communities linked to MENA Big Dig sites are most accurately defined as *stake*holding communities, or "communities of connection," which are inclusive of Indigenous, subaltern, descendant, and local groups (Baird 2014). Claims of such communities of connection are rooted in cultural affiliation, historical continuity, and place-based ties, rather than the specific legal and governmental sovereignty held by Indigenous nations. Applying CARE directly, without adapting it to this distinction, risks appropriating a framework specifically designed to affirm Indigenous rights while overlooking the unique sociopolitical constraints and lack of formalized, internationally recognized data governance rights faced by many MENA stakeholder groups. The challenge of achieving ethically guided and inclusive data stewardship for MENA Big Dig archives is compounded by the difficulty of identifying appropriate community partners. Unlike Indigenous contexts, where clear rights-holding groups often exist, the complex histories, regional instability, population dispersal, and historical alienation in the MENA region mean that it is not straightforward to identify appropriate project partners with stakeholding interests who can legitimately exercise collective authority.

The CARE guidelines thus serve as a powerful prompt for reflection and future cooperative action, highlighting an ethical governance deficit that deserves concerted attention to improve inclusive digital practice connected with the MENA region's colonially inflected histories. Yet, key gaps that remain unaddressed include

- the absence of frameworks for recognizing contemporary stakeholder groups within archival collections
- the absence of structured dialogue on community access and control over archaeological archives in the MENA region
- the lack of mechanisms for local communities to contribute to or reinterpret these archives
- how archival practices can be reoriented to reflect local epistemologies, rather than reinforcing a Eurocentric framework.

Acknowledging the need for community consent and expanded access to archaeological archives is the first step toward building inclusive archaeological data and archives. Despite best efforts, legal and governmental structures, regional instability, limited resources, historical alienation, dispossession, and distrust, population dispersal or discontinuity, and other social barriers may inhibit building relationships between holding institutions, government agencies, and research projects and the

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communities about, by, or for whom the data are curated (Carroll Rainie et al. 2019), but it is nonetheless important to try. Because archaeological archives tend to be based on specific geographical places, opportunities exist to identify local and regional stakeholders. To more appropriately serve MENA communities alienated from archives tied to their history and heritage will necessitate cooperative action from a diverse, multilingual, and globally situated range of heritage professionals familiar with the region's complex histories and social dynamics. Achieving a more inclusive archival practice related to collections that capture local histories will require loosening institutional control in order to empower communities, involving them collaboratively from project design to data preservation, and integrating culturally sensitive practices. Strategies developed to more sensitively manage Indigenous data and collections provide useful models for adaptation, including implementing multilingual access; widening ontologies and metadata in consultation with communities to incorporate Traditional Knowledge systems and linguistics (Barness et al. 2023); adopting hybrid systems of open and restricted access; data-masking or -blurring (e.g., obscuring geographic information of sensitive sites or particular provenience information); integrating cultural provenience information, notices indicating openness to collaborate, and Traditional Knowledge labels and restrictions like those designed by Local Contexts (Carroll et al. 2021:3); and embracing a coproduction of knowledge (CPK) model to reflect diverse knowledge systems and achieve equity in research relationships (Bartlett et al. 2012; Yua et al. 2022). Open data platforms may also publish and update takedown policies, as well as establish new restrictions on publishing certain kinds of data, such as images of individuals, biocultural materials, and information related to human burials or sacred materials and sites (in the vein of the Native American Graves Protection and Repatriation [NAGPRA] regulations in the context of the United States; for discussion of guidance, policies, and resources related to NAGPRA, repatriation, and Native American Archival Materials, see the *Repatriation Meets the Protocols Workbook* [https://rmpworkbook.wordpress.com/wp-content/uploads/2022/10/rmp-workbook-20221006.pdf] and *Repatriation Meets the Protocols Resource Guide* [https://rmpworkbook.wordpress.com/wp-content/uploads/2022/10/rmp-resource-guide-20221006_v2.pdf.]). Inclusive open data platforms also require infrastructural capabilities regarding both access and sharing that prioritize community curation, control, and coproduction of datasets (Carroll et al. 2021). In the sections below, we aim to build on this important work with specific mechanisms and tools that can be used to make interventions in archaeological archives on digital platforms even when host institutions do not lead this work themselves.

It is relevant to this discussion to note that the long-standing exclusion of diverse stakeholders from archival curation and management has also had important ramifications that are rarely considered. The uptake of FAIR data standards has spawned emerging international professional groups working to set technological standards and best practices aimed at the better sharing and interoperability of related data (e.g., Pelagios Network; DARIAH-EU; ARIADNE-plus). And yet, colleagues from the MENA region, let alone local stakeholders, are rarely at the tables where key decisions related to such standards and tools are made. Without input from users and professionals in the region, tools and standards will continue to be developed that do not serve the needs or interests of local stakeholders. There is therefore a responsibility on the part of colleagues with relatively more power in these dynamics, with seats at those international tables, to explore how to make use of their platforms to bring more diverse perspectives to the fore. There is a key responsibility to empower collaborating stakeholder communities to voice the aspects of existing technology and curation that constrain or exclude local interests or ways of knowing, to advocate for changes that encourage more inclusive digital tools and shared infrastructure, and to actively create pathways to bring more diverse perspectives into international conversations. That is, tools for inclusive data stewardship have the potential to empower regional professionals and hence local communities to work with, and even against, existing digital archaeological archives, with prospectives to use them for the benefit of local communities of connection; for instance, by providing access to otherwise lost local historical data incidentally captured by archaeological recording.

Echoes of Exclusion: Pitfalls and Potentials in Archival Digitization

The digitization of legacy archaeological archives in collections of the Global North, particularly those from the MENA region's Big Digs, presents a crucial opportunity to broaden access to cultural her-

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itage and provide opportunities for engagement and even repair. However, the process is fraught with pitfalls that risk perpetuating and hardening exclusionary frameworks rooted in colonial-era cataloging. Archival collections, whether physical or digital, have been cataloged according to entrenched disciplinary and institutional priorities, normalizing conventions and assumptions that have compounded over a century. In the absence of input from diverse stakeholder communities, this practice often reflects a narrow viewpoint that ascribes a flat, one-dimensional meaning to complex resources such as photographs, even though such materials naturally hold multiple potential values and narratives (Dahlgren and Hansson 2020). When analog records are directly migrated to digital form, the original institutional and disciplinary biases become encoded as singular "authoritative" digital truth, determining *who* can access resources and *whose histories* are made visible online. We contend that such dominant narratives can be challenged, and even transformed, using digital tools, asking, as Odumosu (2020:S299) did, "What if the digital object could do all the speaking the original could not do?"—in this case, by intervening through specific approaches to collaborative stewardship.

Key studies in recent years have drawn attention to important blind spots in archives, highlighting, for example, how baseline archival cataloging inherited from previous generations prioritized monuments, processes, and the achievements of field luminaries to the exclusion and elision of the contributions of the many hands that made the massive earth-moving endeavors of early excavations possible (Baird 2022; Chen 2023, 2024; Cradic and Pfister 2021, 2026; Cradic et al. 2026). This issue is exemplified by archives from sites like Tell en-Naṣbeh (Ramallah, Palestine), Dura-Europos (Syria), and Sabratha (Libya), and numerous analogous contexts where photographic metadata available from institutional repositories frequently omit the names and identifying information of the contingent local workers, intentionally obscuring efforts to acknowledge their role in archaeological knowledge production (Cradic and Pfister 2021, 2026; Mickel 2019, 2021, 2026).

For generations, archaeological archives have been cataloged and curated according to particular disciplinary or institutional priorities, according to Western conventions and assumptions that are so ingrained as to become invisible to many of their perpetuators. And yet, with even a cursory glance (e.g., at Figure 1), it is clear that excavation archives inevitably contain more than just documentation that traces fieldwork or attests to the initial uncovering and evolving condition of ancient monuments and artifacts. Photographs, for instance, hint at untold individual histories, family histories, labor practices, and traditions local to the place of excavation that have been overlooked and, through exclusion from metadata, written out of the record.

These glimpses of everyday life held in archival archaeological photographs are frequently captured almost by mistake, incidentally, because they fall outside of the scope of the monument-driven archaeological image creation (Baird 2019). As such, people living near the archaeological site, or in other ways connected with them, end up becoming almost intruders in the archive of depictions of their own cultural heritage. Not being in the—literal or metaphorical—frame of the photographer, who is most often him- or herself alien to the local communities, these accidental visual elements tend to go entirely unmentioned in metadata, making the presence of this not-strictly archaeological information virtually impossible to find even if someone should want to look, outside of serendipitous discovery. Even when members of local communities—site workers, archaeologists, guides, students, or simple passersby—are clearly the intended subject of the photographer, their presence is barely acknowledged in the metadata, and little to no detail is given about who these people are or what they are doing. By not naming the presence of visual elements, human or otherwise, that are not relevant to the archaeology (in its narrowest meaning), these subjects are (not so) implicitly communicated as less important than the material ancient heritage they happen to inhabit or be related to (Riggs 2017a, 2019). The practice of only listing the presence of foreign archaeologists in an archival photograph's metadata, entirely disregarding the other human beings in the frame, is especially troubling and needs to be addressed with urgency. Almost as in a staged magic performance, the words used in the metadata direct all the attention of the viewer onto the archaeology (and the Western archaeologists), making everything else disappear from perception, despite being in plain sight (Riggs 2017b).

The digitization process, undertaken by a growing number of archaeological archives, has missed the opportunity of addressing, at least partially, these inadequacies, and has de facto replicated the

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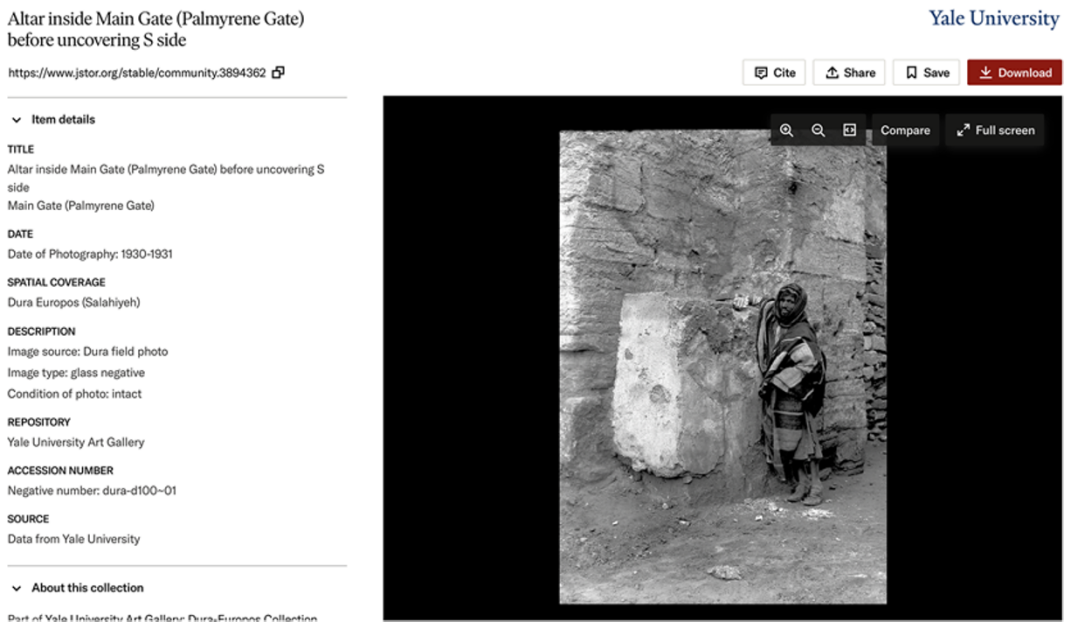


Figure 1. Screenshot of JSTOR Record for photograph described as "Altar inside Main Gate (Palmyrene Gate) before uncovering S side," according to the metadata. The image is a scan from negative number dura-d100~01 of the Dura-Europos Archive Collection, Yale University Art Gallery (https://www.jstor.org/stable/community.3894362).

same flaws and shortcomings of the analog collections. When well-resourced institutions uncritically migrate their historical documentation, the singular frameworks established in initial records that serve as the baseline for all future cataloging—such as photographic negative registers and field notes—are pushed forward into the digital environment. The information thus made available online as the "authoritative" record is fundamentally grounded in the initial, often flawed and exclusionary, classificatory categories.

It is worth reflecting on and making explicit the underlying mechanisms within institutionally generated metadata, such as sparse and monolinguistic metadata and "authoritative" place-naming conventions that inadvertently perpetuate these and other problematic exclusions and biases, and that have the result, in practice, that the very distant communities often envisioned as beneficiaries of archival digitization efforts remain unaware of, and unengaged with, well-meaning and expensive (in both labor and monetary terms) digital outputs. Discussion of an example that concretizes some of the issues in play will help to make explicit the notion of inherited blindspots in both analog and digital archiving practices and the frequent link between the two modes.

Consider, for instance, the path of a single photograph, from moment of capture to current, institutionally sponsored online record: an early photograph staged in the monumental city gate of the archaeological site of Dura-Europos (Syria; Figure 1). When the photograph was taken, initial analog records made in the field or shortly afterward, including field notes and negative registers, were returned to the home institution of the excavation at Yale. These initial records, preserving key contextual details related to the resource (such as where and when the photograph was taken and what was depicted) typically served as the baseline for future, institutionally maintained records in each stage of the resource's life cycle.

Upon the introduction of computers into the collection management space, well-resourced institutions typically pursued some manner of migration of analog records to a digitized version. This process almost always proceeded first to an internal database, accessible only to collection professionals and other vetted users within the confines of the institution's internal data network. Data now available in the era of the open data movement—the information that collecting institutions make available for discovery

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and reuse online as "authoritative" records for the archival content they manage—at best generally reflect an accrual of knowledge about the object in question, but one that is more often than not fundamentally grounded in the classificatory categories within holding institutions.

This phenomenon of inheritance over time of analog to digital metadata can be seen in the "authority" record for the photograph in Figure 1. At present, the available record is the result of a 2023 merger of content formerly managed by ArtStor with its parent, JSTOR. Prior to the 2023 migration, the same static metadata were hosted for over a decade by ArtStor on behalf of the custodial collection (Yale University Art Gallery) and were based on the institution's own records. The monolinguistic record's metadata, pushed forward from the institution database, assign to the image the title "Altar inside Main Gate (Palmyrene Gate) before uncovering S side," thereby inscribing searchability for the photograph according to the English-language place-names preferred by scholars (Dura-Europos; Palmyrene Gate). No mention is made of the male figure, one of the Syrian workers who labored at the site (Baird 2011, 2023), so prominently framed within the image, wrapped from head to shin in woven textiles and with the sculptural find in hand, or the inscriptions etched into the wall of the gate in the background. The act of defining what an image is "about" translates the visual into the verbal through the practice of cataloging, and through the verbal imparts searchability and meaning. Laid bare is an inherited mindset passed forward from previous iterations of item record-keeping, one that looks past or through the human element and prioritizes monumental finds that allow faraway places to be categorized and fitted into mental maps of ancient empires that drove "exploration" (Bahrani 1998).

When an institution catalogs an item—be it an ancient artifact, a photograph documenting excavations, or an excavation notebook—it is engaging in a process that allows for categorization, organization, and retrieval of those items (Henninger 2018). Through the act of cataloging and of assigning metadata (such as a title to a photograph or a culture to an object) it is simultaneously assigning meaning, dictating what is true and worth knowing, and also, often unintentionally, assigning the keywords by which an item can be searched for by a collection professional or other user (and reflecting other complexities: Dahlgren and Hansson 2020). It is creating a web of in-group, language-specific terminology of which one must have knowledge to intentionally access the resource. The sparse and single-language metadata for Figure 1 prevent this photograph from being found using keywords that are not included in the object's metadata, such as alternative place-name traditions or spellings. Language of cataloging and exclusionary place-naming conventions are infrequently acknowledged subjectivities that have real-world impacts for those whom archives serve (Chen 2024; Gooch et al. 2025; Hughes-Watkins 2018; Watson 2023).

Keywords are like pathways for discovery of an archival record, and traditional top-down institutional cataloging has often established an authoritative, but singular, record of meaning that prescribes how users call up the content they are after. Institutionally created descriptive metadata, whether analog or digital, ultimately inscribe meaning and searchability onto traces of the past, whether ancient artifacts or early twentieth-century documentary apparatus such as field notebooks and archival photographs. Contemporary approaches to research that rely heavily on digital resources mean that these inscribed meanings have become even more important in framing what is knowable within collections (Milligan 2022). While the presence of the person in Figure 1 is not even recognized in the institutional metadata, a descendant might nonetheless recognize a grandfather in this image. The image thus potentially holds other, equally valid, histories alongside the existing authoritative version, and digital platforms hold the potential to enable multiple histories about particular items at the same time. Similarly, another local viewer might recognize the gate depicted in the background of Figure 1 as Bab al-hawa (Gate of the Winds), the Arabic name used by excavation workers to refer to the site's monumental gate due to its wind-tunnel-like behavior within the site landscape. And yet, in its present state, neither stakeholder would be likely to search Figure 1 according to their own points of reference. This failure to accommodate multiple, equally valid forms of information—from multilingual place-names to personal histories—means that the communities often envisioned as the beneficiaries of digitization efforts remain unaware of, and unengaged with, the digital output. Ideally, frameworks of categorization of material would be open enough to accommodate multiple, equally valid, forms of information,

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from different interpretations to disciplinary perspectives, from varied keywords to alternative and multilingual place-names.

Digital Silos and the Changing Technical Landscape

The possibilities held by new technologies will always involve growing pains in their use, particularly with regard to legacy collections with their own history of curation and use (the evolution of which has its own story, or paradata—see, e.g., Börjesson et al. 2020). After more than a decade of institution- and project-specific archival digitization projects, there are lessons to be learned from trial and error, and a responsibility to make use of the affordances and increasing flexibility of digitized collections and emerging technologies to work with communities—especially those descended from foreign-run excavations whose perspectives have traditionally been occluded (Ali 2023; Baird and Almohamad 2025; Irving 2017; Mickel 2021)—to reshape item metadata and redesign frameworks for more effectively sharing archival resources (Chen et al. 2026), and interventions that enable repair. While the digitization of collections and their partial or complete availability online hold a potential for inclusion and access that still remains mostly untapped with respect to the MENA region, positive examples of the cocreation of sensitive metadata, culture-specific vocabularies, and alternative technologies most apt to represent different worldviews exist, having been developed with and for Indigenous and local communities in other regions, such as Mukurtu, or the Dúchas Project (Chigwada and Ngulube 2023; Koay et al. 2020; Neil-Binion 2015; Ó Cleircín et al. 2015; Rodriguez 2018).

In addition to problems and dangers created by exclusive reliance on inherited metadata generated from a singular perspective, many well-intentioned digital efforts continue to replicate institutional, disciplinary, and linguistic information silos despite the existence of technical strategies designed to mitigate such problems to the benefit of academic and nonacademic users alike; countering such digital colonialism (Nothias 2025) necessitates recognizing the problems and countering them with digital tools. The current digitization landscape is characterized by institutions working in isolation, creating a multiplicity of disconnected "islands" of heritage resources (Jackson et al. 2009). This lack of coordination limits the informative value of contextually related archival holdings as a network and replicates the nondigital space, where a few authoritative voices dominate the narrative and the dispersal of content places a heavy burden on potential users.

Growing international adoption of Linked Open Data (LOD) strategies offers considerable promise toward bridging linguistic, disciplinary, and institutional frames that otherwise hold related datasets in artificial isolation (Nurmikko-Fuller 2023). LOD is an approach to publishing metadata as structured and machine-readable data. The goal of publishing information as LOD is to make the resources more easily interconnected, thanks to the use of formal vocabularies that define semantic relationships. Two characteristics of LOD make them a fertile choice for cultural heritage: several definitions and relationships can coexist at the same time, and they are not strictly language-specific. The benefits of making historical, thematic, and methodological connections visible and searchable across archives have been argued for extensively by the nationwide "Towards a National Collection in the United Kingdom" program, and piloted by such pioneer projects as Pelagios (Isaksen et al. 2014; Vitale et al. 2021)[3] and Nahan (Tricoche and Sartre 2023),[4] both leveraging common place references to suggest relationships among digitized resources held in different collections. Recent practice-led research discussed in more detail below has shown that the flexibility of LOD approaches can be intentionally leveraged to model collection metadata to reflect multiple ways of knowing and allow differing perspectives to coexist without their impeding one another (Chen 2024; Chen et al. 2026).

However, technology alone is not a panacea. While LOD and other digital technologies can provide useful mechanisms that can be thoughtfully deployed to aid more equitable resource-sharing and discovery by powering search according to different languages and epistemic traditions, it is vital to recognize that the existing infrastructure used to bridge between differently curated resource collections is at present itself highly biased in favor of perspectives from the Global North (Chen 2024; Chen et al. 2026; Kalwara and Radio 2023; Mark and Turk 2003; Watson et al. 2023). These key pieces of infrastructure—including resources such as geospatial gazetteers, chronological gazetteers, and controlled vocabularies

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that facilitate points of connection across collections and languages—are often malleable and invite expansion and revision from professionals with relevant knowledge bases. With input from diverse, globally situated heritage professionals who are intimately familiar with the needs and traditions of marginalized MENA stakeholders, it is possible to codesign interventions that speak back to biases through shared LOD infrastructure and emerging standards and mainstream practice.

There is a problem, however, in that LOD methods in general, let alone the malleability of critical shared infrastructural resources, are not equally familiar among globally situated heritage professionals and institutions, with the MENA region particularly underrepresented. Relatedly, the technological tools used by archives are often developed without sufficient input from archivists, curators, or source communities, resulting in products that are not only cumbersome for professionals but also frequently inadequate for integrating community contributions into existing digital catalogs. This limits the value of community perspectives, relegating them to "engagement exercises" rather than allowing for radical reinterpretations of archival documents. Responsible work to capitalize on the strengths of LOD (Watson et al. 2023; Weber and Locke 2022) and other digital approaches in connection with collections tied to difficult histories must therefore be paired with training efforts in appropriate languages to expand the range of heritage professionals critiquing and reshaping digital tools, shared resources, and practice (Chen et al. 2026).

Further, it is crucial that, alongside strategies to enhance and facilitate digital involvement (for example, with workshops and skill development programs), we also keep seeking contributions that will only come via nondigital means, such as in-person conversations and focus groups, and that we find sustainable workflows to reflect these perspectives and memories in ways that effectively speak back to mainstream narratives. To be able to include such contributions, the role of a facilitator becomes key, not only to mediate between languages and cultures but also to offer a means to translate the fluidity of spontaneous conversations into data (and metadata) formats. Both of the engaged research efforts highlighted below found value in convening semi-structured or unstructured conversations and workshops centered on the discussion of specific archival photographs with members of descendant communities, alongside a cultural facilitator. Only through a subsequent step were memories and information contributed by participants transformed into tags, new categories, and revisions to established LOD resources and/or metadata by the facilitator. This is just one example of how voices excluded by the digital divide can still become part of reimagined archaeological archives, without putting the burden of learning on community members that may have no desire to get involved with digital infrastructure, even as they appreciate the objective of making an historical resource more inclusive and reusable. The possibilities for bridging distance and language barriers with technology invite us to invest more thought and effort into collaboratively imagining how we might use such tools to better connect with communities, especially where conflict and crisis have otherwise impeded engaged work. It is only with strong, sustained co-curational relationships with local stakeholders that institutions will begin to root out and address inherited blind spots that perpetuate exclusions and access inequities. This task is increasingly urgent at a time when Artificial Intelligence (AI) is becoming more commonly employed by heritage professionals, and models trained on such data will render such inequalities even more invisible.

Reimagining Archaeological Archives

The global uptake of videoconferencing and asynchronous workflows, accelerated by the COVID-19 pandemic and taking hold even in regions associated with the digital divide, makes the present moment especially opportune for reimagining how we might make archaeological archives more inclusive and conscientiously deploy technology to open our professional networks to make it so. Significantly, the work related to legacy archaeological archives highlighted in the examples below took place despite ongoing regional conflict, participant displacement, and other challenges, such as intermittent internet, proving that, with sensitive design and flexibility, it is possible to work with heritage colleagues far away to begin determining how to rebalance decision-making and metadata development related to archival collections of significance to a range of (institutional, disciplinary, cultural) stakeholders. It is important to acknowledge that there is no single digitization solution to move toward repair of pervasive digital

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colonialism in archaeological archives or the unequal power dynamic they entrenched; making progress in this area will require long-term work on the part of strong, reflexive global professional networks cooperating to continuously negotiate and intervene against persistent biases. The experimental efforts we feature here, however, demonstrate how we might make better use of what we already have available—islands of FAIR data primarily serving and reflecting the Global North, and a digital tool-scape that can be configured to enable multilingual collaboration with heritage colleagues worldwide—to invest in the development of professional networks that can inform a more equitable digital future. *People and relationships* are the most important pathways to inclusive archives, and at present the power of emerging technology is underutilized toward building the relationships necessary to address the pressing problem of digital colonialism that is currently replicating exclusionary frameworks relative to archaeology in the MENA region.

While bearing in mind that the landscape of available technologies is changing continuously and increasingly quickly, and the limitations that relate to technologies that are almost exclusively designed, developed, and owned by companies and professionals in the Global North, we see an extraordinary potential for emerging digital methods to provide a means for different perspectives on the same archival document to coexist nonhierarchically by enabling the creation of more inclusive and diverse metadata. Exploratory work carried out recently has taken place in two different archives tied to the MENA region to investigate, for example, the benefits of pairing facilitated conversations centered on archival photographs together with LOD methods that facilitate multilingual tagging according to diverse epistemological perspectives with lightweight online annotation tools.

Recogito, a free online and open access annotation platform developed within the Pelagios project (Simon et al. 2020), has been used as a means to introduce new perspectives in the photographic collection of the British Institute for Libyan and Northern African Study (BILNAS). BILNAS's archive, founded in 1969, comprises different kinds of records, mostly documenting British archaeological missions in Libya from 1910 to the early 2000s. As in many of the collections discussed here, the metadata are shaped by, and are a reflection of, colonial relationships and fail to account for the richness of information that is conveyed by the pictures. Beside their explicit archaeological value, in fact, these images often portray fragments of Libyan culture(s), both tangible and intangible. Thanks to funding from the National Archives in the United Kingdom, in 2023 BILNAS was able to establish a partnership with a Tripoli-based group of Libyan heritage professionals, Scene, to experiment with ways to make Libyan perspectives surface in the photographic collections. Selected photographs, thematically grouped, were uploaded on Recogito and made available online. A heritage specialist from Scene organized a series of small focus groups for Libyans and members of the Libyan diaspora.[5] During these online encounters, some in Arabic and some in English to accommodate different linguistic competences, participants were asked to use the Recogito interface to annotate the photographs or even simply to tag them. No suggestions or presets of labels were provided, and participants were free to highlight anything in the shared photographs that was relevant to them. In choosing the participants, the Libyan lead privileged participants with nonacademic backgrounds, especially those removed from the archaeological sector, with the explicit intent of favoring variant interpretations of the archaeological photographs.

This process of joint annotation and discussion proved to be an excellent vehicle for engagement and stimulated rich conversations among the participants on ideas of heritage, tradition, and identity. Participants created annotations that explained the use or provenance of depicted objects, shared personal and family memories, and added Arabic labels that had no equivalent in English or other languages (Figure 2). During the focus groups, participants were able not only to name objects and practices represented in the photographs but also even to identify individuals listed as simply "unnamed" in the catalog data.[6] While the level of participation and the quality of the information gathered were considered as relevant achievements in their own right, the added value of using a semantic annotation platform like Recogito rather than simply discussing the photographs on-screen lay in the easy generation of structured digital records. While annotations in Recogito can be easily created through a user-friendly point-and-click interface,[7] they can also be downloaded as structured data in valid web annotation language. In other words, each annotation is already expressed in a machine-readable format and is automatically associated with a unique identifier, an author, a time of creation, and a provenance

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Figure 2. Screenshot showing one of the photographs of the BILNAS archive (BILNAS/D54/10/2) digitized and made available for community annotation on the Recogito online platform. During one of the workshops facilitated by a Libyan heritage specialist, the participants identified the traditional game played by workers on-site. Courtesy of BILNAS.

document (i.e., the original BILNAS photograph). Recogito annotations are not LOD per se but are expressed in a compatible format and, once appropriately published online, they could easily enter LOD environments.

The small scale of this experiment did not allow for full reingestion of the new information into the BILNAS catalog. However, the potential for user-generated digital content to enrich and diversify digitized archaeological collections appears to be high, and worth pursuing with more resources. The opportunity to create annotations has enabled reinterpretations of an archaeological archive from a wider heritage perspective, revealing new dimensions of relevance, and potential reuse, for the photographs. At the same time, the addition of Arabic labels for the objects depicted has the potential to trace different searching paths within the archive, and perhaps generate different kinds of query and attract new types of user.

Similarly exploring the utility of digitized archival holdings as a tool for reparative relationship-building toward mitigation of inequities tied to an archaeologically rich Syrian site, the development of the International Digital Dura-Europos Archive (IDEA) was launched in 2022 with funding from the United States' National Endowment for the Humanities. The site at the center of the project boasts a sizeable online information landscape, comprising open-access yet linguistically limited and unintegrated resources, including institutionally supplied collection records for artifacts and archival documentation, as well as various discipline-specific FAIR datasets related to such aspects as epigraphy, numismatics, and architecture. Recognizing the fundamental imbalance in whom this landscape currently serves and whose perspectives it neglects (Baird and Almohamad 2025), the IDEA team pioneered a "flavor" of LOD that makes creative use of the Wikidata platform, together with content from Wikimedia Commons, to construct bridges among these "islands" of largely monolingual FAIR data. Leveraging Wikidata's inherently multilingual design, the project prepares the way for a more diverse range of professionals to weigh into the reshaping of the digital footprint connected with Dura-Europos, a task previously impossible owing to collection dispersal and linguistic barriers (Chen 2022, 2026).

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Information contributed in English, for instance, becomes immediately legible in Arabic, and vice versa. This shared "making" of a co-curated dataset in a multilingual public resource effectively capitalizes on technology to pool discipline-specific knowledge, differential access to library resources, and intellectual networks. The resultant dataset possesses value as a concrete reference point and malleable learning tool that can be mobilized to diversify the range of heritage professionals critically engaging with emerging international technical standards, which are often opaque in the abstract and unevenly known.

The practical application of this model was demonstrated during the spring 2024 "Lives in Ruins" pilot initiative, funded by the Open Societies University Network, which utilized the IDEA dataset as a hands-on learning space. Through workshops supported by a bilingual interpreter and an experienced cultural facilitator, a network of globally situated professionals—including participants in Syria and those forced out of the country and into the global diaspora owing to the conflict ongoing at the time—were oriented to the utility of LOD methods for cultural heritage work through skills-building activities like digital image annotation. Starting with a critical look at the sparse and monolingual institutional metadata assigned to archival photographs taken at Dura-Europos during excavations in the 1920s and 1930s, participants worked from mirrored Wikidata items for individual photographs. These new records in the multilingual Wikidata environment are digitally tethered to the monolingual "Authority" record from which they derived, making the baseline institutional data legible in Arabic and preparing a malleable workspace for rethinking how metadata could be improved to better acknowledge excluded histories. Metadata assertions and revisions to infrastructure in the wider LOD ecosystem subsequently contributed by Syrian professionals as a byproduct of the learning process successfully drew out information related to passed-over regional histories and enhanced discoverability for a wider range of stakeholders. As a result of this work, archival photographs such as those featured in Figure 3 are now searchable in English and Arabic according to both scholarly and local toponym traditions and equally discoverable according to their significance as part of the archaeological record and as documents bearing traces of regional history (such as local clothing traditions). This model of consolidating siloed information relevant to a single site into a multilingual, malleable workspace offers opportunities to cooperatively identify microcolonialisms in the broader cultural heritage ecosystem, reflect as a group on the mechanisms that perpetuate them, and codesign interventions to address specific biases and gaps encountered, whether at the collection, shared-infrastructure, or disciplinary levels (Chen et al. 2026).

In the long term, approaches like those highlighted here have the potential to diversify and expand participation in the conversations shaping professional practices, ultimately shifting the linguistically and epistemically biased digital footprints associated with long-studied archaeological sites toward more inclusive and locally grounded perspectives. Since descriptive metadata created by these and other means ultimately drive the searchability of the digital asset to which they are appended, in the digital realm, more metadata, shaped by a more diverse range of key-stakeholder perspectives, provide more possible relevant digital pathways by which to discover a digital record. This holds the potential to make these materials of interest and relevance to descendant, diaspora, and local professional communities, and to enrich our collective shared knowledge. The (deceptively) simple process of asking different stakeholders to name what they "see" in a photograph becomes a powerful way to change, and even subvert, narratives regarding ancient cultural heritage, making things, people, and perspectives previously obscured by the lack of metadata "visible"—and thus findable in an archive. In a scenario in which a growing number of archaeological archives are enriched along these lines (and in compliance with the appropriate politics for access and sharing) we could envisage at least five overall benefits:

1. Expanding the value of the archive beyond archaeology: thanks to the inclusion of additional perspectives mirrored in new metadata, tags, and keywords, archaeological archives become more easily repurposed for broader research in the arts and humanities and in creative practices.
2. Greater contextualization: moving away from the archaeological gaze helps bring ancient heritage under new lenses, highlighting its role in the life and memories of the communities connected to it, and promoting a view of heritage as a "living" component of natural and social landscapes, rather than solely as a testimony of a distant past.

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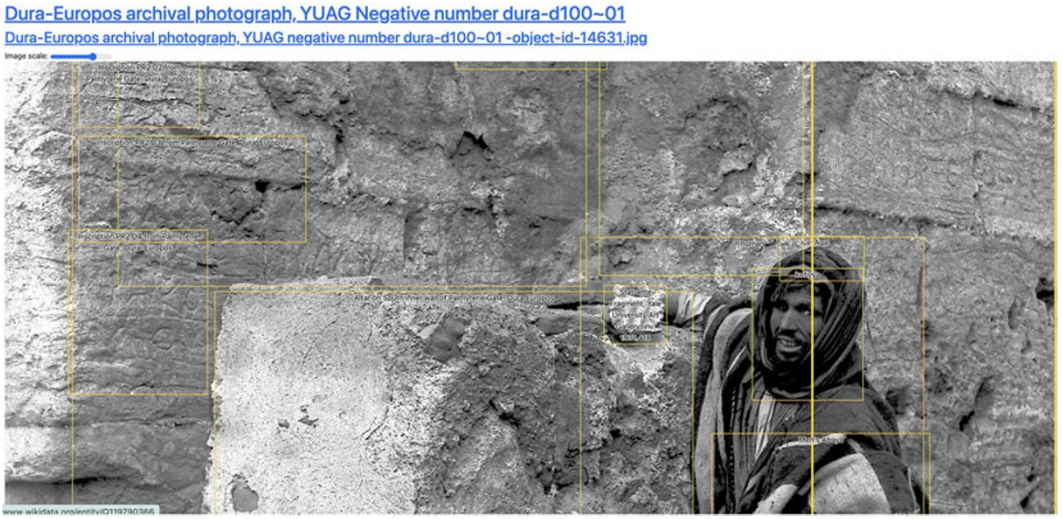


Figure 3. Screenshot showing collaborative annotations made in Wikidata on archival photograph negative number dura-d100~01 of the Dura-Europos Archive Collection, Yale University Art Gallery. Courtesy of the International [Digital] Dura-Europos Archive (IDEA), CC-by-4.0.

3. Stronger interconnections: with more diverse pathways into the archive, the opportunities for internal and external links grow—driven by shared references to the same named entities, such as people and places, as well as semantic relationships and nonarchaeological keywords—potentially connecting archaeological archives not only with each other but also with other kinds of digitized collection, enabling different kinds of exploration, discovery, and contextualization.
4. Improved long-term sustainability: making the value of the archaeological archive under different perspectives emerge indirectly supports its long-term sustainability, as it portrays it as relevant to different communities, and, as such, it is more likely to attract public funding and, perhaps more importantly, to be perceived as something that different communities can feel connected to and engaged with.
5. Stimulating community engagement and ownership: engaging local and descendant communities in metadata creation and archival practices fosters a sense of ownership over cultural heritage. This can lead to more active participation in heritage preservation and storytelling, strengthening intergenerational knowledge transfer.

Conclusions

The challenges in linking the legacy of past archaeological projects, through their archives, with descendant communities and other stakeholders are neither simple nor short-term. However, the potential to not only address but redress some of the myriad silences and elisions embedded within the colonial archive of MENA archaeology is significant. We advocate for a shift in how archives are understood: not merely as repositories of information but as potentially dynamic sites of engagement—spaces that are as complex, contested, and layered as the archaeological sites they document. Given the historically siloed nature of legacy archival collections, shaped by collecting practices and curatorial frameworks rooted in colonial paradigms—and compounded by technical, financial, structural, and other capacity limitations—there is an urgent need to foster both individual and institutional awareness of ethical and inclusive governance principles. These principles must be implemented contextually, on a case-by-case, collection-by-collection basis.

One key pathway forward is to provide guidance and adapt existing ethical stewardship frameworks, such as the CARE principles, for use within MENA-based archaeological archives. This approach supports a more inclusive discipline—one that centers CPK, cogovernance, and responsible access and equitable benefits-sharing. Doing so is not only ethically imperative: it also enables a richer, more

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complex archaeology, one that serves a wider and more diverse range of communities. Such a shift stands to benefit not just archives, institutions, and researchers but also the very communities and regions from which archaeology has historically taken so much and to whom it now owes so much more.

Building partnerships between descendant communities, local heritage professionals, and academic and collecting entities is fundamental to transforming archival stewardship from a static system of knowledge preservation into an interactive and collaborative process. The integration of multiple voices and viewpoints allows for the emergence of a more inclusive practice—one that acknowledges historical injustice, advances ethical research standards, and ensures that archival materials remain accessible and meaningful for culturally connected communities. Our shared commitment to transparency, equity, and distributed authority will shape the future of MENA archaeological archives. Through continuous dialogue, targeted capacity-building initiatives, and inclusive policy reform, we can transform these archives into spaces of empowerment rather than exclusion. The true potential of archaeology—to support cultural resilience and foster historical justice—emerges powerfully when we connect the past with the present, and researchers with communities, in the collaborative production of knowledge.

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Competing Interests. The authors declare none.

Notes

1. We recognize that "stakeholders" and "source communities" are problematic terminologies with extractive histories (Agbe-Davies 2010; Reed et al. 2024). For example, "stakeholder . . . is often poorly defined and used as a catch-all term to encompass groups as diverse as audiences, the public (or publics), communities, citizens, policy makers, funders, research participants, species, and more" (Reed et al. 2024:1482). Although our intention is not to duplicate these problems, it is the very ambiguity of these terms that make them relevant to this discussion. We use them here as intentionally broad terms to refer to any group of people who self-identify as having a close cultural, traditional, or historical tie to cultural patrimony, such as through inhabiting or historically inhabiting a shared region, tradition, language, or culture of origin; and/or who share a relationship of descent or lineage to historical, archaeological, and other cultural heritage material (these are not exhaustive possibilities). We apply these terms when discussing generalized issues that are not in reference to specific community groups, particularly for contexts that involve non-Indigenous communities. See also the *Repatriation Meets the Protocols Workbook* (2021:9) for critical discussion of terminology for Indigenous groups and communities, including Tribes, Tribal communities, and Tribal nations.

2. Taitingfong and colleagues (2024) further define the special cultural, heritage, legal, and other rights of Indigenous peoples. As applied to the CARE principles, "Indigenous Peoples include any of the 476 million people around the world who self-identify as Indigenous, who have been connected to their territories and resources since time immemorial, and carry distinct rights concerning those resources. . . . As political collectives with inherent sovereignty, Indigenous Peoples have continuity with their precolonial societies, and use their own social and legal systems to maintain and transmit relationships with their territories and resources for future generations" (Taitingfong et al. 2024:81).

3. Pelagios was an international digital humanities project running from 2011 to 2022, with funding from Google Ancient Places, the Arts and Humanities Research Council in the United Kingdom, and the Mellon Foundation. The project championed the use of place references to build a network of interconnected resources. The legacy of the project is carried forward by the Pelagios Network Association.

4. Nahan enables map-based cross-searches between archaeological archives that focus on North Africa. Available at: https://nahan.huma-num.fr.

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5. Funding was awarded from the National Archives Research and Innovation Grants scheme. The focus groups were organized and led by Reem Furjani, Director of Scene, https://www.scene.org.ly/.
6. A case in point: Khadijah Jahami, a prominent cultural personality in Libya, depicted in one of the BILNAS photographs, had been recorded simply as "woman with a headscarf."
7. The Recogito intuitive interface has made it a successful choice for teaching, as discussed in Dunn and Vitale (2021).

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