

Article

Giulia Marsili*

Cultural Memory and Digital Heritage: The “Villa Del Casale of Piazza Armerina” Project

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Abstract: This paper explores the relationship between cultural memory, heritage archives, and digital technologies through the case study of the Villa del Casale in Piazza Armerina, a UNESCO World Heritage Site since 1997. Building on theoretical frameworks developed in the last decades, it highlights how archives function not as neutral repositories but as active agents in shaping memory through processes of selection, interpretation, and narration. The project “Digital strategies for enhancing cultural heritage: the Villa del Casale of Piazza Armerina” addresses these challenges by digitizing over a century of archaeological documentation, unpublished excavation diaries, and stored artifacts. Through 3D scanning, semantic metadata enrichment, and an open-source Web platform, the initiative creates a digital ecosystem that bridges the Museum of Palazzo Trigona, the Villa, and their archival collections. Ultimately, the project demonstrates how digital technologies not only safeguard fragile heritage but also actively reshape European cultural memory, transforming archaeological sites into global memory platforms.

Keywords: digital heritage; cultural memory; Villa del Casale of Piazza Armerina; digital archives

1 Introduction. Heritage Archives, Cultural Memory, and the Digital Turn

Cultural memory refers to a framework of shared representations of the past that contribute to the formation of a collective identity in the present. As J. Assmann theorized,

cultural memory differs from communicative memory in its durability, institutional embedding, and reliance on symbolic carriers, such as monuments, texts, rituals, and increasingly, digital infrastructures (Assmann 2011). Although the concept is rooted in historiographical scholarship, in relatively recent times it has been adopted in heritage studies due to its potential to illuminate the processes by which community memory and shared beliefs about the past are formed, maintained, developed, or even dismantled (Veysel 2020; Dinter 2023). In archaeology, cultural memory is anchored in material remains and in the extensive body of documentation produced through excavation, conservation, and scholarly interpretation. These archives, often held in local institutions, serve as repositories of human records and cultural meaning.

Following A. Assmann’s assumptions, “the archive can be described as a space that is located on the border between forgetting and remembering, its materials are preserved in a state of latency, in a space of intermediary storage” (Assmann 2008a, 103). Far from being neutral containers, historical and archaeological archives actively shape what is remembered and how it is remembered. They are not only sites of preservation but also potential resources for alternative narratives. Thus, the interpretation of raw data and its narrativization are crucial in the dynamics of memory-making at any social and cultural level (Rigney and Salerno 2024, 9).

Historical and archaeological archives often hold incredible potential, but they remain underutilized because of difficulties in accessing them, the fragmentation of the records, and a lack of contextual understanding.

At present, digitalization has emerged not only as a technological breakthrough but also as a transformative cultural practice that allows both the safeguarding and democratization of heritage archives (Mandolessi 2024). What was once maintained only through monuments, physical texts, and national institutions is now gathered, curated, reconstructed, and shared in the digital world. Moreover, digital transformation transcends geographical and institutional boundaries, unlocking access to materials once hidden away in local archives or specialized collections. In the case of data scattered in the archives of different

*Corresponding author: Giulia Marsili, Department of History and Cultures, University of Bologna, Piazza S. Giovanni in Monte, 2, Bologna 40124, Italy, E-mail: giulia.marsili2@unibo.it. <https://orcid.org/0000-0003-2732-0605>

institutions, it offers invaluable help in the challenging task of recollecting them and piecing together the narrative. It plays a critical role in enhancing cultural awareness and collective memory, especially of archaeological sites and monuments, whose current state can be seen as a palimpsest of historical interventions and interpretations (Cameron 2021; Marsili 2025). Overall, digital technologies support the recovery, re-contextualization, and dissemination of archival materials, facilitating broader engagement and contributing to a more inclusive understanding of Europe's cultural heritage (Lo Turco et al. 2019).

As digitization involves more and more archives and museums, and enables citizens to interact virtually with memory, the very nature of cultural memory is being renegotiated. Archives have progressively changed their nature from static data repositories to “archives in motion” (Røssaak 2010, 11–26) and “archives in actions” (Opgenhaffen 2022) because the use and reuse of data generate new knowledge and prompt social engagement. Thus, the archive becomes not only a place for storage but also a dynamic actor in shaping memory. In turn, this steering digital turn demands a growing attention to data management and curation (Ixchel et al. 2018, 105–116).

The theoretical frameworks developed by J. and A. Assmann remain crucial in understanding these dynamics (Assmann 2008b, 49–72; A. Assmann 2011; J. Assmann 2011). Their emphasis on the institutional mediation of memory and the role of symbolic media echoes archaeological practice and archive analysis, where documentation and interpretation are deeply affected by curatorial and scholarly choices. P. Nora's concept of *lieux de mémoire* further illuminates the changing role of the archives: they can be considered as “memory institutions” historically rooted in physical commemorative spaces that are mirrors of cultural landscapes (Nora 1989). In this light, digital archives function as new *lieux de mémoire*, changing their nature as networked environments where cultural memory is constantly negotiated and reshaped. Contemporary media scholars have extended these insights, as evidenced by J. Van Dijck's concept of *mediated memories* (Van Dijck 2007). This highlights how digital platforms shape not only what is remembered but also how memory is experienced and performed. The unstable, ever-evolving nature of memory in the digital age is also well embodied in A. Hoskins' theory of connective memory, where archival materials are recontextualized across platforms, audiences, and temporalities (Hoskins 2008, 2022).

Against this theoretical background, this article presents the project of digitization of legacy data about the Villa del Casale in Piazza Armerina to explore the ways in which digitalization may be contributing to the reshaping of

European cultural memory. It considers the intersection between memory practices and digital technologies, proposing that digitalization should be understood not solely as a means of preservation but also as a potential agent in the reconfiguration of cultural memory. Moreover, considering that the Villa was ranked among UNESCO World Heritage Sites in 1997, it exemplifies how the digital turn has profoundly affected archaeological heritage, particularly UNESCO World Heritage Sites, which have long functioned as anchors of collective identity. Digital technologies now enable these sites to function not only as physical destinations but also as global memory platforms accessible through virtual tools, aligning with UNESCO's vision of heritage as a shared human legacy (Debarbieux et al. 2021).

2 The Project

The project “Digital strategies for enhancing cultural heritage: the Villa del Casale of Piazza Armerina, from the late antique building site to the Museum Collection” focuses on the Trigona Palace Museum of Piazza Armerina (Enna), in its interlinked relationship with the archaeological context of Villa del Casale of Piazza Armerina (Marsili 2024, 2025; Marsili and Hassam 2025) (Figure 1). Among the project's priorities is the development of a dynamic digital ecosystem designed to consolidate the extensive documentation related to the site. This includes archival materials produced during more than a century of research from the late nineteenth century onwards. Many of these documents, ranging from excavation diaries and site photographs to correspondence and administrative records, remain unpublished or are dispersed across local archives. Their recovery and digital integration are essential for both the accurate reconstruction of the site's history and for fostering public engagement with the heritage of the Villa.



Figure 1: Villa del Casale of Piazza Armerina, drone photograph (ph. Arch. C. Lamanna).

Currently, community involvement with the Piazza Armerina archaeological heritage revolves around two main poles: Trigona Palace and Villa del Casale. Erected at the end of the seventeenth century and completed in the first half of the eighteenth century, the Trigona Palace is one of the most authoritative examples of late Sicilian Baroque civil architecture. In 1959, the palace was acquired by the Regional Administration for Sicilian Cultural Heritage to house the Museum of the City and Territory of Piazza Armerina. A small section of the museum is currently devoted to an exhibit of findings from the Villa del Casale excavations to showcase the historical development of the monument. Nevertheless, only a fraction of its extensive heritage is currently on display, while most of the relevant findings are currently inaccessible to the public, as they are stored in the Villa warehouses. In addition, the distance between the Museum and the Villa (approximately 6.5 km) frequently hinders the development of a cohesive touristic and cultural itinerary linking the two sites. Moreover, the quality of the information conveyed in the visit itineraries features a substantial mismatch between the two. The didactic apparatus produced for the Museum, with a diachronic path through the monument's main settlement phases, cannot be enjoyed *in situ*, that is, when the visitor is actually inside the Villa. To bridge these gaps, the creation of a web-based digital ecosystem intends to expand users' perception of Piazza Armerina's cultural heritage and provide them with a novel, updated, and comprehensive understanding of its historical developments. By enhancing museum exhibits and virtually accessing artifacts stored in the Villa's storerooms, the project seeks to contribute to the knowledge-producing process, enrich visitors' experiences, and, ultimately, promote cultural exchange.

3 The Archaeological Context

Generally appreciated for the imposing decoration of the 4th c. residence, for centuries the Villa played the role of a key landscape marker with almost uninterrupted occupation from the so-called Villa Rustica (end of the 1st c. AD) to the Medieval village (12th century AD). This settlement palimpsest has been brought to light during many excavation seasons from the second half of the nineteenth century to 2014 (Gentili 1999; Sfameni 2006, 81–90; Pensabene and Barresi 2019). Both the residential and stocking areas of the late antique villa have been uncovered in this long-time span, with more than 60 rooms, two bath complexes, and two spacious warehouses (Figure 2). Several artisanal and housing spaces related to the Arab-Norman settlement that occupied part of the ancient structures and extended into the

surrounding areas were also unearthed (Figure 3) (Pensabene and Sfameni 2006; Bonanno 2020).

After a short break, since 2022 scientific activities have been resumed under the coordination of the University of Bologna and the auspices of CISEM (Centro Interuniversitario di Studi sull'Edilizia nel Mediterraneo tardoantico), with the cooperation of the University of South Florida for the digital curation and technical implementation (Baldini et al. 2024, 2025). New archaeological investigations, coupled with geophysical campaigns and 3D surveys, have been conducted within the framework of the International Summer School ArchLABS (<https://site.unibo.it/piazza-armerina-cisem/it/summer-school>).

The project “Digital strategies for enhancing cultural heritage: the Villa del Casale of Piazza Armerina, from the late antique building site to the Museum Collection” fits in this context, combining the digital preservation of archival and legacy data with an extensive 3D documentation campaign focused on structures and artifacts. The latter involves the use of advanced technologies, including three-dimensional (3D) surveying, geospatial analysis, terrestrial laser scanning, digital photogrammetry, and structured light 3D scanning.

4 Project Methodology and Preliminary Results

The project adopts a strongly interdisciplinary approach, combining historical research, digital archaeology, archival science and information technology. Its methodology is structured around several core phases (Figure 4):

- (1) Identification and recovery of legacy data, including textual and visual materials;



Figure 2: Villa del Casale of Piazza Armerina, general plan of the villa and new excavations to 2023 (Arch. C. Lamanna, after Isabella Baldini et al., “La ripresa delle ricerche”).

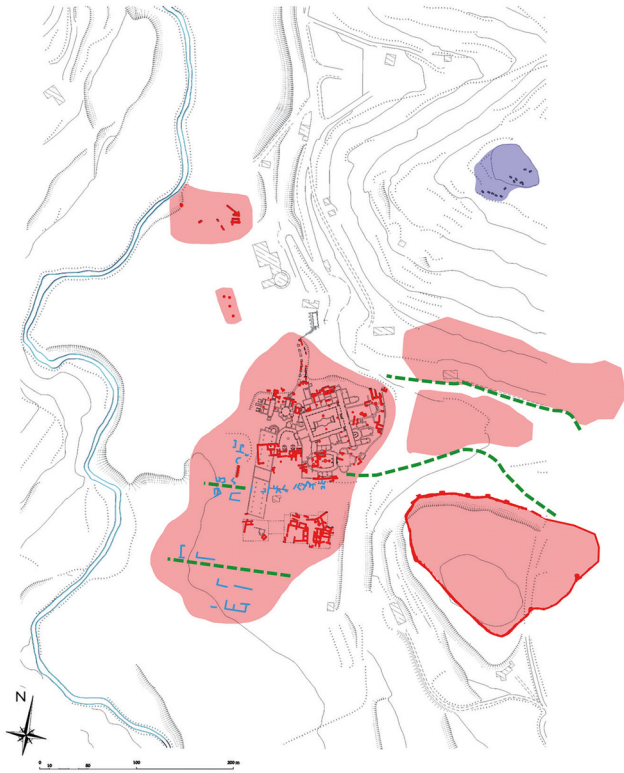


Figure 3: Villa del Casale of Piazza Armerina, the extent of the Byzantine and medieval settlement with the areas investigated to the south east and north of the villa (Arch. C. Lamanna, after Isabella Baldini et al., “La ripresa delle ricerche”).

- (2) Recovery, catalogue, 3D documentation, and modelling of a large group of artifacts from Gentili’s excavations, previously scattered in the Villa’s storerooms and partly exposed at Palazzo Trigona;
- (3) High-resolution digitization of documents, artifacts, and photographic materials using advanced scanning and imaging techniques;
- (4) Semantic metadata enrichment using ontologies and international standards (such as CIDOC CRM) to ensure the semantic interoperability of data;
- (5) Integration and publication of content through an open-source Web3D framework, providing unrestricted access and interactive experiences;
- (6) Narrative and educational design, creating engaging digital storytelling, and virtual exhibitions to enhance public understanding and participation;

Over a century of archaeological excavations has produced a substantial legacy dataset comprising excavation diaries, notebooks, published notes, and reports. Since the mid-seventeenth century, annotations and drawings by local antiquarians and European travellers have documented the

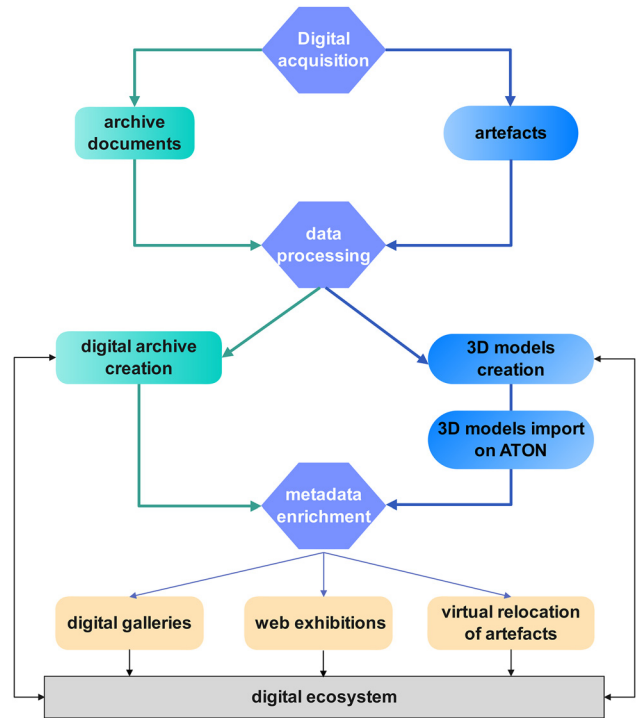


Figure 4: Pipeline for the implementation of legacy data into project digital ecosystem (after Giulia Marsili, “Digital strategies”).

presence of ancient ruins and sporadic discoveries of artifacts. These early records attest to the long-standing interest in the site and contribute to the allure of the area, enhancing its appeal alongside its natural beauty (Figure 5). Nevertheless, it was not until the late nineteenth century that documented discoveries and sporadic excavations began to take place. The first remains of structures and mosaic floors were unearthed in 1820, and in 1881 Luigi Pappalardo revealed the earliest figurative mosaics in the Trichoras hall (Agnello 1965; Chiarandà 1654; Gentili 1999). Subsequent excavation campaigns occurred between 1929 and 1940 under the direction of Paolo Orsi, Giuseppe Cultrera, and Biagio Pace, who expanded Pappalardo’s initial findings. Their work extended from the outer wall of the exedra in the elliptical courtyard to the Triapsidal Hall, the ambulatory of the Great Hunt, and the room featuring the so-called “bikini girls” mosaic, with a primary focus on exposing both mosaics and architectural elements (Orsi 1934; Cultrera 1936; Pace 1951, 454–476; Pace 1955). The most significant excavation phase followed between 1950 and 1955, when Gino Vinicio Gentili led investigations that brought to light the majority of the Late Antique building remains and oversaw the restoration and conservation of the mosaics until 1963 (Figure 6) (Gentili 1999). In 1970, Andrea Carandini conducted targeted trenching to clarify the stratigraphic sequence in selected areas (Carandini et al. 1982). Further excavations carried out

between 1983 and 1988, directed by Ernesto De Miro and Graziella Fiorentini, uncovered large-scale storage installations located in front of the Villa's main entrance (De Miro 1988, 58–73). Additional discoveries emerged during Lorenzo Guzzardi's investigations in 1996–1997, which revealed isolated medieval structures (Guzzardi 1997). Finally, between 2004 and 2014, the team led by Patrizio Pensabene made a substantial contribution by uncovering a new bath complex south of the Villa and organizing an extensive body of data from earlier excavation campaigns (Pensabene and Barresi 2019).

This brief overview of the site's research history highlights the extent to which our understanding and appreciation of the archaeological site – both within the local community and among the wider public – have benefitted from the contributions of various individuals who engaged with the site at different historical moments and through diverse methodological approaches. The careful recovery and reconstruction of this fragmented legacy not only enhances our comprehension of archaeological data but also offers valuable insights into the cultural and political contexts of Sicily across different historical periods. To fully appreciate this multi-layered heritage, legacy data from past excavation campaigns were systematically collected, organized, and digitized within a GIS environment (Figure 7a). The integration of excavation data from Gino Vinicio Gentili and Ernesto De Miro has already made it possible to reconstruct the dynamics and spatial development of the excavations over time, as well as to assess the consistency and spatial distribution of various categories of finds across distinct phases of occupation (Ellena 2023; Pizzi 2023).

The second step in the comprehensive enhancement of Villa del Casale's legacy data involved the creation of 3D models of artifacts currently housed in the Villa's storage facilities, thanks to the collaboration of the University of



Figure 5: Ruins of the aqueduct running north to the Villa in a 18th c. drawing by Jean Houel (Jean Houel, *Ruines de Gela (Mediterranea)*, 1776).



Figure 6: Villa del Casale of Piazza Armerina, the courtyard, the corridor of the great hunt and the Basilica after excavation (courtesy of Soprintendenza per i Beni Culturali e Ambientali di Enna).

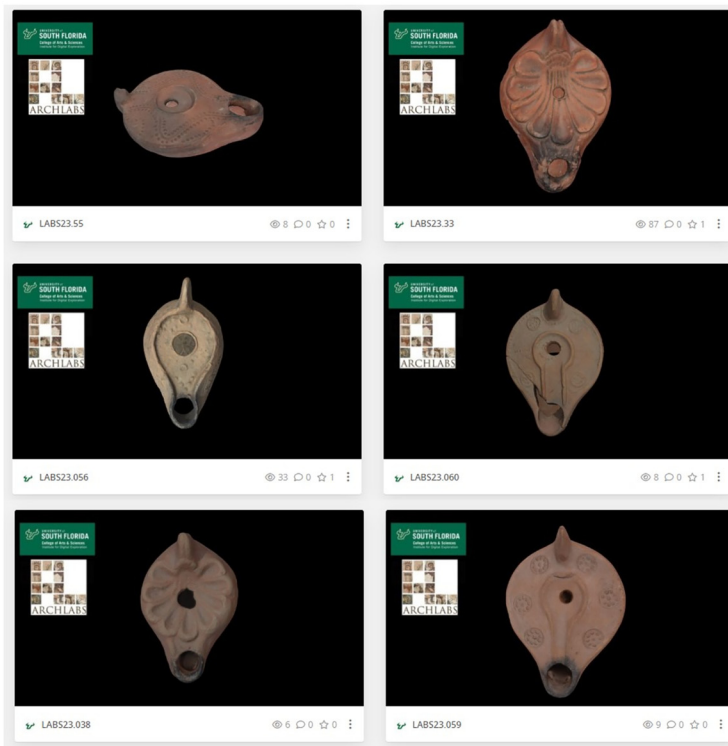
South Florida (Figure 7b). Over 100 objects, primarily lamps from the Frigidarium of the northern bath complex, alongside materials from both the Late Antique and Arab-Norman phases of occupation, were digitized using handheld photogrammetry techniques and an Artec Space Spider structured light scanner (Hassam 2023; Marsili and Hassam 2025, Section 4). This digital dataset not only enables a scientific re-evaluation of the artifacts within their original archaeological contexts but also fosters broader and more inclusive access to materials that would otherwise remain inaccessible to the general public.

This process was accompanied by 3D scanning of the entire exterior of the Villa complex. It was completed using Faro Focus premium Terrestrial Laser Scanners, combined with data from a prior digitization campaign that focused on the Villa's mosaics, ending in the creation of a 3D scan of the entirety of the villa complex with an accuracy of ± 1 mm at 10 m (Gabellone et al. 2020; Vennarucci et al. 2021; Kingsland 2023).

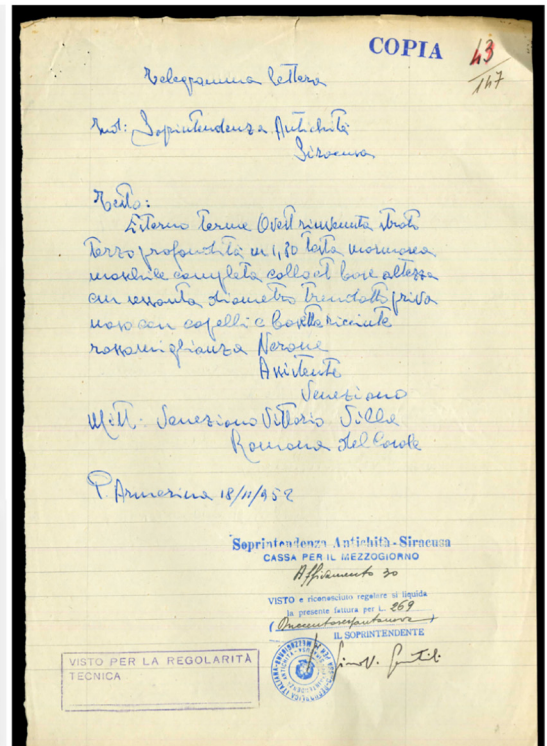
Approximately one hundred partially unpublished graphic and photographic documents dating from the late nineteenth to the early twentieth century have been recovered thanks to a thorough review of primary archival collections held by the regional Superintendencies of Siracusa and Enna. These images document key excavation phases and the monument's condition before the extensive twentieth-century restorations. They document the earliest excavation campaigns, providing rare insights into the initial state of the site prior to major restoration interventions. These are complemented by formal documents detailing the logistics of Gentili's campaigns and his correspondence with cultural authorities, scholars, and institutions involved in the



a



b



c

Figure 7: a) Thematic map illustrating the chronology of the Gentili excavations (from Marina Pizzi, “Legacy data”); b) Digital collection 3D digital collection of finds from the Gentili excavations (©University of South Florida); c) Telegram announcing the discovery of a marble statue in 1952 in the area of the baths (after Marsili 2024, courtesy of Soprintendenza per i Beni Culturali e Ambientali di Siracusa, Proprietà della Regione Siciliana, Assessorato dei Beni Culturali e dell’Identità Siciliana - Dipartimento dei Beni Culturali e dell’Identità Siciliana - Soprintendenza per i Beni Culturali e Ambientali di Siracusa) (elab. G. Marsili).

excavation process. These documents shed light on the operational challenges of early archaeological activities and provide valuable insights into significant discoveries (Figure 7c). Among the Siracusa Superintendency archive documentation, an unauthored and undated excavation diary was also recovered, which has been transcribed and analyzed through AI techniques (Transkribus; Handwritten Text Recognition; Handwriting Analysis Tool) (Marsili and Hassam 2025). This investigation led to the identification of the earliest Piazza Armerina manuscript field notes, dating back to 1935. In this year, Giuseppe Cultrera resumed the excavations in the Triclinium area, previously investigated by Paolo Orsi, thanks to funding from the Municipality of Piazza Armerina and on the occasion of the celebrations of the Augustan Bimillennium (Muscolino 2017, 176). The manuscript was likely compiled by Domenico Inglieri, Paolo Orsi's former collaborator, who was appointed site manager on the excavation site in place of the Superintendent (Inglieri 2017, 21–23; Puglisi 2017, 54–56) and similarly entrusted with excavation management by Cultrera.

One of the project's major goals is to develop an open-access, web-based digital platform to host, present, and freely share all materials produced during the project's lifespan. A web portal was created to improve access to previously unavailable resources and support both scientific research and the virtual recontextualization of finds from past excavations. A dedicated digital collection platform has been implemented using a heavily customized installation of the Omeka Classic CMS to host and display 2D and 3D replicas of artifacts and archival materials, allowing for the structured presentation of digitized data and the creation of virtual exhibitions (Marsili and Hassam 2025, Section 4) (<https://www.cisemda.com/>).

The virtual environment is designed to feature several key sections, including a curated digital collection of photographs and excavation diaries from the earliest excavation seasons, virtual reconstructions of the Villa's architectural structures and decorative elements, 3D galleries of artifacts accompanied by scholarly metadata and annotations, and thematic virtual exhibitions exploring aspects such as conservation history, artistic iconography, and excavation methodologies. The latter will adopt a space-centric enhancement approach and a real-time narrative line mostly focused on historical annotation to enhance the great array of legacy data recovered to overlap with physical space and interlink with digital surrogates of objects and spaces. Informative storytelling techniques will be used to integrate historical data and cultural features with digital annotations and 3D visualizations.

A selection of 3D models of objects from the baths complex of the Villa del Casale has already been post-processed and progressively made available online,

encompassing metadata for both traditional and digital CH objects. Currently, 3D models are available in a Sketchfab collection, while further experimentation will regard in the next future the upload of the Villa model on the open-source Web3D framework ATON, with the selection of specific Points of Interest (PoIs) (Fanini et al. 2021). Semantic metadata enrichment will be ensured by the adoption of ontologies and existing standards, such as CIDOC CRM, integrating application profiles for specific targets, such as CHAD-AP, for the description of acquisition and digital preservation workflows (Barzaghi et al. 2024). As far as digital augmentation is concerned, data visualization will be used to overlay detailed information about the objects on display, making connections between artifacts, discoveries, biographies of archaeological research key figures and ancient owners of the Villa, and historical events and contexts.

This infrastructure not only ensures long-term preservation and scholarly usability but also promotes heritage accessibility for non-specialist audiences, including educators, students, tourists and local communities. The use of open technologies and FAIR data (Findable, Accessible, Interoperable, and Reusable) principles guarantees the transparency, reusability, and scalability of the digital assets produced (Wilkinson et al. 2016). Given the general difficulty in digitally accessing the Villa del Casale archaeological heritage, the transformation of previously inaccessible or fragmented archaeological records into structured digital resources that can be easily located, accessed, and reused remains crucial. In particular, by organizing materials with standardized metadata, persistent identifiers, and interoperable formats, it ensures that the data become findable within broader scholarly ecosystems. More broadly, the project addresses long-standing gaps in accessibility and preservation, demonstrating how digitization and careful data curation can make cultural heritage information discoverable and meaningful for both research and public engagement (Marsili and Hassam 2025, Section 4).

5 Linking Legacy Data, Cultural Memory, and Digital Practice

The intersection between cultural memory, heritage archives, and digital technologies reveals how archaeological documentation acts as an active mediator between past and present. As demonstrated by recent developments in archive archaeology, legacy records – far from being neutral by-products of fieldwork – encode the methodological, political, and social frameworks within which archaeological

knowledge was constructed (Bobou et al. 2025). The archival corpus of the Villa del Casale offers exemplary instances of this dynamic. Excavation diaries such as the 6-month manuscript later attributed to Domenico Inglieri, with its detailed account of labor organisation, excavation logistics, and even weather conditions, make visible the operational realities and interpretive priorities of 1930s fieldwork, revealing both early methodological limitations and the cultural milieu in which the site was investigated (Marsili and Hassam 2025, Section 3). Likewise, the graphic and photographic documentation of Paolo Orsi's and Giuseppe Cultrera's campaigns – ranging from images of the early uncovering of the Triclinium mosaics to letters negotiating land acquisition – testifies to the entanglement between scholarly practices, local authorities, and heritage politics, exposing how the site's narrative was shaped through institutional and civic mediation (Marsili 2025).

Within this framework, the Villa del Casale digital project can be understood as a typical case of how digital archives mediate the reconstruction and reactivation of cultural memory. The recovery and integration of legacy data – excavation notebooks, photographs, maps, correspondence, and administrative documents – constitute not merely an act of conservation but a multilayered process of memory reconstruction. Through digitization, scattered and fragmented records are reintegrated within a coherent digital infrastructure that allows them to be rediscovered, connected, and interpreted anew. In doing so, the project transforms the archive from what A. Assmann has described as a “space of latency” into a space of connectivity, performativity, and cultural regeneration.

Digital technologies make these multilayered histories newly accessible and intelligible. By semantically integrating heterogeneous records – diaries, correspondence, early photographs, administrative notes, and technical sketches – within a unified digital ecosystem, the project not only preserves fragile archival materials but also reanimates them as agents of cultural memory. The gallery of photographs depicting the Decauville railway, for instance, illuminates the infrastructural challenges and engineering decisions that structured mid-twentieth-century excavations (<https://www.cisemda.com/items/show/24>), while the 3D documentation of artifacts from Gentili's campaigns allows researchers to appreciate and recontextualize finds that had been dispersed across storerooms for decades (<https://www.cisemda.com/collections/show/1>). Virtual exhibitions also help in understanding the research activity behind the curatorial process that led to the digital publication of specific dataset, as in the case of the fieldnotes entitled “Giornale degli Scavi in Contrada Casale Piazza Armerina,” discovered in the

archives of the Superintendency of Syracuse. Metadata enrichment, semantic mapping, and virtual reconstruction – core components of the project – operate as acts of cultural translation: they do not merely reproduce archival content but reinterpret and reframe it within a new discursive and technological ecology.

In this sense, the act of digital curation becomes a performative practice of remembering, in which the processes of selection, recontextualization, and visualization generate new epistemic and affective relations with the past. The digital archive functions simultaneously as an instrument of knowledge and an agent of cultural transformation, mediating between historical evidence, scholarly interpretation, and collective engagement. Moreover, the digital archive extends the social life of archaeological data by opening it to new publics and participatory practices. As materials are digitized, annotated, and disseminated online, they circulate within a networked memory environment in which researchers, students, and local communities become active contributors to the process of remembering – a dynamic that resonates with A. Hoskins's notion of connective memory, according to which memory is constantly performed and reshaped through digital connectivity.

In the case of the Villa del Casale, the transition from physical to digital archive enables a renewed and more plural understanding of the monument's significance across temporal and spatial scales. The digital repository does not replace the traditional archive; rather, it amplifies and extends it, transforming a fragmented and locally confined set of historical records into a living archive – a hybrid environment where traces of the past are dynamically connected to present and future interpretations. Within this living system, digital surrogates, semantic networks, and narrative interfaces converge to create a multi-vocal memory platform that fosters dialogue between institutional heritage, academic research, and public participation.

6 Conclusions

The digital project of the Villa del Casale in Piazza Armerina aims to broaden public engagement with local cultural heritage by developing a web-based platform that integrates both the artifacts on display in the Museum and the extensive collections preserved in the Villa's storerooms. Employing advanced digital technologies, the initiative seeks to produce a range of resources that retrace and enrich the threads of cultural memory by documenting the monument's complex history and contextualizing its discovery within specific historical and cultural frameworks.

Through open access to curated digital content, the project enhances both remote and on-site engagement, offering immersive visualizations and precise reconstructions that support enriched visitor experience and thematic itineraries. This approach allows for a deeper and more participatory understanding of the Villa's historical significance.

Targeting museums, educational institutions, local authorities, and the wider public, the digital strategy seeks to generate a broad impact. By digitizing fragile or otherwise inaccessible artifacts using high-resolution 2D and 3D scanning technologies, the project not only supports conservation and scholarly research but also extends the reach of cultural heritage to new audiences. Immersive virtual environments and multimedia tools further enable innovative educational practices and cultural tourism, encouraging active community participation.

Crucially, the project embeds these digital resources within a broader narrative framework designed to shape cultural memories across local, national, and European scales. The digitized material becomes more than a record of the past; it actively participates in the construction and transmission of shared memory. By enabling access, fostering dialogue, and connecting dispersed data and interpretations, the project contributes to a dynamic and evolving memory landscape that reflects the Villa's enduring significance in the cultural imagination of Sicily and, more broadly, Europe.

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