

Access to Artists' Studios: an Ontology-Based Framework for the Documentation and Analysis of Artists' Studios

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Abstract

Artists' studios are vital creative units that offer valuable insights into the artistic process of an artist, yet they remain unexamined and under-documented. This paper presents an ontology-based documentation framework that captures the dynamic relationship between artists and their studios, applied to two case studies involving studios of artists using earthenware clay and stone. The framework draws upon ontological approaches and utilizes digital interactive technologies to provide engaging explorations of artists' studios. By implementing the CIDOC Conceptual Reference Model and the Art & Architecture Thesaurus vocabulary, the framework promotes a shared understanding and ensures the long-term preservation of artists' studios in a broader cultural context.

Keywords

Artists' studios, Digital documentation, Interactive navigation, Semantic framework

1. Introduction

Artists' studios have long been recognised as dynamic spaces that reflect the evolving creative journey of an artist. Tangible and intangible elements within the social, historical and cultural environment of the studio can reveal insights related to the artist's artistic process but also personal narratives.

Research documents, personal sketchbooks, artwork documentation, photographs, and other ephemera are filled with evidence that helps to clarify the life and work of an artist. According to Jenny Sjöholm, studio objects 'can be used as raw material in the making of something, [but mostly] their function is described to create and bring opportunities to think and reflect as well as of comfort to artists' work process...' [1]. Each of these elements can form a puzzle to reveal the deep connections between the artist and the creative output and help us have a better understanding of their creative space.

Studying these ephemeral elements and the studio as a space can be valuable in a broader historical context not only for the artist's work but also for a cultural heritage context. Even though digital documentation seems the only long-term solution for protecting such creative spaces, the lack of comprehensive documentation methodologies for documenting artists' studios increases the risk of losing important creative resources and keeping them inaccessible.

To address these risks, this paper proposes a semantic documentation framework that utilizes digital technologies and methods to capture the multifaceted nature of artists' studios. The framework documents the relationship between artists and their studios based on a wide range of elements connected to the social and cultural environment of the artist using interactive digital documentation methods. The interactive survey of the studio's physical space is based on a 360° panoramic documentation and a video interview of the artists interacting with their workspaces to provide an immersive and engaging experience. Through the documentation, these connections are then encoded and modelled using the CIDOC Conceptual Reference Model and Art & Architecture

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Thesaurus structured vocabulary by the Getty Research Institute. The ontological approach of the framework ensures compatibility and integration with existing cultural heritage standards and systems to mitigate the fragmented resources.

This innovative approach will ensure the preservation and accessibility of the studios for study and analysis. The framework's interactive features will open up new educational and research possibilities, offering insights into the artist's artistic and professional journey. By unlocking the stories hidden within artists' studios, the study will contribute to its cultural significance but also to the preservation of cultural heritage.

2. Theoretical Background

Traditionally, the studio has been considered the central site where creativity is nurtured, and the artists shape their ideas. In Gustave Courbet's 1855 painting *L'Atelier du peintre* (The painter's studio)³, we can see this dynamic relationship as he places the artist in the centre looking detached from what is happening around him surrounded by friends, peers, critics, and philosophers and 'the other world of everyday life, the masses, wretchedness, poverty, wealth [2].

Through the mentioned painting, it is noticeable how traditionally the studio comes to be seen as either solitary, messy rooms with a lonely artist or a noisy grand workshop with eccentric characters. Most likely, these clichés do not resemble the reality of these creative spaces today but live in the popular imagination. The diversity of art disciplines made many artists no longer have typical studios, but they maintain some working space [3]. Still, the studio remains an essential instrument for an artist's artistic performance. But what makes the study of an artist's studio so important?

The studio is a vital space where an artist's creative process unfolds, offering insights that are as revelatory as the artworks themselves [4]. Research documents, personal sketchbooks, artwork documentation, photographs, and other ephemera are filled with evidence, traces, and archives to clarify the artist's creative process. They can be described as "visual evidence" of the artist's creative journey.

For this reason, access to an artist's personal space promotes critical thinking about the artist's work, creates interpersonal connections, and studies every artist's work in depth. Collecting references and pieces of evidence about their artistic practice can be valuable in a historical context and sense and can initiate educational conversations about an artist's practice. Researchers and art historians can gain insights into an artist's influence, social relationships, and working methods [5].

Even though these spaces hold significant cultural and historical value, are currently still underexplored and underdocumented. Without the studios' documentation, the risk of losing these creative resources as part of our cultural heritage can be high.

Due to redevelopment, neglect and the temporary nature of studios as spaces, their documentation is crucial for preservation, especially with the historical studios as older-generation artist do not have the technical knowledge to preserve their creations and spaces. The challenge becomes more complicated with artists who use ephemeral and temporary materials in their studio which makes the documentation more difficult. Without documentation, we risk losing these creative spaces as part of our cultural heritage and art narratives.

The consequences of inadequate documentation pose significant risks, both for the preservation of cultural heritage resources but also for the safeguarding of historical knowledge that comes with it. The main risk is the loss of valuable historical and cultural context around an artist's creative process - such as the artist's habits, routine, working techniques, documents, and unfinished works. This loss leads to several associated risks: first, it impedes research and innovation and second to a long-term cultural and historical fragmentation.

³ <https://www.musee-orsay.fr/fr/oeuvres/latelier-du-peintre-927>

3. Methodology

To address the risks followed by the undocumented and fragmented resources related to the artist's studio, the study developed a semantic documentation framework to capture and share the relationship between artists and their studios.

The first phase of the study focuses on the collection of tangible and intangible elements from the urban and social environment of the studio which need to be identified and documented. The space will be documented through a 360° panoramic camera for a detailed and interactive documentation of the studio. This approach allows a high-resolution exploration, with the ability to zoom into fine details and interact with all objects within the studio environment. The panoramic viewer enhances the exploration by allowing you to add information and tap and study on specific studio objects, such as artworks or tools, and read descriptive texts or audio comments by the artist.

Additionally, with the panoramic documentation, video interviews will be conducted with the artists in their studio spaces. These interviews will offer deeper insight into the artist's working methods, how they interact with their environment, and the personal relationship of objects within their studio. The combination of video and 360° panoramic tours will provide a rich multimedia and engaging experience for the documentation.

The collected data will be then studied and post-processed to break down into connections between the artist and the studio. The connections will be revealed from the study of the studio such as how the artists use the space, what time the artist starts working in the studio, or even the data on the space became a studio. These connections are then encoded and modelled using the CIDOC Conceptual Reference Model and Art & Architecture Thesaurus structured vocabulary by the Getty Research Institute. The creation of an ontology based on the connections with CIDOC-CRM will ensure accessibility, interoperability, and comprehensive presentation of the data, while the description with the AAT Vocabulary will provide a standard, controlled vocabulary for generic concepts related to art and cultural heritage for better access to information related to material cultures [6], [7].

In the domain of cultural heritage, the CIDOC Conceptual Reference Model (CRM) is the most appropriate and widely accepted ontology for the documentation of cultural entities. Data from different sources are integrated through the CIDOC-CRM framework to establish the relationships between implicit and explicit concepts [8]. CIDOC-CRM is an event-based ontology that provides a set of 'entities' describing real-world objects and actors that can be connected through explicit relationships [9].

The ontology only becomes usable for real-life applications when its concepts and instances use glossaries with structured terminologies. A controlled vocabulary is defined as an information tool with standardised arrangements of words and phrases representing a concept described consistently [7]. Since there is no consistent term to reference subjects, a controlled vocabulary can improve access to visual arts and material culture information. The Art & Architecture Thesaurus (AAT) by the Getty Research Institute provides a standard, controlled vocabulary for generic concepts related to art and cultural heritage for better access to information related to material cultures. The vocabulary provides accurate relationships and definitions of subject matters in hierarchical display and alphabetical order to provide 'knowledge creation, research, and discovery' [7]. The use of an ontological reference model to describe the relationship between artists and their studios can provide a semantic documentation framework for the thorough analysis of artists' studios.

By implementing this methodology, the framework aims to provide a documentation methodology for artist studios that can be applied across different contexts, from contemporary to historical artists, ultimately contributing to the preservation of artistic and cultural heritage.

4. The Case Studies

The ontology-based documentation framework was first implemented in the studio of Lemba Pottery and is currently being applied to the studios of Yianni Yianni and Elina Ioannou, both located in Cyprus.

Lemba Pottery, created by George and Sotiroula Georgiades, integrates traditional Lapithos earthenware methods with modern stoneware techniques. Lapithos, a village on the slopes of the Kyrenia Mountain Range, became well-known for its glazed pottery in the 14th century. Potters from Asia Minor found that combining clay, water and natural materials near the village can produce excellent-quality clay for earthenware.

In 1988, George and Sotiroula opened a new workshop in the village of Lemba, near Paphos while he was still practising the traditional pottery techniques learned from his father. George also began experimenting with stoneware construction, firing, and glazing and as a result, their work fuses traditional earthenware techniques with a mid-century modern aesthetic (figure 1,2). The organic shapes and natural colors of the pottery are reflected in their studio with the sleek and minimal design constructed of industrial materials. Both the studio and the pottery uphold the ethos of Lapithos—craft that celebrates Cyprus’s natural materials and landscapes. In this way, Lemba Pottery is an important repository of the long tradition of art and making in Cyprus.



Figure 1: View of the workroom. Photograph by the author.



Figure 2: View of the kiln room. Photograph by the author.

The second case study is now being applied in the studio of Yianni Yianni and Elina Ioannou. Yiannis built the studio 25 years ago, and Elina has been using it for about 10 years. While Yiannis is a self-taught sculptor who transitioned from applied arts to creating his sculptures, Elina, a visual artist trained in France, works primarily within the rules of contemporary art. Their shared space showcases how different artistic approaches can coexist within the same studio, each using the same material—local calcarenous stone—but with distinct techniques and perspectives.

Yiannis, one of the few remaining stone carvers in Cyprus, has been creating artistic sculptures and architectural ornaments since 1975. Elina, one of the rare female artists excelling in the male-dominated field of stone carving, was taught by her father from a young age and has recently incorporated direct stone carving into her work.

Surrounded by trees in a tranquil environment, the studio is located on the same plot as the family home. The space itself combines industrial elements with personal touches, giving it a warm, lived-in feeling. The studio is organized with precision, reflecting Yiannis' structured approach to his craft. Tools and equipment, some self-made, are neatly aligned alongside large limestone blocks, ready to be transformed into art. The studio's collection of machines, both new and old, stand as milestones in Yiannis' artistic journey, making his workspace feel like a living museum—a cabinet of curiosities, where every object tells a story about his work and evolution as an artist.

Outside the studio, in an open-air space, Yiannis and Elina do much of their heavy work together, benefiting from the natural light. The Cypriot landscape surrounding the studio serves as a daily source of inspiration for Elina, while the tranquillity of the studio allows Yiannis to focus deeply on the fine details of his sculptures. Scattered around the outdoor space, fragments of finished and unfinished sculptures create an impression of walking through an archaeological site, blending art with nature. Overall, visiting their studio feels like stepping into an artistic timeline, where the past and present merge in a serene, yet productive, environment (figure 3). The second case study is still in progress and currently in the data collection stage, with an ongoing documentation of the studio space.



Figure 3: View of the studio. Photograph by the author.

5. First implementation of the framework

The first completed implementation of the framework was conducted in the studio of Lemba Pottery. The studio was documented for the panoramic tour using an Insta360 ONE camera, followed by manual post-processing with Pano2VR software. The panoramic experience offered an interactive exploration, such as exploring objects like artworks, paintbrushes, and notepads to access descriptive text or audio explanations (figure 4). After the panoramic documentation, a Canon EOS 80D camera was used to film George Georgiades creating a single piece of stoneware pottery, documenting the entire process—from shaping to firing and glazing—over several weeks. The film captures the atmosphere of the studio and interviews the potter during different stages including shaping, drying, firing and glazing (figure 5) [10].



Figure 4: Panoramic documentation of the studio. Photograph by the author.



Figure 5: Video capture of George Georgiades at work. Photograph by the author.

The documentation revealed connections between the potter and his studio related to his pottery creation, materiality/methodology and inspiration. Through the documentation the study discovered how the potter prefers to work during the morning and midday when the neutral white, slightly warm light creates playful shadows in the studio. Early hours allow him to intentionally create with the warmth of the sunlight and experiment with the shadows.

The documentation showed how natural elements inspire his creativity and influence his work, which mainly uses minimal decoration and warm, earthy glazes. The blue of the sea, the dark green of the forest, and the orange colour of the sunrise are his main inspirations. During the interview, the potter mentioned how 'the simplicity of nature and earth provides endless shapes, forms and colours; from leaves, the turquoise blue of the Mediterranean Sea, sea pebbles and sand'. The potter works with stoneware clay and develops his own lead-free glaze recipes that are tactile and inviting, with a distinctive surface texture.

These valuable insights about George Georgiades' studio were then mapped using the CIDOC-CRM reference model and described through the AAT vocabulary, creating an ontological schema. The paper will present the part which describes the artistic production of the artist in the studio.

The first event (Figure 6) has as a starting point George Georgiades (E21 Person) who forms an idea ('P187: has a production plan' to 'E29 Design or Procedure') during the morning ('P8 took place on or within (witnessed)' during 'E4 Period').

(E53 Place) 'P172 contains' windows (E70 Thing) that 'P56 bears feature' a 'E26 Physical feature'. The window view (E26 Physical feature) influences (P15 was influenced by (influenced)) his pottery work (E24 Physical Human-made thing).

The step after the creation of the ontology was to describe four main CIDOC entities with the AAT vocabulary (Table 1):

Table 1

Mapping of AAT Vocabulary to CIDOC-CRM entities

CIDOC-CRM Entities	AAT Vocabulary
E39 Actor	Agents Facet
E24 Physical Human Made Thing	Object Facet
E55 Type	Object Facet
E57 Material	Material Facet

An example of a CIDOC-CRM entity of the case study described by the AAT Vocabulary is the E39 Actor.

The first entity, E39 Actor, attempts to present the broader spectrum of the ontology in the discipline of artists by showing the potential to be expanded and also cover people in crafts.

The entity created two general hierarchical positions made from two different but similar vocabularies:

A) Agents Facet

.. People

... People (agents)

..... <people by occupation>

*..... **<people in crafts and trades>***

B) Agents Facet

.. People

... People (agents)

.... <people_by_occupation>

..... <people in the humanities>

..... <people in the arts and related occupations>

..... <people in the arts>

..... <people in the visual arts and related occupations>

..... <people in the visual arts>

..... <people in the visual arts and related occupations>

..... <people in the visual arts>

*..... **<artists>***

The concept of Artists follows an extensive hierarchy of anatomical constituents, made up of a few of the main art disciplines filtered by medium or work type. Similarly, the People in crafts and trades concept follows an extensive hierarchy of anatomical constituents comprising a few main craft disciplines filtered by material.

The following proposed partonomy shows the class of E39 Actor descriptively:
E39 Actor:

1.1 Artists (visual artists)

- 1.1.1 Artists by medium or work type*
 - 1.1.1.1 Conceptual artists*
 - 1.1.1.2 Environmental artists*
 - 1.1.1.3 Glass artists*
 - 1.1.1.4 Installation artists*
 - 1.1.1.5 Performance artists*
 - 1.1.1.6 Photographers*
 - 1.1.1.6.1 Digital photographers*
 - 1.1.1.6.2 Photographic artists*
 - 1.1.1.7 Printmakers*
 - 1.1.1.7.1 Engravers (printmakers)*
 - 1.1.1.7.2 Etchers*
 - 1.1.1.8 Sculptors*
 - 1.1.1.8.1 Metal sculptors*
 - 1.1.1.8.2 Stone sculptors*
 - 1.1.1.8.3 Lithographers*
 - 1.1.1.8.4 Lino cutters*
 - 1.1.1.9 Sound artists*
 - 1.1.1.10 Video artists*
 - 1.1.1.11 Painters*
 - 1.1.1.11.1 Painters by the subject of work*
 - 1.1.1.11.1.2 Figure painters*
 - 1.1.1.11.1.3 Landscape painters*
 - 1.1.1.11.1.4 Portrait painters*
 - 1.1.1.11.1.5 Still-life painters*
 - 1.1.1.12 New Media artists*
 - 1.1.1.12.1 Digital artists*

1.2 People in crafts and trades

- 1.2.1 People in crafts and trades by material*
 - 1.1.1.1 Ceramicists*
 - 1.1.1.1.1 Potters*
 - 1.1.1.2 Woodworkers*
 - 1.1.1.2.1 Fine Woodworkers*

The above examples are part of the ontology created for the case study of Lemba pottery, based on the relationships between the artist and the studio extracted from the interactive documentation. The examples show the benefits of implementing interactive documentation methods to easily capture the space in order to get insights about the individual's artistic journey, philosophy, influences, thinking process, and materiality for the development of an ontological schema.

6. Significance

The proposed ontology-based documentation framework offers a significant contribution to cultural heritage related to the aspect of access, preservation and analysis. By providing interactive

documentation of private spaces like studios, the framework can shed light on historical and cultural resources which are not easily accessible, yet deeply rooted in our heritage. The documentation of these resources, both tangible and intangible, ensures the preservation and analysis of an artist's work, philosophy, fabrication process, materiality and overall approach which is crucial for preserving historical resources and the legacy of the artist.

The results from using such a framework can offer an ongoing and in-depth study and analysis of the space and artist's work to the general public, scholars, art historians, researchers, material scientists, conservators and students. The interactive panoramic tour, with close-up and detailed views of tools and the layout of the workspace, provides detailed visual and material evidence, that enriches our understanding of their creative process and technique. The ability to study these elements can inspire the development of new methodologies for documenting and preserving cultural heritage, and enrich educational possibilities related to art history.

Additionally, the creation of such a framework will improve the fragmented documentation of past attempts by offering a more comprehensive way of studying artists' studios. The use of an ontological approach allows the study to align and match with digital standards, and to promote the study on broader applications and interpretation. Furthermore, the flexible and digital nature of the framework allows it to be adaptable on a global scale by research institutions, museums and other organizations. It can be applied across various cultural heritage disciplines in diverse cultural contexts, enhancing the significance of artists' studios in a border cultural and art context.

7. Future Plans

The study aims to improve and expand the possibilities of the documentation framework by applying it to case studies from various art disciplines. The documentation of a broader range of artists' studios but also on both historical and contemporary studios can offer valuable insights into the significance of these creative spaces and examine the effectiveness and adaptability across different contexts. Specifically, the framework will be tested in studios where the artist's direct input is available or not. This will help the framework to determine whether it can effectively interpret and document the studio's content using direct and indirect sources and provide a meaningful and accurate representation. By identifying any gaps and possible improvements through the implementation of case studies, the framework will be further developed to work on the problem of the lack of systematic documentation methodology that enables the capture of the dynamic relationship between artists and their studios.

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Declaration on Generative AI

The author has not employed any Generative AI tools.

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