

Research on Street Art in the Digital Space

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ABSTRACT (ENGLISH)

The purpose of this proposal is to research methods for preserving memories of street art objects in virtual space, as well as potential alternatives to preserve them. A single database of works worldwide can be created using photographic documentation in a common digital archive, which is considered the most suitable option. This proposal examines the potential problem of creating digital archives and preserving memory in the online space, as well as the potential use of databases. Possible uses of digital works include maps that display existing and disappeared street art objects, and educational initiatives that utilize preserved street art in digital spaces. Creating an online repository accessible to all can help increase the inclusiveness of the urban environment by making street art available to more people, and also underline the importance of intercultural dialogue in a single urban environment.

Keywords: street art; digital archives; cultural memory; virtual maps

ABSTRACT (ITALIANO)

Ricerca sulla Street Art nello Spazio Digitale. L'obiettivo di questa proposta è quello di ricercare metodi per preservare la memoria degli oggetti di street art nello spazio virtuale, oltre a potenziali alternative per preservarli. Una banca dati unica delle opere mondiali può essere creata utilizzando la documentazione fotografica in un archivio digitale comune, che è considerata l'opzione più adatta. Questa proposta esamina il problema potenziale della creazione di archivi digitali e della conservazione della memoria nello spazio Internet, nonché l'uso potenziale di database digitali. Gli usi possibili delle opere digitali includono mappe che mostrano oggetti di street art esistenti e scomparsi, e iniziative educative che utilizzano l'arte di strada conservata negli spazi digitali. La creazione di un archivio online accessibile a tutti può contribuire ad aumentare l'inclusività dell'ambiente urbano rendendo l'arte di strada accessibile a più persone e sottolinea inoltre l'importanza del dialogo interculturale in un ambiente urbano condiviso.

Parole chiave: street art; archivi digitali; memoria culturale; mappe virtuali

1. INTRODUCTION

The preservation of street art is one of the most pressing issues in the field of contemporary art of the 20th and 21st centuries. As a young and developing art form, it is increasingly gaining approval from both professional communities of artists and researchers of contemporary art, as well as from audiences who encounter street art daily in open urban spaces. By addressing sharp social, political, historical, and cultural issues, street art, including murals, graffiti and stickers, is often "protected" through relocation to enclosed institutions or *in situ* conservation, such as protective glass (Pagnin et al., 2023). However, these preservation methods frequently contradict the very essence of street art — its integration within open and natural urban environments (Cadetti, 2020). Street art becomes fragile, gradually collapsing under the influence of the climate, the work of urban utilities and authorities, painting over by other artists or vandals. The ephemeral nature of street art makes it particularly relevant to consider ways to digitize artists' work, similar to what can be seen in the field of performances and short-term installations (Owens, 2018: 25). The context of Italian cities emphasizes that they receive a large number of tourists every year, underlining the importance of studying this issue.

It is crucial to emphasize from the beginning the distinction between street art and new muralism in an urban setting. Street art often features a wide variety of works, typically smaller in size, fast and dynamic in making, often illegal, and they are made using stencil techniques, bombing with spray and markers, and stickers. The new muralism is a vast current that is only beginning to be actively considered by the academic community. It contains conceptual and space-appropriate high quality murals, often large scale and not always, but more than street art, coordinated with the community and administration. It is interesting that the New Muralism arose from Latin American street art, showing a social context such as the Mexican Revolution. New murals are also included inside of them a message for the public. Such murals often harmoniously fit into space, gaining much wider acceptance than classical street art (Mezzadri, 2021: 2515-2516). The preservation of high-quality murals will be significantly higher than, for

instance, the wall work.

Street art, especially high-quality ones like "Madonna with a Gun" in Naples by British artist Banksy or the mural "Dante" in Ravenna by Brazilian artist Kobra, reflect the country's openness to intercultural dialogue and the expansion of contemporary art objects in its space, which means they do not deny the consideration of issues of digitalization of controversial but vibrant street art (Amato, 2015: 12-13). Some good digital archives already exist and combine not all, but many works of art that are presented in GLAM, like Google Arts and culture database (Wani, Ganaie, & Ali, 2019).¹ At the same time, there is still no single archive of art works on the streets of cities. Moreover, not even an active project on researching this type of street art archives for improving them. Monumental works of art with the high significance to humanity are most often protected and restored, while even high-quality works of modern street art, even if the authors wish, are doomed to "death". The memory of even those works that were saved through photo-capture is lost even in infinite Internet space due to the lack of a single and accessible digital database. It is difficult to deny that the quality of the work, having polisemia and not destroying other objects, can complement the complex urban space, and their disappearance sometimes makes the space more opaque (Paris, 2021). The presence of professionally executed street art facilities allows to decorate the city and organize local residents and tourist routes more interactive and memorable. If the transfer to real institutions seems to some artists wrong and violates the real nature of street art — being available and located on the open street, then the creation of digital archives often does not contradict the idea of artists. This can be seen in the example of many projects, for instance, the active idea Street museum of art in 2010, which brings together artists from different cities, with different backgrounds on one city site and fixing the resulting and changed urban reality. As a result, the website is available for examination as one small archive.² An equally interesting project is Tales of Golden Apples, in the Republic of Tatarstan, Russia.³ It shows a whole archive and map of interconnected street art objects. However, it does not exhaust all the possibilities and all the artists who exist and work outside of this project. Very similar to this idea is Street Art Storage in Saint Petersburg, Russia.⁴ They try to save the pieces of street art into the museum's closed space, but with showing it in virtual places, such as social networks.

Particular attention is paid to how modern tools and methodologies can be applied to protect this type of cultural heritage and further present it to a more global audience. The proposal attempts to explore and study the possibilities and means of preserving street art in digital form. The use of such ways to display and preserve valuable street art objects is applicable to Italy and other countries in the world, allowing street art. The research related to the topic of preservation of memory and digital heritage, which is in the available conference topics, aims at finding and eliminating the shortcomings of possible ways of preserving objects of street art in digital design. There are many theoretical sources for studying this issue today. Some sources consider the topic of street art conservation through different methods, but do not provide a full analysis of the prospects of a digital street art archive. For instance, Pagnin et al. (2023) shows different methods of preservation from environmental threats, but their research does not address the potential for creating a comprehensive digital archive of street art. Some of the works analyze how to find the significance and meanings of street art in urban spaces, like Paris (2021) and Amato (2015), and how to preserve it outside of the streets, like in the works Ciancabilla & Omodeo (2016) and Ciancabilla (2015). A lot of dialogues were conducted with artists, because their opinions, in the end, are the main, that is seen in the part with interview Cadetti (2020). Exploring existing experiences of preserving art or culture in digital form is presented, for example, Owens (2018) and Wani et al. (2019). The article Mezzadri (2021) examines the issue of conservation of works in urban spaces, including murals, using striking examples and with the participation of institutions in real life, but it might be important for the creation of digital spaces for such a process. However, they do not consider all existing options. An interesting alternative to real street art is the broadcasting of images using a projector. This option is explored in the paper by Jung (2015). One of the most famous and significant works describing the origins of street art and its influence on the modification of the city is the book Chalfant & Cooper (1984). It was created by photographers and street art researchers, and has been reprinted several times. Finally, a large base will be papers describing the action of the FAIR principles and copyrights in digital spaces, such as Wilkinson et al. (2016) and Yarc (2020). The attention is paid to the geographic information system (GIS) and usage of it in the cultural sphere in the research Carlucci et al. (2012). Their research is more

¹ <https://artsandculture.google.com/> (cons. 05/01/2025)

² <https://www.streetmuseumofart.org/> (cons. 08/01/2025)

³ <https://almetpublic.art/en> (cons. 08/01/2025)

⁴ <https://street-art-storage.com/> (cons. 02/04/2025)

technical, which provides information about the real-world uses of databases and the law cases associated with them.

2. RESEARCH OBJECTIVES

The main objectives of the study may be considered as:

- Analysis of existing methods for the digital documentation of street art objects and possible online archives and repositories collecting and displaying street art objects.
- Study of FAIR principles (findability, accessibility, interoperability, and reusability) regarding their application to the issue of preservation of street art, as well as the main contradictions that may arise when analyzing the compatibility of these principles and street art (Wilkinson et al., 2016).
- Evaluation of the integration of digital platforms and metadata to ensure the sustainability and accessibility of digital street art collections.

3. METHODOLOGY

The main methods used in this work are:

Ethnographic approach.

- Interviews with artists and a population survey. The main task will be to conduct new interviews with artists, conduct a survey of viewers and, possibly, projects, and also conduct an analysis of existing interviews and conversations with artists.
- Field research, in the form of observation and description of processes of creation of objects of street art. Using this method, photographic field notes will be taken.
- Monitoring social networks with reference and placement of street art. The main social networks to research will be Instagram, Tiktok and Telegram.

Digitalization and visualization of street art.

- Photo-capture and scanning of street art objects for further consolidation into archives. This can be done with the use of a digital camera, mobile photography and AdobeScan scanning.
- Mapping of existing street art objects and possible integration of existing and disappeared objects into routes. Such a project can be created using simple and accessible open platforms, such as Google Maps, as well as more complex ones, such as StoryMaps Blog or Datawrapper.⁵ When integrating street art into digital form, the implementation of geographic information systems (GIS) helps improve the infrastructure of the archival system. GIS records the spatial location of each artwork in the form of geographic coordinates, i.e. latitude and longitude, and is often used in both the cultural and user fields. This allows researchers, the general public, and other institutions to spatially access the artwork in its original location, which is essential for understanding the contemporary physical environment in which the artwork was located. Additionally, recording the date of creation, documentation, deterioration, or removal allows the archive to add a dynamic temporal layer of information, which is important for perishable street art. This feature makes it easier to track changes over time and provides insight into the relatively transient quality of street art, its life cycle, urban shifts, or the impact of policy. GIS also provides multi-layered visualizations that allow users to sift through data based on specific attributes, including neighborhood, style, artist, or subject matter. This transforms the archive from a simple static repository into an active resource for dynamic research, education, cultural policy, or even comparative and thematic analysis (Carlucci et al., 2012). Mapping art at a global or city level gives users an intuitive understanding of the geography of street art.
- Study of creation and use of digital graffiti as an alternative to digital archives of street art. A study of available technologies and programs used to create 3D graffiti in the form of projectors and mapping software, as well as a comparison of examples of projection mapping from different cities, including their goals, technical implementation, and audience opinion (Jung, 2015: 361-365).

Analysis of data from active online archives of street art objects.

⁵ <https://www.google.com/maps> (cons. 05/01/2025)

- Identifying the advantages and disadvantages of existing archives. Comparison and identification of pros and cons can be done using a scale of assessment, including user-friendly interface, website accessibility, translation into other languages, and data quality.
- Creating a proposal to optimize and improve the work of digital preservation of street art. To improve existing street art digital archives, it is proposed to develop a more intuitive interface that can provide convenient access to data for both specialists and a wider audience, as well as to implement uniform metadata standards (for example, the studied FAIR principles), including more accurate geolocation, authorship and description of objects.⁶
- Research into the possibilities of creating virtual tours and educational initiatives based on street art facilities. The study will cover existing digital tours, as well as the possibility of creating similar excursions in text or live format.

4. RESULTS AND DISCUSSION

The expected results will be a full analysis of the problems of exhibition and preservation of street art in the digital environment, as well as the possible creation and existence of the best archive of works using FAIR principles:

- Develop optimal methodology to use the recommendations of the study in the process of creating and disseminating digital archives with street art. This methodology will help to better manage the photographic survey of works, make their meta-description, carry out the determination of geolocation and combine them into stored, convenient and accessible archives. This will help improve the systematization related to the preservation not only of works of street art, but also of any objects possessing ephemeral nature.
- Identification of the problems related to the preservation of street art and accessibility of urban environments in the form of the disappearance of works due to climate, time and urbanization. The definition of complexity can help not only to preserve street art, but also to pay attention to the development of urban space.
- Application of FAIR principles to the creation of conceptual models that allow the development of common storage bases for works related to street art.
- Creation of a project of an interactive archive map, especially with usage of GIS, with various works on the example of one city. This virtual map in the future will be able to be kept for a long time in digital format, and also to be distributed, used and created on the basis of maps of other cities. Through such mapping, virtual or real tours can also be built that introduce interested people to the cultural diversity of cities.
- Assistance in creating an accessible and inclusive environment. These archives are an option for exploring and virtual travel for people who cannot visit a place, for example, for health reasons. The digital archive of street art can be considered an alternative to reviewing works, while not excluding the possibility of live visits and the existence of real original works.

As a topic of discussion, not studied but addressed in the research, questions related to methodology may arise. For example, how should archives treat copyright? The ethnographic approach used in the research can show us the opinion of the artists themselves. Studying archives such as The Street Museum of Art or Google Arts and Culture can show how artists, associations or institutions join the project. In addition, respect for personal rights or the use of Creative Commons can also be brought up in the discussion (Yarc, 2020: 270-280).

5. CONCLUSIONS

This study focuses on the possibility of preserving graffiti and street murals in the digital space, which could be a significant step toward preserving the memory of contemporary street art and passing information about it to future generations. The future practical steps are based on the conceptual framework laid down in this work. This study reflects the main problems arising from various studies, for example ethnographic, but it is important to consider a future digital project that can take its origin from this conceptual stage of work. The long-term goal is to eventually develop an accessible and free platform for modern street art, both classic disappearing graffiti and wider murals. This database/platform can directly contain a structure informed by the results of this study.

⁶ <https://www.go-fair.org/fair-principles/> (cons. 05/01/2025)

Before the widespread accessibility of the Internet, street art that had not been captured by a camera was often lost, highlighting the unique ephemeral nature of this art form. Modern digitization already enables the preservation of photographs, modeling of artworks, integration into routes, and mapping their locations, effectively storing and preserving the memory of possible routes in digital form (Pagnin et al., 2023: 1-5). The creation of such a digital space emphasizes possible intercultural dialogue between cities and countries, as well as promotes the development of urban space. Street art has not yet won full love among the audience, but every year, with the appearance of new bright names and with the beginning of commercialization of street art objects, which we can see in the example of Sotheby's auctions with pieces of street art works, the stigma, warning and mythological space surrounding street art began to fade, as well as the desire of institutions to preserve this type of art (Ciancabilla & Omodeo, 2016).⁷

It is important to certainly divide the quality street art, which makes the city space more vivid, from vandalism or primitive works that are perceived as hostile by people (Chalfant & Cooper, 1984). There are many important names in the field of street art in different countries that create special art, capable of their beauty or sometimes repulsive ugliness to make a place in the city unusual and congenial (Cadetti, 2020: 166-356). Hundreds of bright names surround the street art iconography, and deserve to be remembered for these works. Sometimes the key work is to destroy it, but still, many artists are keen to preserve their work as much as possible (Ciancabilla, 2015: 49-73).

Beyond this study there are many perspectives and opportunities. This work may to some extent allow changing the psychological perception of street art, but does not make it a priority, although it contributes to it. In the future, this work will allow:

- Digitize and create a complete archive or several archives of metadata related to street art.
- Develop the study of fixing non-temporary works, for example, performances and their placement in virtual space.
- Find accessible routes, maps and educational programs that will make not only virtual but real space even more inclusive.

This proposal can help develop the urban space, access to its people, and also facilitate the task of artists in the field of preservation of finished works in digital spaces. It may help to do it without contradiction with the main idea of street art. Moreover, such online archives can be filled with interested people, just as it happens in social networks where users can publish, share, comment on the visual materials of other users.

In conclusion, it should be noted that such an initiative will expand the idea of the possibility of memory retention in the virtual space of non-durable objects and actions, and also emphasizes the importance of such steps.

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