



URBAN ART IN THE METAVERSE: NEW CREATIVE SPACES

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ABSTRACT

The metaverse emerges as an innovative arena for the advancement of urban art. Within this space, virtual reality enhances creative, experimental, and interactive possibilities, particularly among young people, who are the most active users. This study examines the perceptions of artists and young citizens regarding digital urban art through a case study that includes an interview and three focus groups. The findings reveal that, while art students express critical attitudes towards the metaverse, they recognise its potential to promote community engagement and preserve digital heritage. In contrast, advertising students value its capacity to strengthen local identity while communication students exhibit greater scepticism concerning the authenticity of digital artistic experiences. In conclusion, the metaverse offers an expansive platform for experimentation, interaction, and community involvement. Nevertheless, uncertainties remain regarding its ability to replicate the physical experience.

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1. Introduction

Urban art, born out of the need to express social and cultural discontent, has evolved into a global artistic phenomenon that transcends conventional boundaries of art (Arroba, 2021; Pérez, 2012). Originating on the streets of New York in the 1970s, where graffiti served as a cry of protest, this art form has undergone a significant transformation. Today, urban art encompasses a range of expressions, including murals, graffiti, installations, and performances in public spaces (Pérez, 2018; Reyes, 2007). Graffiti, regarded as one of the earliest forms of urban art, has transformed into a cultural and political tool within cities, marking territories, and creating urban narratives that reflect social complexities.

Over time, graffiti has adapted to new technological and aesthetic realities, leading to movements such as post-graffiti. This evolution expands the boundaries of techniques and materials employed. Characterised by the incorporation of digital and mixed-media elements, this movement explores innovative materials and aesthetics while challenging conventional perceptions of art in public spaces (Martínez, 2022; Pérez, 2018). Through these artistic proposals, a new form of interaction with the environment has emerged, not only enhancing the landscape but also fostering a critical dialogue between the artwork, the space, and the citizens (Bengtson, 2018; García-Doménech, 2016).

In the contemporary sphere, these artistic manifestations not only reconfigure physical spaces but also act as catalysts for social cohesion. This phenomenon has been instrumental in transforming the urban landscape, promoting social interaction, fostering a sense of community, and revitalising shared spaces. Urban art, in all its forms, continues to play a crucial role in the transformation of cities.

A notable example of this transformation can be found in Penelles, Spain, where artistic interventions through murals have turned the town into a hub of tourist and cultural attraction. This initiative has encouraged youth participation in the community, fostering collective dialogue. The establishment of open-air art galleries has strengthened the sense of belonging and social cohesion, reconfiguring perceptions of public space and consolidating local identity (Sabaté, 2024).

Similarly, in La Bañeza, a town in rural Spain, urban art has played a crucial role in curbing depopulation. The use of murals and other artistic expressions has facilitated the revitalisation of its social fabric, endowing the town with a new cultural and community identity (Lombas, 2024). These examples of urban art projects highlight how art can serve as an effective strategy to re-signify and revitalise communities, creating new cultural and tourist focal points that promote social interaction and foster a sense of belonging (García, 2019).

The emergence of digital art and the adoption of non-fungible tokens (NFTs) mark a significant milestone in artistic evolution, offering new avenues for the creation, distribution, and commercialisation of art that transcend traditional physical barriers while providing an immersive and participatory experience (Moreno & Navarro, 2016). NFTs are unique digital assets that utilise blockchain technology to certify the ownership and authenticity of a digital work. Blockchain is a distributed ledger technology that ensures the transparency and immutability of transactions, thus facilitating new forms of marketing and collecting in the art world. These technological advancements have enabled urban art to extend beyond physical spaces, entering the digital and virtual realms, where the ownership, authenticity, and interactivity of art can be redefined (Cuesta et al., 2021).

In fact, digital art and NFTs have afforded artists and creators greater commercial independence with their works. Through smart contracts, which are binding agreements that accompany the purchase and sale of an NFT, creators can specify conditions, such as the potential for reselling the work and the collection of certain royalties from such transactions (Medina Amores & Medina, 2022).

The intersection of urban art, digital art, and virtual reality presents unique challenges related to copyright, authenticity, and accessibility (Giner Cordero, 2016). However, it also offers unprecedented opportunities to explore new forms of artistic expression, community participation, and innovative business models in the art world. This convergence invites reflection on the impact of blockchain technology on the perception and valuation of art, as well as the possibilities for creating immersive and participatory art spaces (Kostopoulos et al., 2021).

Urban Art and the City

Urban art is deeply rooted in the city and the lives of its citizens. It not only uses urban spaces as its primary canvas but also interacts dynamically with the local community, fostering an ongoing dialogue between the artwork, the environment, and the people. This symbiotic relationship is fundamental in understanding the impact and relevance of urban art in the contemporary context. According to Pinder (2008), urban art is not merely a reflection of the city; it also acts as a catalyst for transformation, intervening in spaces and promoting new forms of interaction and meaning.

One increasingly significant factor in the context of urban art is its recognition as an object of cultural protection. According to UNESCO (2019), intangible cultural heritage can only be acknowledged as such if it is legitimised by the communities involved. This necessitates that institutions make decisions regarding which works of urban art, with their diverse forms and meanings, merit such consideration. Currently, there is a consensus that certain wall artworks warrant official protection due to their cultural and social impact. The management and preservation of urban art has become a subject of debate in various arenas, where institutions strive to balance protection with creative freedom (Luque-Rodrigo, 2020). A notable example is Banksy's *Spybooth* artwork in Cheltenham, England. Despite the community's efforts to have it designated as a local heritage site, the work ultimately vanished. It is suspected that it was dismantled and sold in fragments through social networks, sparking an intense debate about property rights and the preservation of this type of art (Hansen, 2018).

The theft of urban artworks has become a recurring phenomenon, as documented in various media outlets. Among the artists most affected by these acts are Banksy, whose works have been stolen multiple times, and Invader, known for his mosaics, which have also been the subject of thefts. Another notable example is US artist Ryan McGinness, whose road signs created in collaboration with the New York Traffic Department have disappeared. These incidents reflect not only the growing demand for such works in the underground market but also highlight the challenges associated with conserving urban art in public spaces (Hansen, 2018).

It is essential that, as urban artistic expressions gain prominence in our cities, protective mechanisms are adapted and expanded. To ensure the essence of these works remains unchanged, protection should not alter their nature. Instead of intervening in the creation modes or artistic processes, it should concentrate on studying methods, documenting outcomes, and disseminating knowledge without compromising the original expression (Luque and Moral, 2019).

Urban spaces serve not only as the canvas for street art but also as its source of inspiration and purpose. Cities, with their structures, histories, and social dynamics, provide the essential context for urban art development. Bengtson (2018) asserts that urban art reshapes perceptions and uses of public spaces, transforming them into centres for gathering and communication. This phenomenon not only beautifies cities but also redefines their boundaries and functions.

Irvine (2012) reinforces this idea by suggesting that urban art acts as a reflection of the city, responding to its social, economic, and political changes. Urban artists use walls, streets, and other architectural elements to engage in dialogue with the city and its inhabitants, creating a visual narrative intertwined with everyday urban life.

The relationship between urban art and citizens is bidirectional and deeply symbiotic. Citizens are not only viewers but also co-creators and recipients of these artworks. Youkhana (2014) highlights that urban art fosters a sense of belonging and community, allowing individuals to see their own experiences and aspirations reflected in the works.

Furthermore, García-Doménech (2016) argues that urban art has the power to transform citizens' perceptions and attitudes towards their urban environment, promoting social cohesion and community participation. Artistic interventions in public spaces often invite citizens to actively engage in the creative process, which not only democratises art but also strengthens community ties and encourages greater involvement in urban life.

1.2. Urban Art in the Metaverse

The metaverse is emerging as a digital extension of our reality, capable of replicating the spatial dimensions of contemporary cities through digital twins. It offers new possibilities for urban artists to explore forms, scales, and contexts that would be unattainable in physical spaces. This virtual

environment not only supports the preservation of cultural heritage but also facilitates the creation of social protest movements and new forms of artistic experimentation. A notable example is the planning of a civil rights march in the metaverse by officials in Montgomery, demonstrating the potential of this environment to host meaningful and symbolic events (Reichental, 2024).

The concept of digital twins, where cities are replicated in the metaverse, opens up new possibilities for the conservation and preservation of urban heritage. These digital replicas can serve as laboratories for experimenting with new forms of art and expression, as well as for planning and visualising social movements and other urban interventions. Initiatives such as the Urban Metaverse Summit and Digital Skills Jobs promote the integration of these technologies into urban art, highlighting how the metaverse can become a space for artistic innovation and community participation. These platforms offer new opportunities for urban artists and communities, using art as a tool for social change and cultural heritage preservation.

In fact, the metaverse has been hosting various types of artistic proposals, such as competitions and exhibitions, which increasingly promote immersive experiences. A distinctive feature of urban art in the metaverse is its capacity to foster deep community participation. Works can be designed not only to be viewed but also to be experienced and modified by the audience, blurring the lines between creator and viewer. This democratisation of the creative process invites the audience to become active participants in the work, generating a sense of belonging and virtual community.

In this digital environment, artists like Boa Mistura can create artworks that intertwine interactive and dynamic elements, such as animations, temporal transformations, and direct interactions with viewers, thereby enriching the artistic experience.

The Boa Mistura collective, established in 2001 and based in Madrid, is renowned for its artistic interventions in urban spaces worldwide, aiming to revitalise and beautify neighbourhoods and communities. In the metaverse, they have discovered new terrain to expand their vision. Their works combine art and social engagement, utilising the urban environment as a canvas and community participation as a vital component of the creative process. An emblematic example of their work is the Reversus (RE-VS) Project in the Madrid neighbourhood of Vallecas. Their murals not only enhance the urban landscape but also aim to positively impact the local community by fostering identity and neighbourhood pride through participatory and collaborative art.

Figure 1. RE-VS. Phygital artwork: NFTs and mural



Source: Boa Mistura, 2023.

By applying its collaborative and transformative approach to the digital space, Boa Mistura can reach a global audience, overcoming geographical and socio-economic limitations. Virtual projects can

replicate or be inspired by their physical murals, while also incorporating elements unique to the digital environment, such as interactivity and transience. This allows users not only to view but also to interact with and transform the art in real time.

Digitising physical works allows Boa Mistura to sell them as unique pieces of digital art. This not only provides an additional income source for the artists but also preserves the ephemeral nature of street art digitally.

NFTs (non-fungible tokens) have opened new avenues for distributing artworks, benefiting artists and redefining marketing and collecting in the art world. Since a work sold through NFTs fetched \$69 million at Christie's auction in 2021, the art market has shifted focus to this new buying and selling method. The piece, a digital collage titled *Everydays: The First 5,000 Days* by Beeple (Mike Winkelmann), became the third most expensive artwork sold by a living artist at the time.

However, the recent boom in NFT collections has faced a significant downturn since 2021, leaving some collections with little to no value. Experts suggest this decline is due, in part, to a surplus of offerings compared to actual demand. This has led to a market with increasingly discerning buyers who carefully assess the style, uniqueness, and potential value of NFTs before investing. As a result, we are in a highly speculative and volatile market where both creators and investors must exercise caution to understand the risks involved in these transactions (Hategan, 2024).

2. Methodology

The specific objective (SO1) of this study is to assess the level of knowledge and perception of urban art, as well as its potential within the metaverse, among young people. This analysis is crucial, as new generations are increasingly engaging in the digital world and are emerging as future artists and buyers in the field of digital art.

To achieve this purpose, the following specific objectives are proposed:

SO2: To determine the extent to which young audiences are familiar with terminology related to urban art in the metaverse, including phygital, NFTs, virtual reality (VR), and augmented reality (AR).

SO3: To analyse the impact and retention of phygital art interventions compared to conventional urban art forms among young people.

SO4: To investigate how perceptions and memory of these interventions vary based on gender, age, and academic background, with a focus on students in Art (Fine Arts, Design, Illustration, and Art History), Advertising, and Audiovisual Communication.

This study employed two primary methods of data collection: interviews and focus group discussions. The content sections covered in each method are detailed below.

2.1. Interview with Boa Mistura

The interview combines formal and informal elements, providing a versatile approach that facilitates gathering data, assessments, opinions, knowledge, and experiences essential for an in-depth exploration of the study's focus (López and Deslauriers, 2011; Ñaupas-Paitán et al., 2018).

Conducted by telephone on Tuesday, 11 June 2024, the interview featured Pablo Purone, a member of Boa Mistura, discussing the Reversus (RE-VS) Project, an NFT artwork exhibited at ARCO in 2023. This project serves as a case study, illustrating a success story in the commercialisation of urban art and NFTs.

The interview was organised into the following sections:

Table 1. Structure of the interview

Thematic block	Concepts
Urban Art	Definition of urban art, concept of phygital art, target audience, merging urban and digital art
Metaverse	Exploration of the metaverse and NFTs, technical and creative challenges, audience reactions, influence on culture and society.
Future	New creative avenues, the role of artificial intelligence in art, protection of cultural heritage, and future projects in the metaverse and with AI.

Source: Authors' elaboration, 2024.

2.2. Focus Groups

Focus groups were used to gain deeper insight into youth audiences' perceptions and attitudes towards urban art in the metaverse and the use of related technologies, such as NFTs and artificial intelligence. This methodology was selected for its capacity to facilitate dynamic exchanges of ideas, enabling observation of how participants collaboratively construct meanings and reflect on the topic.

Three focus groups were conducted, each comprising six participants selected from various fields of study, ensuring gender balance. The groups met in June 2024 for sessions lasting approximately 90 minutes. Participants included students from Fine Arts, Design and Illustration, Art History, Audiovisual Communication, and Advertising and Public Relations. This diversity facilitated an exploration of varied perspectives on urban art and its evolution in digital environments.

Table 2. Focus group participants

Study area	Men	Women	Total
Art: Fine Arts, Design and Illustration, Art History	4	2	6
Audiovisual Communication	3	3	6
Advertising & Public Relations	2	4	6

Source: Authors' elaboration, 2024.

For each group, a topic guide was developed to explore in depth the subjects previously covered in the interviews. An open-ended structure, rather than closed questions, was employed to facilitate discussion, enabling participants to share their experiences, knowledge, and opinions on the following key themes:

- Knowledge of urban art: exploring their perceptions of urban art, its presence in cities, and the cultural impact they perceive in their environment.
- Interaction with digital technologies: discussing their knowledge and understanding of phygital art, NFTs, virtual reality, and augmented reality, as well as their experiences with these technologies in the artistic field.
- Perception of art in the metaverse: reflection on the role of the metaverse as a new creative space and how it could transform the production, consumption, and conservation of art in the future.
- Future of digital art: the potential of art generated by artificial intelligence and the cultural and ethical implications of its use, as well as the opportunities it offers for the preservation of artistic heritage.

Regarding the metaverse section, Boa Mistura's foray into this realm and NFTs was driven by a desire to experiment and question how digital art could interact with their traditional artistic practices. In the Reversus Project, they fragmented a physical mural into 35 digital pieces (NFTs), thereby creating a direct link between physical and virtual spaces. This initiative is a non-profit research and experimentation project, with the primary objective of exploring the possibilities offered by digitisation in urban art.

The Reversus Project faced numerous technical challenges, ranging from creating animated digital art pieces to coordinating the real-time sale and erasure of fragments of the physical mural. Collaboration with experts across various disciplines was crucial in overcoming these challenges. Purone notes that working in the metaverse involved integrating diverse disciplines and coordinating multiple technical and creative aspects.

Audience reactions to engaging with Reversus in the metaverse were similar to those experienced during physical interactions. The project was designed as an extension of Boa Mistura's work in public spaces, connecting it to the digital realm.

Purone explains that, during the development of the project, each time a user acquired a fragment in NFT format, it was removed from the wall in the physical world. Thus, the individual and private act of a collector transferring the fragment to their digital device had a direct impact on the collective environment, as the fragment disappeared from the public space.

Despite acknowledging that NFTs and digital art can open new avenues for exploration and funding for artists, Purone argues that urban art must remain in the physical and public space to preserve its essence.

In the third section that focuses on future potential and creative avenues, Boa Mistura is committed to further exploring the metaverse and NFTs in their upcoming projects, including the replication of Reversus at the Miami Fair. They aim to keep experimenting with the intersection between the physical and digital realms. Regarding the future of urban art, Purone believes that while urban art will always be linked to the street, new technologies can facilitate the exploration of novel paths and ways of working.

Purone acknowledges the potential of artificial intelligence (AI) as a powerful tool, albeit one still in the experimental phase. He believes that AI can enhance the creative process if properly harnessed, but it also presents ethical and authenticity challenges. AI, like other technological tools, has the capacity to revolutionise artistic creation, but its use must be managed carefully to avoid ethical issues and to preserve the authenticity of art.

The metaverse and AI offer new methods for preserving cultural and artistic heritage. While urban art must be experienced in the streets, digital documentation through the metaverse can serve as a replica that facilitates access to and preservation of ephemeral works. AI can also aid in safeguarding cultural heritage through advanced restoration and digitisation techniques. In this sense, Boa Mistura sees the metaverse as a complementary tool for urban art, which can help maintain and disseminate artistic works on a global scale.

3.2. Focus Groups

Many participants (almost 85%) expressed a positive assessment of urban art, highlighting its cultural and social relevance. When asked to define street art, a variety of perspectives emerged, showcasing the richness and diversity of this art form. The most common responses included mentions of urban art's ubiquity in public spaces and its ability to utilise multiple media and techniques, underscoring its inclusive and adaptable nature. However, when directly asked about street art in the metaverse, it was mentioned only sporadically. This suggests that while some participants acknowledge its existence, they do not view it as a central or established aspect of the street art experience.

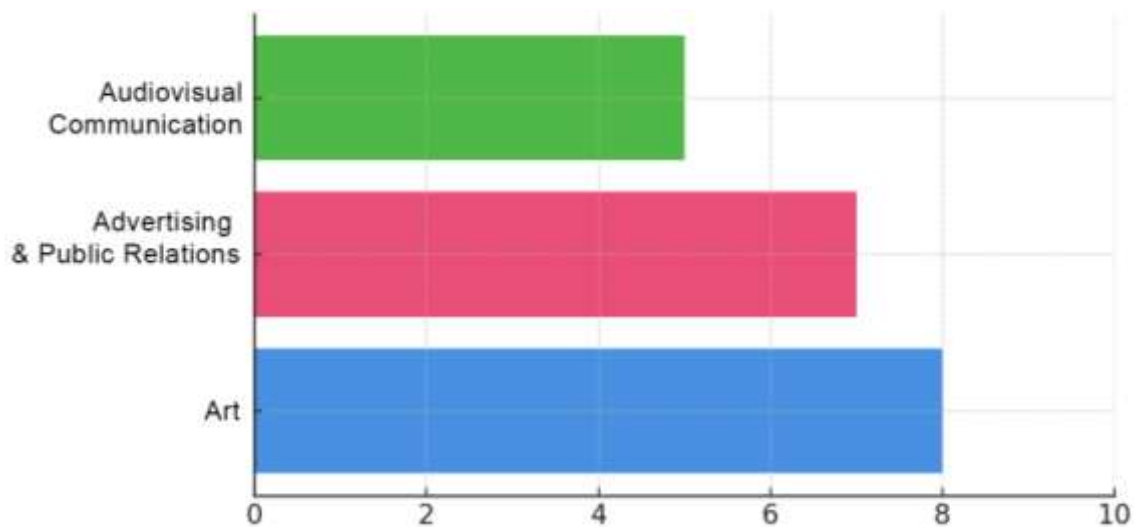
Regarding urban art in the metaverse, Figure 3 indicates that although art students (8/10) are the most critical of its implementation, they perceive it as having the greatest impact on urban art. They believe that the metaverse encourages participation and interaction, reinforces a sense of community, and offers opportunities for the protection and preservation of artistic heritage in digital format.

On the other hand, advertising and public relations students (7/10) view the metaverse positively for its ability to strengthen identity and community pride, though they express reservations about the authenticity of digital art compared to physical art. Nevertheless, they highlight the metaverse's

potential to democratise access to urban art. Audiovisual communication students (5/10) are the most sceptical. They acknowledge that the metaverse can extend the reach of urban art and facilitate participation, but they doubt its effectiveness in protecting artistic heritage and preserving the depth of the artistic experience.

Overall, participants noted that transitioning urban art into the metaverse presents both challenges and opportunities. While some were sceptical about the capacity of urban art, traditionally tied to physical space, to replicate itself in a digital environment, others emphasised that the metaverse can broaden access to art. As one participant remarked, "The metaverse could allow urban art to reach more people, even those who do not have physical access to the works," recognising the potential for the democratisation of the art experience. However, the absence of physical contact with the artworks was noted as a limitation to preserving the authenticity of urban art.

Figure 3. Perception of the impact of the metaverse on urban art



Source: Authors' elaboration, 2024.

Regarding phygital art, approximately half of the participants demonstrated some level of understanding of the concept, with no discernible gender differences between men and women. However, significant variations in knowledge and perception of phygital art were observed according to the participants' field of study. Advertising and Public Relations students are more likely to view these technologies as innovative and democratising, while Graphic Design and Illustration students showed less familiarity with the term.

The main responses included descriptions such as "a combination between the person and the digital world," "an innovative way of exploring the relationship between the tangible and the virtual in contemporary art," "the result of mixing the digital with the physical to create new artworks that push boundaries," "art combined with digitisation," "art that incorporates digital elements," "a blend of physical and digital art," "artistic expression in which technology is used to create works of art," and "a method of mixing traditional art with the latest digital art for exhibitions." When asked to associate phygital art with a concept, 56% related it to experimentation, 28% to entertainment, and 17% to interaction.

With respect to NFTs, scepticism was widespread, with participants tending to view these digital assets as speculative and intangible. Both men and women expressed reluctance in purchasing NFTs, citing their volatility and lack of physical presence. Women emphasised that NFTs appear to be a passing trend with little long-term potential. One participant remarked, "NFTs carry a very speculative connotation for me. I don't see their value in the long term," reflecting a common perception that this might eventually vanish, especially in the online domain.

Men also shared a critical perspective on NFTs, arguing that their lack of tangibility prevents them from being regarded as true forms of property. One participant stated, "I have not bought them and do

not consider them works of art," while another added, "I find it to be a useless idea and believe that NFTs stifle good ideas and the originality of artists."

Despite this scepticism, some participants acknowledged that, although they were unwilling to purchase NFTs, the underlying technology could influence the future of digital art, particularly in the way artists market their work within the metaverse. This ambivalence underscores that while NFTs are viewed negatively by many, their potential in the digital art market is still recognised in certain contexts.

Concerning the future of art, both women and men identified the metaverse and artificial intelligence as key elements that will influence culture and artistry. Women highlighted that these technologies could democratise access to art, enabling new forms of interaction and participation. One participant noted that "the ability of these technologies to assist artists in their creative process will be a significant change," while others emphasised the potential for the metaverse to serve as an inclusive platform. Men also recognised the impact of these technologies, albeit with a more critical stance towards the adaptation of traditional art. One participant asserted, "Classical art will always be present, but new digital art will dominate our experiences in the virtual realm," highlighting the coexistence of the old and the new.

4. Discussion and Conclusions

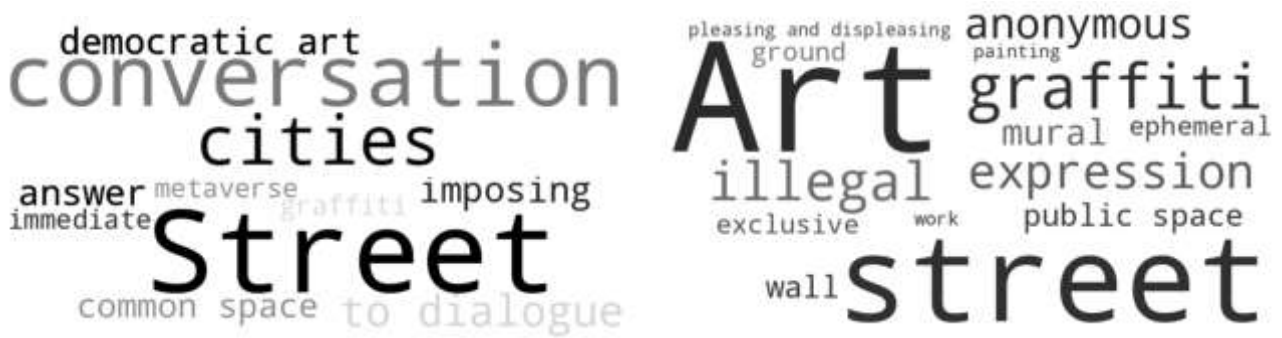
This study has examined the perceptions and knowledge of urban art, both in its traditional form and its expansion into the metaverse, among a young audience. The primary aim of assessing the level of knowledge and perception of urban art in the metaverse has largely been achieved, revealing insights, attitudes, and limitations crucial for understanding how new generations engage with these concepts.

Artists view urban art as a dialogue within the shared space of the street. For Boa Mistura, this approach facilitates immediate and direct interaction without the barriers often found in conventional art spaces such as museums or galleries. The street thus emerges as a democratic space where art is accessible to all, although it can also be imposing. This democratic aspect is fundamental to the identity of urban art, enabling unmediated interaction with the public.

Overall, the focus groups revealed a growing awareness of the intersection between art and technology. While some reservations exist regarding the evolution of concepts such as NFTs, most participants express openness to the notion that digital art and the metaverse could offer new creative and cultural opportunities, provided that a balance between innovation and artistic authenticity is maintained.

Conversely, the audience perceives urban art in various ways, sometimes elevating it to the status of art, while at other times identifying it solely with graffiti or similar expressions in public spaces. This variability in perception underscores the need for greater education and outreach regarding urban art and its multiple dimensions. Key terms such as "art," "urban," "physical," "digital," "impact," "NFT," "community," and "conversation" emerge as fundamental concepts in understanding this art form, both in its traditional iteration and its evolution into the metaverse. Notably, the concept of the metaverse was not spontaneously mentioned by any participants when asked about street art. Although they recognise its potential, they do not yet consider it a consolidated aspect of the overall urban art experience.

Figure 4. Urban art according to Boa Mistura and focus group participants



Source: Authors' elaboration, 2024.

Phygital art, which fuses the physical with the digital, is widely regarded as a form of experimentation. Both artists and audiences perceive this art form as innovative and relevant in the contemporary context. However, there remains a significant lack of knowledge about art in the metaverse, particularly among fine art students. This suggests the need for greater dissemination and recognise potential outlets and opportunities within the art market.

Upon reviewing the results, it is evident that there is a disconnect between the concept of urban art and its potential for expansion and interaction in the metaverse. Most interviewees consider these spheres separate and independent, failing to see a direct relationship between them.

The technical and creative challenges posed by the metaverse and NFTs have not deterred artists from exploring these new frontiers. Projects such as Boa Mistura's *Reversus* illustrate how digital art can complement and expand traditional artistic practices. These initiatives not only enable broader dissemination and global reach of the works but also facilitate new forms of interaction and community participation. Consequently, urban art is evolving beyond expressing social discontent or serving as a mechanism for protest. It increasingly seeks the involvement of citizens, viewing them as active participants in these artistic projects, with the metaverse presented as an ideal environment.

The metaverse and associated technologies, such as NFTs and artificial intelligence, provide fertile ground for innovation in urban art. While urban art will always retain an essential connection to the street and physical space, new technologies enable the exploration of complementary and expansive forms of artistic creation and dissemination. The digital preservation of ephemeral art and the development of interactive and participatory spaces are just some of the possibilities these technologies offer.

Despite the findings, this study has notable limitations. Firstly, the sample focused exclusively on students from specific academic fields, which may have biased the results toward certain perspectives on digital art and the metaverse. Expanding the sample to include professionals, collectors, and a more diverse audience could provide a broader view of perceptions regarding urban art in the metaverse. Additionally, understanding of concepts such as NFTs and phygital art was limited, likely reflecting the participants' academic focus and the novelty of these terms within the art market. Finally, only one interview was conducted with an artist from Boa Mistura, which restricts the variety of artistic perspectives presented in the study.

As a case study, future research could include interviews with multiple urban artists working in both physical and digital formats to offer a more comprehensive understanding of how urban art is adapting to the metaverse. Furthermore, while the qualitative analysis allowed for an in-depth exploration of opinions, a quantitative approach could enrich the study with more representative data on the adoption and understanding of these technologies.

This study also opens several avenues for future research. One area of exploration could involve investigating the evolving perceptions of digital and phygital art as these technologies become increasingly integrated into everyday life and the art market. Further research might focus on how art education can be adapted to include the metaverse and emerging technologies, ensuring that future artists are well-equipped to capitalise on new creative and commercial opportunities.

Additionally, it would be relevant to analyse how wider audiences outside academia perceive and value urban art in the metaverse, which could provide a more inclusive perspective on the impact of these technologies. Finally, investigating the ethical and cultural implications of artificial intelligence in artistic creation would be worthwhile, particularly concerning the preservation of authenticity and the role of the human artist in an increasingly digitised context.

In conclusion, while urban art retains a fundamental connection to the street and physical space, emerging technologies such as the metaverse, NFTs, and artificial intelligence present new opportunities for its expansion. Digital art enables the creation of interactive and participatory spaces that can enhance the physical art experience, thus offering new potentials for innovation. However, maintaining a balance between technological advancement and the preservation of artistic authenticity is essential. It is a challenge that artists, cultural institutions, collectors, and the public will need to navigate in the coming years.

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