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THE PROCESS OF VIRTUALIZING PUBLIC ART: QR GRAFFITI, ART IN AUGMENTED REALITY IN PUBLIC SPACE, AND GRAFFITI CREATED IN VR

Abstract
The virtualization of public art, which I approach as art in public space, street art, and graffiti, can be viewed from one side as its medialization, that is, a mediation of reception through media images functioning online. This process makes our experience of these art forms virtual in terms of their potentiality. On the other hand, the virtualization of public art can be approached as a process of gradually transferring it into the virtual space. In this second case, virtual space constitutes, if not the foundation, then at least an equal element of artistic realizations. These realizations are increasingly manifesting themselves primarily in a digital form, although each time in a physical space, which gradually loses its significance, undergoing hybridization. The process of virtualizing public art is illustrated by referring to examples of graffiti made in the form of stencils with artistic QR codes. Then, I point out artistic projects that explore the city by searching for contemporary art objects in the form of augmented reality, located in selected and marked areas on a map. As the final examples, I mention the work of Kenyan artists who create and promote the creation of graffiti in virtual space.

Keywords:
public art, street art, graffiti, medialization, virtualization, hybridization of public space

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INTRODUCTION

Public art is a concept that encompasses various phenomena of an artistic and aesthetic nature, the vast majority of which are characterized by positive aesthetic values. For this reason, although site-specific realizations, installations, sculptures in public spaces, as well as performances, happenings, and graffiti may be included[1], other types of urban images are excluded, namely those images or signs and traces left by vandals[2].

The transfer of public art into virtual space is an extremely interesting phenomenon that began with its medialization. It is often surprising, especially considering that public art is defined by the urban environment in which it occurs, an environment that for most of its history has had a physical character. However, it should be noted that the virtualization of public art is linked to the virtualization, or rather hybridization, of public space. This space has not only a physical character but also a digital, online layer, and these layers intertwine, connect, and refer to each other in various ways. The hybrid form of public space exists due to the interconnection of two ontological layers: the physical and the digital.

Art encountered by people in public spaces must be accessible while moving through the city. Therefore, its fundamental characteristic is direct intervention in the urban fabric. This feature remains intact in the situation of hybridizing public space, where the urban fabric undergoes transformation. In technologically developed urban environments, we move through physical streets and digital networks, which constitute part of the fabric of contemporary cities. Therefore, the art we encounter, while still spatially located in the physical sense, is no longer always and exclusively subject to physical space, undergoing increasing virtualization, analogous to the virtualization of our lives.

In the area of public art that I am reflecting on, I will focus on graffiti and street art, additionally including some works in augmented reality (AR), which, if they were realized in physical space, would have the status of sculptures. I will, however, exclude the issue of performance, its documentation, medialization, and transformation under the influence of communication techniques, not due to theoretical divergence but because of the divergence of the research material, which should be (and is) subject to separate and thorough analysis (Jankowska, 2004).

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[1] *Public Art*, after Tate Gallery [official website]. Available at: https://www.tate.org.uk/art/art-terms/p/public-art [Accessed: 3.04.2025].

[2] Signs and traces left by vandals can be collectively treated as urban images, i.e., images created in the urban environment in public space, both legally and illegally, critically and commercially. I have written about this in more detail in the text "Urban images: street-art, graffiti, and vandalism – in the context of Arnold Berleant's aesthetics of environment" (Łukaszewicz-Alcaraz, 2017, pp. 653–661).

However, it is the performative aspect that connects all the cases of public art discussed in this text and left aside, because not just performances and happenings per se, but also graffiti and street art are not only visual but, above all, performative in nature[3]. Then, the AR and VR realizations I refer to are also defined by their performative context in both creative and receptive aspects. Of course, a broader framework for the performativity I mention could be outlined, as even classical works of art – such as paintings, sculptures, or architectural objects – require psychosomatic engagement from both the creator and the recipient, as Arnold Berleant has repeatedly pointed out in his development of the Aesthetics of Engagement[4]. However, such a broad theoretical framework would not allow for the isolation of a specific subject of study that I wish to focus on.

MEDIALIZATION OF STREET ART AND GRAFFITI

The medialization of street art and graffiti, that is, the mediation of the reception of this type of art through images functioning within the framework of the latest communication technologies, although problematic from the perspective of their characterization as being based on intervention in urban space, has been continuously progressing since the moment the first photograph of an image created on the walls of public urban space was taken. Andrea Baldini, a contemporary researcher of this phenomenon who does not cease to recognize the subversive potential of these urban images despite their transfer into media or gallery spaces, emphasizes the importance not only of their popularization through the latest communication technologies but also the transformation of the forms of engagement with them that these technologies provoke:

> The existence of those photographs is not secondary, parasitic, or an uninteresting epiphenomenon when we get to the appreciation of street art. Quite in contrary. Those documents constitute our primary access to works of street art. This in turn suggests the epistemic and ontological primacy of the "reproduction" over the "original". For its constitutive link with the city, street art's digital media revolution had then affected how we perceive, experience, and conceptualize public places (Baldini, 2020).

[3] The argument in this direction has been developed in the following texts, gradually clarifying my understanding of urban images: Łukaszewicz-Alcaraz, 2014a, pp. 7–9; Łukaszewicz-Alcaraz, 2014, pp. 38–45; Łukaszewicz-Alcaraz, 2016, pp. 9–23.

[4] Counting it from at least the time of the publication of the book *Art and Engagement* (Berleant, 1991) and in Poland, from the time of the translation of *Re-thinking Aesthetics: Rogue Essays on Aesthetics and the Arts* (Berleant, 2004) into Polish (Berleant, 2007).

Baldini, when defining graffiti and street art, treats graffiti as the most radical form of street art (Baldini, 2018, pp. 9–10), whose critical, subversive character brings it closer – sufficiently in his view – to critical art (Baldini, 2022). This move allows the Italian aesthetician to acknowledge the possibility of presenting graffiti in galleries and art museums without losing its specificity, although he points out the problematic nature of this gesture, often criticized for "domesticating" graffiti through its institutionalization, which deprives it of its essential subversiveness (Austin, 2010; Bengtsen, 2015). By considering graffiti as a type of street art, Baldini approaches it differently than I do, as I view works created in the urban area as various examples of urban images – some of tchem constituting examples of public art – of a different aesthetic engagement character, requiring either a posture with less cognitive orientation and more contemplative traits, as in the case of graffiti, which is more focused on somatic involvement, or sometimes with more, as in the case of street art, whose aesthetic values and content necessitate an intentionally cognitive posture, i.e., one focused on understanding (Łukaszewicz-Alcaraz, 2017). Such a distinction leads to a differentiated approach to their gallery exhibition possibilities, which accepts the presentation of street art in this form but rejects the presentation of graffiti – except through documentation[5].

I certainly agree that the presentation of graffiti and street art in art galleries, such as the exhibition "The Bridges of Graffiti", which featured the works of ten artists: Eron, Futura, Doze Green, Todd James, Jayone, Mode2, SKKI ©, Teach, Boris Tellegen and ZeroT was organized by the Fondazione de Mitri and Mode2 as a side event to the 56th Venice Biennale, which also received UNESCO patronage, significantly contributes to raising their status and also influences reconsidering the role and place of the museum towards making it a place open to different perspectives and critical discussions (Baldini, 2017, p. 28). However, in my opinion, such social advancement of graffiti is paid for by the dilution of the meaning of this art, which is alive in the streets. Such price is not to be paid when it is not the artists exhibiting graffiti-style works or originating from graffiti environments/ experiences but rather works documenting their creations made in public spaces, as in the exhibition curated by Pietro Rivasi in Modena titled "1984. Evoluzione e rigenerazione del writing," which took place in 2016 and presented many photographs and videos of graffiti and street art

[5] Such a distinction is fundamentally consistent with Baldini's thought, who, as a leading example of the possibility of presenting graffiti in a gallery-museum format, analyzes the exhibition curated by Pietro Rivasi in Modena titled "1984. Evoluzione e rigenerazione del writing," which took place in 2016 and had a largely documentary character. However, Baldini draws broader conclusions from this, stating that "museumization does not necessarily mean the domestication of graffiti" and does not strip it of its subversive character (Baldini, 2017, p. 28). Nevertheless, the presentation in the form of documentation of various social phenomena in an art gallery is not the same as the possibility of these phenomena being present in galleries per se.

images (Salad Days, 2016). The gallery advancement of "street art" is problematic for the very form of its existence, but its medialization does not pose such a threat, remaining external to it. Medialization is also more understandable in the broader perspective of the ongoing transformations of public space.

The first form of medialization of art is its documentation, which has gradually developed over the past century. Its beginnings can be traced back to the appearance of the illustrated press, whose primary form of illustration in the 19th century was woodcuts (Kita, 2015), which by the end of the century were gradually replaced by photographs and photographic collages[6]. Photography and photographic reproduction are not the same, as photography achieved the status of art[7], while photographic reproduction by definition does not aim to achieve this and usually does not[8].

The photographic popularization of art, which is fundamentally unreproducible, as discussed by Walter Benjamin in the 1920s and 1930s, is an appropriate reference for understanding the character and role of photographic reproduction in graffiti and street art (Benjamin, 1975, pp. 75–76). Benjamin's thought, rooted in the philosophy and theory of culture defined by historical materialism, indicating the role of technological changes in production means for artistic practice changes, remains relevant today and facilitates understanding of the transformations in artistic practices and forms of artistic consciousness that have developed since the invention of technological forms of imaging. The first step in this process was the mechanical reproduction of images that previously existed, which achieved a level of execution suitable for reproducing works of art around 1900. It was at then that the connection between the original and a specific time and place in space, which provided the possibility of experiencing the aura, an integral quality of a work of art that cannot be transmitted through mechanical reproduction techniques, was broken for the first time (Benjamin, 1975, pp. 69–72).

[6] A wonderful book dedicated to photomontage, in which the theme of the presence of photomontage in the press from the first half of the 20th century is developed, was published by Stanisław Czekalski (2000).

[7] The path to recognizing photography as art was bumpy and twisted with various turns, from attempts to resemble romantic painting, while painting itself became more progressive with Impressionism, through gaining recognition as an independent art with the acceptance and emphasis placed on specifically photographic properties and possibilities in the movement of New Objectivity. This process included a crucial moment when the exhibition *The Decisive Moment* by Henri Cartier-Bresson was displayed at the Louvre, that is, at the metaphorical Parnassus of art, and then underwent various modifications, moving away from analog photographic qualities towards digital painterliness and visionariness (Soulages, 2012, p. 270).

[8] An exception can be the story about the necessity of documenting performances from the perspective of the possibility of their historical recording, which gradually evolved towards becoming an equal medium in video performance (Jankowska, 2004).

Benjamin, not only a materialist cultural theorist but also a communist, viewed the change that occurred with the development of technical forms of reproduction as justified because it aligned with material changes in history, stemmed from them, and had a more egalitarian character. However, he did not idealize the processes occurring, noting that every transformation is not merely the addition or subtraction of something but a transformation, i.e., a change, in the process by which one dimension is enhanced while another weakens. In the case of art reception, its popularization and the expansion of its audience beyond the previously educated elite who had access and the ability to travel and personally experience the original works of art is associated with a flattening of its reception. A similar situation occurs in the case of both photographic documentation of graffiti and street art, as well as, in a broader perspective, with the influence of technological media on the transformation of these forms of imaging, originally related to the public sphere.

The documentation of graffiti or street art is not the same as the graffiti and street art themselves and fundamentally changes the way they are received, although it undoubtedly allows a greater number of people to become familiar with the visual aspect of the works in a representational form. The visual and representational popularization of urban images, which are part of art experienced in the natural conditions of the material, physical urban environment, which has been the primary form of public space at least since ancient times, flattens the reception of these images, which, at least potentially, are perceived by a greater number of senses. In their perception within the physical urban environment, the smell of paint, and the goosebumps that appear on the body when we pass through an unknown area containing graffiti, which we do not fully perceive at the moment of being focused and searching for its critical meaning, are essential.

Sharing images of urban works, first in the form of analog photographs and later digital ones, on websites and social media undoubtedly increases the popularity of the person or people who created them. It also sometimes has political significance – as is the case with works by Banksy or the famous image of the Hooded Man, analyzed in its various transformations, including media transpositions, by W. J. T. Mitchell (2011) and Orayb A. Najjar (2011). However, what is taken away from these images is their essential dimension, Benjamin's "aura," understood as the feeling of a certain distance, which occurs despite the relative closeness of the object and results from the genetic connection between the original and a specific place and time, which is extremely important in the case of urban images. Due to the transfer of urban images into the space of digital images, they are removed from the continuity of physical space, lose their uniqueness and temporality, and gain infinite reproducibility and potential immortality on servers. Their uniqueness and ephemeral character are replaced by superficial repetitiveness outside of specific

social, political, and economic significance and potential digital eternity. They are freed from the process of struggles and conflicts that define a given social environment and which, in relation to them, can be treated as their "tradition," gaining exhibition value.

This, however, is only one side of the coin of the ongoing technological transformations that affect images and, more broadly, art created in urban spaces, leading to the emergence of new forms of these images and this art in a form that can no longer be easily reduced to the original physical form, though retaining an essential element – a creative and/or critical approach to public space. However, in order to fully understand this process, we must briefly turn our attention to changes in the public space itself, which occur as a result of material transformations in means of production – broadly speaking – and technological media – more specifically.

HYBRIDIZATION OF PUBLIC SPACE AND ITS RELATIONSHIP WITH PUBLIC ART

Artistic practices, such as creating works of art in public space, including street art and graffiti, are carried out in the urban social environment of a public nature, which, however, undergoes rapid processes of privatization in the era of late capitalism. Graffiti opposed the privatization of public urban space at the end of the 20th century, later leaving this task to vandalism and post-vandalism (Moch, 2016, p. 62), while street art, sculptures, and installations entered and continue to enter into various alliances with private spaces and objects, as well as spaces subject to social forms of management. Graffiti production expressed attempts to reclaim public space that had been, and was being, appropriated by private entities, which is why slogans such as "RECLAIM THE STREETS" emerged (Ramirez Blanco, 2013). On the other hand, works falling under the street art movement were and are generally created with the consent of residential communities, private entities, or local government institutions, which, by supporting art, simultaneously protect their own interests by beautifying unattractive or degraded buildings that are not yet being demolished (Moch, 2016, pp. 141–142). (Through their actions, they – for better or worse – contribute to the processes of gentrification (Grochowska, 2013, pp. 149–158)). The specificity of sculptures and installations, in turn, forces an even closer relationship with regional and supraregional authorities. This affects, on the one hand, the production of works defined in terms of content and meaning in agreement with these entities, and on the other hand, it requires these entities to understand the significance of contemporary culture and art if the works are to be executed in this spirit.

When analyzing the changes occurring in art practices in public urban spaces, including their gradual virtualization initiated by mediatization processes, it should be noted that they are fundamentally linked to the transformations affecting the urban environment and public space itself. Many theorists, especially since the beginning of the 21st century, have pointed out the influence of virtual technologies on their progressing hybridization (di Marino, Tabrizi and Chavoshi, 2023, p. 6). Hybridization, which cities undergo, is largely the result of the digitization of various areas of life and relies on new connections between urban neighborhoods, people, digitization, and spaces for work and leisure. It is also related to changes in the division between the public and private spheres. The area where public life takes place is a specific area of social life, which can include various urban public spaces such as streets, parks, or squares. In this area, relations with both friends and strangers take place, as well as actions that largely, although not exclusively, define social life (di Marino, Tabrizi and Chavoshi, 2023, p. 7). The ability to present oneself, express oneself, and be heard in public social space has conditioned the recognition of an individual as a subject (rather than merely an object) of politics since ancient times. This public space used to have a physical nature. However, it began to lose this nature with the development of the press (Benjamin, 1975, p. 52), radio, and television (McLuhan, 1964; McLuhan, 2004), which enabled feedback, i.e., allowing recipients to actively participate in the creation of public debate conducted through media, thus also in the production of media messages.

Gradually, from the moment the mediatization of public debate began, we reached an advanced hybridization of social space, which is no longer just physical but also no longer exclusively public. The hybridity of social space involves, on the one hand, the blurring of the boundaries between physical and digital spaces, occurring through the use of mobile technologies as social devices, because the social environment is shaped by the mobility of users connected to each other and to others, also with space via mobile devices. As Adriana de Souza e Silva writes, "[a] hybrid space is a conceptual space created by the merging of borders between physical and digital spaces, because of the use of mobile technologies as social devices" (de Souza e Silva, 2006, p. 266). Social media, for example, can influence the attractiveness of a restaurant in the neighborhood, which had previously been overlooked by local residents. In this way, they participate in the process of spatial negotiations in the urban environment, integrating the layers of this environment: the physical – where one can have a meal – and the digital – where one can share the experience of that meal. Noticing these processes, the authors of a text dedicated to the hybridization of the city, and particularly places of work, using Oslo as an example: Mina Di Marino, Helyaneh Aboutalebi Tabrizi, Seyed Hossein Chavoshi, point to three dimensions that define the hybrid nature of contemporary urban spaces: spatial-functional, social, and digital, while the interaction

between these dimensions is connected with the complexity of what is private and public, with blurred boundaries between public, semi-public, and private spaces, as well as being linked to the network, which reconfigures hybrid urban spaces, being simultaneously embedded in it.

> The interaction between spatio-functional, social, and digital features is related to the complexities of the concepts of public and private as well as the network in which we would reconfigure and embed hybrid urban spaces (di Marino, Tabrizi and Chavoshi, 2023, p. 6).

Physical proximity does not necessarily mean availability, the public nature does not necessarily relate to physical matter, interaction does not require immediacy or spatial contact, and informationality is not necessarily tied to text or words. This situation has led to the creation of hybrid patterns of urban life, neighborhood relations, and social practices (Hampton, 2002, pp. 228–231), which have far-reaching consequences for the ways in which urban spatial structures are shaped and for their dynamics. This is something urban planners, architects, and city designers must take into account today.

Hybrid spaces are connected, mobile, and social spaces (Castells, 2002, pp. 116–136), which, therefore, are defined by a second aspect of their hybridity: they cross the boundaries between the private and public, enabling, for example, civic engagement in urban space from a distance defined by one's place of residence on the outskirts rather than in the city center, or even outside the city. This process has been ongoing for several decades, but it intensified significantly since the COVID-19 pandemic, which accelerated these processes. This has been reflected in theoretical and analytical texts, as well as previously in political and economic guidelines, as the development of remote work significantly reduced lockdown costs in developed countries, while also helping to reduce the spread of the virus (OECD, 2020).

Currently, the urban social space is an environment in which we move using both physical bodies and various mobile applications on smartphones or, at least in some cases, in VR or AR goggles. What is physical and what is digital intersect with one another, not by simply adding, but by merging. The digital requires some form of physical materiality to manifest, and the material is increasingly mediated digitally. This mutual intertwining of the physical and digital can be understood through the concept of the evolution of nature and culture, in which it is recognized that what is natural influences what is cultural, and what is cultural influences what is material. The mutual relationship between what is natural and cultural in highly developed cities is also observed, both in terms of their urban and architectural shape, and the social functions they fulfill (Jones, 2009, pp. 309–323), because, on the one hand, although contemporary cities are built from highly processed materials, these materials are still extracted

from the earth, and on the other, human communities implement their relationships within them, determining forms of their existence on both biological and cultural levels.

In order to reflect on the consequences of the transformation of urban space for social practices, including artistic practices carried out in this space, it is worth referencing the perspective of historical materialism applied to the analysis of cultural phenomena, as referred to in the previous section of this article by Walter Benjamin. This Marxist theorist of culture did not limit himself to analyzing the widespread access to works of art, which before the development of machine reproduction techniques had an elitist nature. He also pointed out other consequences of the basic thesis of historical materialism in the realm of culture and art practices related to the transformation of the material base, which results in the emergence of new practices and, therefore, new forms of consciousness (Benjamin, 1968; Benjamin, 1999). This process was also indicated by Canadian sociologist Marshal McLuhan, who in *Understanding Media: The Extensions of Man* (first published in 1964) argued that the type and form of media are significant, and even more significant than the content they convey, as they shape and control the scale and form of human associations and actions, and ultimately their consciousness, which is an expansion of the meaning of his famous slogan *The Medium is the Message* (McLuhan, 1964; McLuhan, 2004).

The mediatization of artistic practices in urban public spaces is just one element of the process of changes occurring due to changes in the material base, which is no longer just physical, but becomes both physical and digital, that is, hybrid. The hybridization of practices, including artistic practices, carried out in urban social spaces, which are no longer entirely private nor entirely public, nor only physical, but connect what is physical with what is digital, is a natural stage in the development of these practices in accordance with the theses of historical materialism. This leads to the creation of new ways of understanding and acting in space and society, which is particularly visible in the case of technologically advanced urban environments. In these environments, we observe processes of creating new forms of civic engagement and urban interactions based on various forms of intervention in the urban and public space through artistic, visual, spatial, and performative realizations, connecting two ontological levels of the reality defining these cities – the physical and the digital. Hybridization leads to new forms of interaction within the local community through the functioning of individual places, their remote animation, and the creation of temporary online communities. It is no surprise, then, that new practices built on a transforming material base result in new forms of consciousness and social identity. The way societies shape and define space is changing, as well as how they shape themselves through their functioning in professional, interest-based, family, friendship, neighborhood, and creative groups.

Artistic realizations created in this situation in urban social spaces are a kind of reformulation, "nodes" of a physical and technological nature, connecting two layers of social reality: the physical and the digital in an unexpected way, potentially reconfiguring the expectations of people moving within the city and network. They create a new type of "common places," which can also be called "places in between," built on an unforeseen solution to technological and infrastructural urban conditions (Setti, 2013; Crotti, 1997). It is worth noting that their aesthetics are not only based on visual accessibility but on informational accessibility. It is precisely this accessibility – the ability to easily move from a small physical intervention to information suspended online – that defines their public nature, maintaining their character as public art – now realized in a hybrid urban environment.

VIRTUALIZATION OF ART IN PUBLIC SPACES AND STREET ART AS THEIR TRANSFER TO VIRTUAL SPACE

At the beginning of the article, I pointed out the fundamental and essential connection between graffiti and street art with public space and the urban environment. Initially, this space and environment had a physical character, which was gradually lost due to the media-driven discourse. The medialization of discourse began during the era of print press, then television, later evolving into stages leading towards websites and social media. Mass communication media began relatively early to involve the audience in the process of interaction and co-construction of discourse, through the publication of letters from readers and directing the television camera at them. However, it wasn't until the mid-1990s, when communication reached the so-called "2.0" level, that we encountered a situation in which public space was democratized to such an extent that amateurs were widely included in the process of creating messages functioning in culture, regardless of the physical place they occupied or their nationality (Lessing, 2006). In the first decade of the 21st century, social media began to develop, continuing the democratization process of public space on the web[9], as well as the Internet of Things, conceptualized within the framework of 3.0 communication. This stage of communication's technological development, based on the growth of wireless networks, cheap microcontrollers, cloud computing, etc., creates connections between places, objects, and people, often referring to terms like cross-media or communication bridges. These bridges, or

[9] Social media, by their nature, are less subject to the pressure of centralized and thus ideologized mass media, which, however, does not mean that there are no possibilities for manipulation through algorithms that promote certain types of content due to potential corporate profit.

intersections of physical and digital roads, often house works of art in public spaces, including street art and graffiti.

Changes in communication media understood as the transition from communication 1.0 to 3.0, facilitate the reception and enhance the popularity of graffiti and street art, as I mentioned earlier, citing Andrea Baldini's reflection. However, their consequences are more far-reaching than those noted by the Italian theorist. On the one hand, there is the phenomenon of unverifiability observed in communication, both text-based and image-based (not only static images but also moving ones). In other words, verification of such communication through direct reference to reality becomes difficult and sometimes even impossible. Since the first media war, namely the Gulf War known to most of the world through media reports, which Jean Baudrillard wrote about convincingly (1995, 2006), we have reached the precession of simulacra (1994, 1996) and post-truth, which he predicted. It thus becomes impossible to simply confirm whether someone truly said the words attributed to them, just as it is impossible to determine whether a certain event occurred – including the event of painting a picture on the city's walls. What proliferates instead are images of images, which refer to each other in a network of mutual relationships, but it becomes difficult, or even impossible, to say whether this image was actually created. This is particularly relevant for images on city walls, which by their nature are more or less ephemeral (Moch, 2016, p. 80). Therefore, art made in public spaces changes its face. The aesthetic form or the content of the physical images themselves is no longer the most important – moreover, they are increasingly difficult to create in the increasingly commercialized space of large urban agglomerations with buildings made of glass and steel, as convincingly described by Sepe, a Polish graffiti artist and street artist, in the video dialogue he had with Yuka, a Mexican colleague, as part of the "Breaking Walls with Graffiti" project (Łukaszewicz-Alcaraz, 2014). The transformations to which the urban environment is subjected, both in terms of physicality and the ways of moving through it and communicating within it, heavily mediated by digital tools, lead to changes in practices of intervention in this environment and public space.

Since, currently, public space is not just physical, and much of it exists online, graffiti and street art are also increasingly transitioning to virtual forms. This is the other side of their advancing mediatization, which is not just external, i.e., spreading already created works, but also internal, influencing the substantial transformation of their structure in line with the new media architecture of 3.0, based on bridges and intersections of the physical and the digital. Virtualization of graffiti and street art does not necessarily mean their complete transfer to digital form, although we are also dealing with this form. In the commercialized and socially degraded public space of urban environments, graffiti and street art undergo physical reduction, while the importance of what

is digital grows, thus making them hybrid, in the previously defined sense. Minor interventions in the physical urban space act as references to analogous places in the digital space, between which bridges are set up, offering us the experience of art in public space, including graffiti and street art.

An excellent example of the physically reduced form of graffiti and street art, which refers to digital spaces, both containing images and music, is the form created using QR code stencils. This form is especially preferred in cultural areas where graffiti is treated more severely, both socially and legally, than in Western countries and the Americas, such as in Japan, China, or India, though its reach is not limited to these countries. One of the first graffiti works in QR code form, which is also an example of street art, was created by Yuri Suzuki in Tokyo in 2008 and was called "Future Pirate Radio." Based on graffiti in the form of a QR code, it referred to an audio form – pirate, not under authority, and critical of the dominant discourses, thus continuing the subversive character of graffiti and street art in a changed technological form within a transformed technological environment.

REMO (Remo Camerota), an Australian artist living in Tokyo, created another famous work in 2010 using a QR code in a public space in Bristol. It was his campaign called *The Scar Graffiti campaign*, referring to his graphic novel *SCAR Vol. 1*. The QR codes, spray-painted and placed in various locations around the city, were prepared for reading by British telephone devices. When scanned by phone, they referred to an audio piece called *Graffiti Piece of Alice* within *SCAR Vol. 1*. The QR code, made in the form of graffiti, acted in this case as a kind of signature, which was also a link to the rest of the work. Graffiti made in the form of a QR code but referring to further spaces created by artists can be considered transformations of street art, linking streets and spaces through creative nodes.

The works discussed above use QR codes created with stencils and spray paint. However, the QR code form is also made from other materials, such as mosaics. This material was chosen by Space Invaders, who installed QR code mosaics in various cities, such as in Varanasi (India 2008): VRN_12, QR code (Invader2006 (2008), or in Brussels (Belgium 2012): BXL_40. In the latter case, the QR code referred to moving images, specifically an animation showing an invasion of the city. However, the QR codes from Space Invaders usually led to messages such as "this is an invasion," „nice art," „I love you," or "not for sale," highlighting their anti-systemic character.

Creating artistic works in this way is an example of transformations in the forms of creation that are not reducible to the dissemination of graffiti works in media, even in social media. It is evident that transformations in material bases are still transforming practices, and the emergent forms of consciousness based on them, regardless of whether the materiality is solely physical or hybrid. The form of media communication, therefore, influences the reformulation of

the ways we experience, associate, think, and feel. These forms are increasingly being moved to virtual space, which does not mean the complete loss of their physical substrate, but its fundamental reduction. This is also evident in other artistic works, even those that are not rooted in illegal or anti-systemic practices, as is the case with graffiti. Limiting the focus to graffiti could create a misleading belief that their "hiding" in the digital space is a result of an attempt to escape the practices of power. However, it might be considered to be opposite. Already Slavoj Žižek, in *The Plague of Fantasies*, first published in 1997, wrote that in the network we can also experience the continuation of the Law of the Father in the network (Žižek, 1997; Žižek, 2001). Since, according to this law, we are currently experiencing the progressive disembodiment of what characterizes human experience, and art presented in the public space of cities, public art, is increasingly taking the form of a partially virtual, hybrid, or augmented form.

The number of projects using AR (augmented reality) technologies is currently increasing, whether we look at downtown Frankfurt, Germany, where from October 22, 2022, to June 30, 2024, one could find site-specific works realized in in the interesting project *The Anlage*, involving Tanya V. Abelson, Benedikt Ackermann, Florian Adolph, Alex Chalmers, Shaun Motsi, and Kristin Reiman[10]; or in Timișoara, Romania, where the Android ArtTM app was developed and launched, focusing on enhancing the experience of existing works and monuments found in physical space (Vert, Andone, Vasiu, 2019); or in Nairobi, Kenya, where the Greek company Narratologies team taught students at Kenyatta University how to create urban games using photogrammetry and AR as part of the CAPHE project[11]. Gaming-related artworks, discovered while traversing the city through a mobile app, are becoming increasingly popular, enriching the way we move through the city and changing the form of experiencing art by activating audiences in both mental and physical engagement. Since public space is often perceived through media mediation

[10] Tanya V. Abelson (*1985, Buenos Aires, AR) – created digitally experienced music for imported plants, which marked a path in the Nizza garden: "Tambourine" (2021). Shaun Motsi (*1989, Harare, ZW) – presented a virtual tree inspired by the film "Avatar" in the middle of the Nizza garden: "Untitled" (Nu Sensitivty, 2021). Alex Cahlmers (*1991, Whangarei, Aotearoa/NZ) – placed a digital elevator cabin appearing among surrounding skyscrapers: "Untitled" (2022). Benedict Ackermann (*1994, Frankfurt, DE) – provided the possibility to identify plates on sidewalks, beneath which cables connect in a system using a program based on Artificial Intelligence: "Embedded systems" (2022). Florian Adolph (*1977, Marburg, DE) – digitally revealed two massive sculptures in the Nizza park: "Paper and Steel" (2019). Kristin Reiman (*1992, Tallinn, EE) – placed two digitally connected speakers on a small hill to activate the work: "How to unfocus completely" (2022).

[11] *Narratologies AR Treasure Hunt Closing Event in Nairobi, Kenya* [official wbsite of the CAPHE project], https://www.caphe.space/narratologies-ar-treasure-hunt-ecodream-hunts-a-closing-event/ [Accessed: 7.04.2025]

today, and social interactions through various technological interfaces, it is understandable that art is increasingly and more widely created in the space between what is physical in the city and activating images on screens, and what is suspended in the cloud. The images that appear on bridges between the physical and digital worlds manifest on the surfaces of screens, only to disappear, temporarily inhabiting our bodies and requiring us to at least briefly embody them, to give us an embodied experience, even though mediated through digital media.

In our bodies and through our bodies, we also experience fully virtualized graffiti images. This confirms Hans Belting's assertion that the primary location of images is the human body (Belting, 2007, p. 35), despite his skepticism about the status of images of digital images (Chmielecki, 2016). Virtual graffiti is painted in programs like Tilt Brush through goggles and remains on digital walls, visible only to intentional recipients. This is surprising but understandable when we see where it happens, because these are usually countries where there is not so much a lack of graffiti legalization, which is not globally widespread, and not that much of its social acceptance either. Therefore, young people practicing it, who want to raise important social issues or create works in graffiti style, agree with the criticism of graffiti as the destruction of private or public property and create works that, in their opinion, ensure the coherence of their artistic message – works that do not destroy physical public space but are available in virtual space. Such works are created, for example, by the Nairobi Fat Cap group – Fallohide and Baraza Media, which are initiatives in Nairobi, Kenya, focused on training artists in virtual reality graffiti, aiming at social goals, visibility/audibility of artistic messages, and the need to assert the presence of African artists and tell their stories in the emerging virtual world, without the need for critical historical dialogue. This approach is very interesting, showing a difference from the critical approach dominant in the Global North, which is deeply skeptical about the global nature of digital networks, virtual reality, and the Metaverse project in detail.

PROVISIONAL SUMMARY. TECHNOLOGY, AESTHETICS, AND ETHICS IN THE AGE OF THE FOURTH INDUSTRIAL REVOLUTION

Contemporary artistic practices in AR (augmented reality) and VR (virtual reality) environments clearly demonstrate the interconnection between technological, social, aesthetic, and ethical issues. These technologies provide new creative possibilities, enabling artists to engage in social issues and use digital spaces to convey their values. In the context of this transformation, the issue of the hybridization of public space stands out. Traditional physical spaces, such as urban streets, are beginning to coexist with virtual spaces, creating new

forms of interaction with the public. The hybridization of public art, including street art and graffiti, has become one of the key elements of this change. Street art, traditionally existing in physical space, is entering the digital realm. QR and VR graffiti, and AR public art, are just a few examples where traditional art forms meet modern technologies, expanding public space with new, digital layers. As a result, urban space becomes more complex, blending physical and digital elements which together create a new, hybrid public space that is more dynamic and interactive.

The core value of contemporary artistic practices in AR and VR is accessibility. Broad access to digital spaces democratizes art, making it more accessible to various social groups worldwide. Artists who use these media can reach a wider audience and influence social change, creating works that transcend the boundaries of traditional physical spaces. This phenomenon could lead to greater inclusivity in culture, becoming one of the key elements of the Fourth Industrial Revolution. Kurt Iveson rightly notes that graffiti and street art are practices that enable urban residents to reclaim their right to public space (2009). In the age of digital technologies, such an approach evolves, and traditional forms of street art become part of a global, virtual space, giving artists new tools to express their ideas and participate in global social and cultural processes. In this way, the hybridization of public art, combined with modern technologies, becomes one of the most important elements of contemporary artistic practice, participating in the process of merging physical and digital space into one dynamic ecosystem.

BIBLIOGRAPHY

Austin, J. (2010). More to See than a Canvas in a White Cube: For an Art in the Streets. *City*, 14 (1–2), pp. 33–47.

Baldini, A. (2017). Dangerous Liaisons: Graffiti in Da Museum. In Rivasi, P. (ed.), *Un(Authorized)//Commissioned*. Rome: WholeTrain Press, pp. 26–32.

Baldini, A. (2018). *A Philosophy Guide to Street Art and the Law*. Leiden: Brill.

Baldini, A. (2020). Street Art in the Digital Age: Photos, Documents, Urban Agency. *Arch Daily*, February 18. Available at: https://www.archdaily.com/933982/street-art-in-the-digital-age-photos-documents-urban-agency [Accessed 7.04.2025].

Baldini, A. (2022). What Is Street Art? *ESTETIKA. The European Journal of Aesthetics*, LIX/XV (1), pp. 1–21. https://doi.org/10.33134/eeja.234

Baudrillard, J. (1996). Precesja symulakrów. Translated by T. Komendant. In Nycz, R. (ed.), *Postmodernizm. Antologia przekładów*. Kraków: Wydawnictwo Baran i Suszczyński, pp. 175–189.

Baudrillard, J. (1994). The Precession of Simulacra. In Baudrillard, J., *Simulacra and Simulation*, transl. S. F. Glaser. Ann Arbor: University of Michigan Press, pp. 1–42.

Baudrillard, J. (1995). *The Gulf War Did Not Take Place*. Translated by P. Patton. Bloomington: Indiana University Press.

Baudrillard, J. (2006). *Wojny w Zatoce nie było*. Translated by S. Królak. Warszawa: Sic!

Belting, H. (2007). *Antropologia obrazu. Szkice do nauki o obrazie*. Translated by M. Bryl. Kraków: Towarzystwo Autorów i Wydawców Prac Naukowych Universitas.

Bengtsen, P. (2015). Carelessness or Curatorial Chutzpah? On Controversies Surrounding Street Art in the Museum. *Konsthistorisk Tidskrift / Journal of Art History*, 84 (4), pp. 220–233.

Benjamin, W. (1968). *The Work of Art in the Age of Mechanical Reproduction*. In H. Arendt (Ed.), *Illuminations* (H. Zohn, Trans., pp. 217–251). New York: Schocken Books.

Benjamin, W. (1975). Dzieło sztuki w dobie reprodukcji technicznej. Translated by J. Sikorski. In Benjamin, W., *Twórca jako wytwórca*, Poznań: Wydawnictwo Poznańskie, pp. 66–105.

Benjamin, W., Twórca jako wytwórca. Translated by J. Sikorski. In Benjamin, W., *Twórca jako wytwórca*, Poznań: Wydawnictwo Poznańskie, pp. 46–65.

Benjamin, W. (1999). The Author as Producer. Address at the Institute for the Study of Fascism, Paris, April 27, 1934. In Benjamin, W., *Selected Writings. Volume 2, part 2, 1931–1934*, transl. R. Livingstone and Others, Jennings, M. W., Eiland, H. Smith, G. (eds.). Cambridge, Massachusetts, and London, England: The Belknap Press of Harvard University Press, pp. 768–792.

Berleant, A. (1991). *Art and Engagement*. Philadelphia: Temple University Press.

Berleant, A. (2004). *Re-thinking Aesthetics: Rouge Essays on Aesthetics and the Arts*. Aldershot: Ashgate Pub.

Berleant, A. (2007). *Prze-Myśleć Estetykę. Niepokorne eseje o estetyce i sztuce*. Translated by M. Korusiewicz. Kraków: UNIVERSITAS.

Castells, M. (2002). Virtual Communities or Network Society? In Castells, M., *The Internet Galaxy. Reflections on the Internet, Business, and Society*. Oxford: Oxford University Press, pp. 116–136. https://doi.org/10.1093/acprof:oso/9780199255771.003.0005

Chmielecki, K. (2016). Obrazy, które nie są już obrazami. Wizualność obrazu cyfrowego w antropologii obrazu Hansa Beltinga. In Łukaszewicz-Alcaraz, A. (ed.), *Widzialność/ Wizualność obrazu cyfrowego pomiędzy fenomenologią a kulturą wizualną*, Szczecin: Akademia Sztuki w Szczecinie, pp. 114–135.

Crotti, S. (1997). Interspaces: From Public Site to Common Places. In *Architecture of Public Space: Forms of the Past, Forms of the Present*. Milano: Electa.

Czekalski, S. (2000). *Awangarda i mit racjonalizacji. Fotomontaż polski okresu dwudziestolecia międzywojennego*. Poznań: Wydawnictwo Poznańskiego Towarzystwa Przyjaciół Nauk.

de Souza e Silva, A. (2006). From Cyber to Hybrid: Mobile Technologies as Interfaces of Hybrid Spaces. *Space and Culture*, 9(3), pp. 261–278. https://doi.org/10.1177/1206331206289022

di Marino, M., Tabrizi, H. A., Chavoshi, S. H. and Sinitsyna, A. (2023). Hybrid Cities and New Working Spaces – The Case of Oslo. *Progress in Planning*, 170(100712), pp. 1–35. https://doi.org/10.1016/j.progress.2022.100712

Grochowska, A. (2013). Murale symbolem rewitalizacji czy gentryfikacji? Przykład Wrocławia. *XXVI Konwersatorium Wiedzy o Mieście*, pp. 149–158.

Hampton, K. (2002). Place-based and IT Mediated 'Community'. *Planning Theory & Practice*, 3(2), pp. 228–231.

Iveson, K. (2009). Graffiti and the politics of public space. *City*, 13(4), pp. 367–379.

Jankowska, M. (2004). *Wideo, wideo instalacja, wideo performance w Polsce w latach 1973–1994. Historia, artyści, dzieła*. Warszawa: Wydawnictwo Neriton.

Jones, O. (2009). Nature–Culture. In Kitchin, R. and Thrift, N. (eds.), *International Encyclopedia of Human Geography*. Elsevier, pp. 309–323. https://doi.org/10.1016/B978-008044910-4.00716-1

Kita, J. (2015). Ilustracje z dziewiętnastowiecznej prasy Królestwa Polskiego jako źródło do badań nad kulturą uzdrowiskową. *Studia z Historii Społeczno-Gospodarczej XIX i XX Wieku*, XIV, pp. 37–48. http://dx.doi.org/10.18778/2080-8313.14.03

Lessing, L. (2006). *Code: Version 2.0*. New York: Basic Book.

Łukaszewicz-Alcaraz, A. (2014a). Foreword. The eye and the palm. The dynamic of the painting as an artistic, social, and political expression „Breaking the walls of graffiti. The correspondence between street–artists". In Łukaszewicz-Alcaraz, A. (ed.), *Breaking the Walls of Graffiti. The Correspondence Between Street-Artists*. Szczecin: Wydawnictwo Naukowe Akademii Sztuki w Szczecinie, pp. 7–9.

Łukaszewicz-Alcaraz, A. (2014b). The event and the painting Abusa Crew and Chinarte about femininity and community. In Łukaszewicz-Alcaraz, A. (ed.), *Breaking the Walls of Graffiti. The Correspondence Between Street-Artists*. Szczecin: Wydawnictwo Naukowe Akademii Sztuki w Szczecinie, pp. 38–45.

Łukaszewicz-Alcaraz, A. (2016). Wybrane wątki pragmatyczne, ontologiczne i estetyczne w filozoficznej analizie obrazów miejskich. *Kultura i Historia*, 30, Lublin, pp. 9–23.

Łukaszewicz-Alcaraz, A. (2017). Urban Images: Street-Art, Graffiti, and Vandalism – in the Context of Arnold Berleant's Aesthetics of Environment. In *Proceedings of ICA 2016: Aesthetics and Mass Culture*. Seoul: The Korean Society of Aesthetics, pp. 653–661.

McLuhan, M. (1964). *Understanding Media: The Extensions of Man*. New York: McGraw-Hill.

McLuhan, M. (2004). *Zrozumieć media. Przedłużenia człowieka*, transl. N. Szczucka. Warszawa: Wydawnictwa Naukowo-Techniczne.

Mitchell, W. J. T. (2011). *Cloning Terror: The War of Images, 9/11 to the Present*. Chicago: University of Chicago Press.

Moch, W. (2016). *Street Art i Graffiti. Litery, słowa i obrazy w przestrzeni miasta*. Bydgoszcz: Wydawnictwo Uczelniane Wyższej Szkoły Gospodarki.

Najjar, O. A. (2011). Emergent Structure in the Abu Ghraib Political Cartoons of Emad Hajjaj. *The International Journal of the Image*, 1(3), pp. 1–18. https://doi.org/10.18848/2154-8560/CGP/v01i03/44212

OECD (2020). *Policy Responses to Coronavirus (COVID-19)*. Available at: https://www.oecd.org/en/publications/capacity-for-remote-working-can-affect-lockdown-costs-differently-across-places_0e85740e-en.html [Accessed: 3.04.2025].

Public Art (n.d). Tate Gallery [official website]. Available at: https://www.tate.org.uk/art/art-terms/p/public-art [Accessed: 3.04.2025].

Ramirez Blanco, J. (2013). Reclaim The Streets! From Local to Global Party Protest. *Third Text: Critical Perspectives on Contemporary Art and Culture*, 123. Available at: http://thirdtext.org/domains/thirdtext.com/local/media/images/medium/Julia_Blanco_Reclaim_the_streets_1.pdf [Accessed: 3.04.2025].

Salad Days (2016). 23 Giugno / Modena '1984. Evoluzione e rigenerazione del writing'. *Salad.Days Magazine*, June 8, https://www.saladdaysmag.com/23-giugno-modena-1984-evoluzione-e-rigenerazione-del-writing/ [Accessed: 4.04.2025].

Setti, G. (2013). Beyond Public Spaces: Shared Spaces in the Contemporary City. *Journal of Civil Engineering and Architecture*, 7(7), pp. 833–840.

Soulages, F. (2012). *Estetyka fotografii. Starta i zysk*. Translated by B. Mytych-Forajter and W. Forajter. Kraków: Universitas.

Vert, S., Andone, D. and Vasiu, R. (2019). Augmented and Virtual Reality for Public Space Art. *ITM Web of Conferences*, 29 (03006), pp. 1–9. https://doi.org/10.1051/itmconf/20192903006

Zizek, S. (1997). *The Plague of Fantasies*. London: Verso.

Zizek, S. (2001). *Przekleństwo fantazji*. Translated by A. Chmielewski. Wrocław: Wydawnictwo Uniwersytetu Wrocławskiego.

Media

Invader2006 (2008). *SPACE INVADER VRN_12 QR CODE INDIA*, Available at: https://youtu.be/koovHRADjxI?si=uRyV0PdlkOCk7ATM [Accessed: 7.04.2025].

PROCES WIRTUALIZACJI SZTUKI PUBLICZNEJ: QR GRAFFITI, SZTUKA W ROZSZERZONEJ RZECZYWISTOŚCI W PRZESTRZENI PUBLICZNEJ ORAZ GRAFFITI VR

Streszczenie
Wirtualizacja sztuki publicznej, przez którą rozumiem sztukę w przestrzeni publicznej, street art i graffiti, może być postrzegana z jednej strony jako ich medializacja, zapośredniczenie odbioru poprzez inne obrazy medialne także funkcjonujące online. Sprawia ona, że nasze doświadczenie tych rodzajów sztuki ma charakter wirtualny w sensie jego potencjalności. Z drugiej strony do wirtualizacji sztuki publicznej można podejść jako do procesu stopniowego przenoszenia jej w przestrzeń wirtualną. W tym drugim przypadku przestrzeń wirtualna stanowi, jeśli nie podstawę, to przynajmniej równoprawny element realizacji artystycznych. Te realizacje coraz częściej przejawiają się przede wszystkim w sposób cyfrowy, choć każdorazowo zachodzi to w pewnej przestrzeni fizycznej, która niemniej jednak stopniowo traci na znaczeniu, co ma zasadniczy związek z przekształceniami zachodzącymi współcześnie w przestrzeni publicznej. Wskazany proces wirtualizacji sztuki publicznej obrazuję odnosząc się do przykładów graffiti wykonywanego w formie szablonów z kodami QR o charakterze artystycznym. Wspominam również projekty artystyczne polegające na odkrywaniu miasta poprzez poszukiwanie obiektów sztuki współczesnej istniejących w formie rozszerzonej rzeczywistości w wybranych i zaznaczonych na mapie lokalizacjach. Jako ostatnie przywołuję przykłady działania artystów i artystek kenijskich, którzy tworzą i popularyzują tworzenie dzieł graffiti w przestrzeni wirtualnej.

Słowa kluczowe:
sztuka publiczna, street art, graffiti, medializacja, wirtualizacja, hybrydyzacja przestrzeni publicznej