

Urban Encounters: Climate Art and the Public

Artículo de reflexión

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Abstract

This article examines the importance of public spaces as conduits for communication and education and platforms for spreading awareness of global warming through artistic expression. It explores how these spaces function, the impact of artworks in urban environments, and the role of public art in addressing sustainability issues. By categorizing public spaces into social and quotidian realms, the article highlights their potential as forums for discussion and learning about global issues. The article uses case studies, such as the projects of Daan Roosegaarde and Eve Mosher, to illustrate how climate art engages viewers in contemplating a more sustainable future through emotional and sensory experiences.

Palabras clave

Climate art; climate change; global warming; public art; public urban space

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Encuentros urbanos: el arte climático y el público

Resumen

Este artículo examina la importancia de los espacios públicos como conductos de comunicación y educación, así como plataformas para difundir la concienciación sobre el calentamiento global mediante la expresión artística. Explora las funciones de estos espacios, el impacto de las obras de arte en los entornos urbanos y el papel del arte público a la hora de abordar cuestiones de sostenibilidad. Al clasificar los espacios públicos en ámbitos sociales y cotidianos, el artículo destaca su potencial como foros de debate y aprendizaje sobre cuestiones globales. El artículo utiliza estudios de casos, como los proyectos de Daan Roosegaarde y Eve Mosher, para ilustrar cómo el arte climático involucra a los espectadores en la contemplación de un futuro más sostenible mediante experiencias emocionales y sensoriales.

Palabras clave

Arte climático, cambio climático, calentamiento global, arte público, espacio público urbano

Rencontres urbaines : l'art climatique et le public

Résumé

Cet article examine l'importance des espaces publics en tant que vecteurs de communication et d'éducation, ainsi qu'en tant que plateformes de sensibilisation au réchauffement climatique par l'expression artistique. Il explore les fonctions de ces espaces, l'impact des œuvres d'art sur les environnements urbains et le rôle de l'art public dans la résolution des problèmes de durabilité. En classant les espaces publics en domaines sociaux et quotidiens, l'article met en évidence leur potentiel en tant que forums de débat et d'apprentissage sur les enjeux mondiaux. L'article s'appuie sur des études de cas, telles que les projets de Daan Roosegaarde et d'Eve Mosher, pour illustrer comment l'art climatique engage les spectateurs à contempler un avenir plus durable à travers des expériences émotionnelles et sensorielles.

Mots-clés

Art climatique, changement climatique, réchauffement climatique, art public, espace public urbain

Encontros Urbanos: Arte Climática e o Público

Resumo

Este artigo examina a importância dos espaços públicos como canais de comunicação e educação, bem como plataformas para difundir a conscientização sobre o aquecimento global por meio da expressão artística. Ele explora as funções desses espaços, o impacto das obras de arte nos ambientes urbanos e o papel da arte pública na abordagem de questões de sustentabilidade. Ao classificar os espaços públicos em domínios sociais e cotidianos, o artigo destaca seu potencial como fóruns de debate e aprendizado sobre questões globais. O artigo usa estudos de caso, como os projetos de Daan Roosegaarde e Eve Mosher, para ilustrar como a arte climática envolve os espectadores na contemplação de um futuro mais sustentável por meio de experiências emocionais e sensoriais.

Palavras-chave

Arte climática, mudança climática, aquecimento global, arte pública, espaço público urbano

Introduction

In recent decades, the phenomenon of global climate change has become a prominent topic on the socio-political agenda. The growing awareness of this global crisis has led to increased concerns about environmental issues. Various actors, including scientists, geologists, sociologists, activists, politicians, and policymakers, have worked to protect the environment (McCright & Dunlap, 2000). However, the responsibility for addressing this challenge no longer rests solely with the scientific community (Tsui, 2020). In addition, contemporary artistic expressions and related disciplines must also contribute to this endeavor. In this regard, the role of art in the context of climate change has become increasingly important.

Artistic expression can serve as a crucial mode of communication, playing a pivotal role in raising awareness about global warming (Galafassi *et al.*, 2018; Hahn, 2023). Artwork that is emotive and effective in portraying the complexities surrounding the environmental crisis significantly influences public perception. By providing a platform for social learning, emotional connection, and active public engagement, this artistic medium fosters a deeper understanding of climate change issues (Hahn, 2023). A considerable number of contemporary artists have developed innovative projects that engage the public in the topic of climate change. Through their work, these artists inform the public about environmental challenges and prompt consideration of potential solutions and strategies for a more sustainable future.

The pivotal role of contemporary art in shaping conversations and perceptions regarding the environment is evident. Artworks possess the ability to challenge entrenched conceptions and instigate critical reflections on the intricate relationship between humanity and nature. Bill McKibben (2005) underscores the indispensable contribution of artists in fostering climate awareness. Contending that a purely intellectual grasp of scientific facts is insufficient to inspire meaningful change, he argues that artists have a unique ability to make emotional connections between the public and climate change, thereby inspiring concrete action toward environmental sustainability (McKibben, 2005). As Melissa Denchak (2017) notes, meaningful change can only be achieved when individuals are willing to

take action. This underscores the importance of civic engagement in the fight against climate change.

Currently, a number of creative professionals, including artists, designers, architects, and activist groups, have expressed concern about environmental issues. These individuals present their works using a variety of methods, including traditional media, new media, and social forms such as activist art and participatory art.

The growing interest and relevance of the role of art in the context of climate change in contemporary discourse indicate that the topic is worthy of further investigation. The question of whether climate art can influence its audience has been addressed in several studies (Galafassi *et al.*, 2018; Hahn, 2023; Kaufmann *et al.*, 2023). Adam Brenthel (2016) posits that art provides a personal connection through sensory and conceptual means, thereby facilitating more intimate and effective communication. Similarly, Sacha Kagan (2014) argues that art can evoke emotional responses, rendering it an efficacious instrument for the dissemination of awareness regarding pivotal matters such as climate change.

In this context, David Buckland (2013) emphasizes the profound impact of art, highlighting its ability to convey social and emotional dimensions through personal experiences. This distinctive approach, which diverges from that of scientists and governmental bodies, underscores the capacity of art to inspire shifts in behavior and attitudes toward the environment. This perspective aligns with the insights of John Dewey (2005), whose theoretical framework offers a robust foundation for comprehending how art influences behavioral modification.

Climate art emerges as a poetic and potent force in the elevation of public consciousness regarding climate change and the spurring of tangible efforts toward environmental sustainability. The combination of phenomenological encounters and emotional resonance inherent in art, as elucidated by Dewey (2005) and other scholars (Pugh & Girod, 2007), indicates that its impact transcends mere entertainment, assuming a pivotal role as a catalyst for both social and environmental transformation. In its contemporary iteration, art is increasingly being utilized by artists as a medium for disseminating concepts related to the environment to a wider audience. This is occurring in part due to the

evolution of the urban public environment, which has become a prominent setting for the display of contemporary art. Public spaces are defined by their physical and visual accessibility to any individual, serving as social gathering points for a multitude of activities (Brighenti, 2011; Gehl, 2011; Habermas, 2020). This quality implies that public spaces are part of citizens' everyday environment, rendering them conducive environments for exchange, communication, and debate on social, political, and environmental issues. In particular, artworks exhibited in these public spaces have the potential to disseminate their message to a broader audience, thereby fostering dialogue and knowledge transmission (Tsui, 2020). In other words, public art allows individuals to engage in shared experiences and to share their personal experiences with others, which can stimulate changes in their behaviors. Consequently, contemporary art can be regarded as an efficacious instrument for environmental communication and education, particularly when deployed in the urban public domain.

This article examines the interconnections between public space, climate art, and educational communication, intending to elucidate the ways in which art can contribute to the awareness of climate crises in urban environments. Rather than limiting its scope to the examination of artistic perspectives and theories, the article also considers the role of public spaces and their interaction with climate art and educational messaging.

Furthermore, this paper explores pivotal aspects such as the role of art in public spaces, strategies for effective communication of artistic messages concerning the climate crisis, and the resulting impacts of climate art. In essence, this study seeks to examine the potential of public urban spaces as a distinct and impactful medium for raising awareness and facilitating dialogue about the climate challenges we confront.

To achieve this objective, the study delves into the significance and functions of climate art, evaluates the concept and functions of public spaces within the contemporary urban landscape, scrutinizes specific case studies, and proposes strategies for leveraging public urban spaces as effective mediums for communicating and educating about global warming, while also discussing its outcomes.

1. Climate art and public urban space

1.1. The climate art

Climate art utilizes a multitude of methodologies, encompassing traditional media, installations, performances, and artistic activism. It frequently integrates scientific data and technology to convey the realities of climate change, fostering aesthetic experiences and interactive engagements (Rice et al., 2019). Moreover, climate art frequently employs participatory and community-oriented approaches, wherein members of the public become collaborators or participants (Lesen et al., 2016). The interdisciplinary nature of climate art is evident in the diverse sources of inspiration drawn upon by artists, including fields such as science, pedagogy, philosophy, technology, and community engagement.

The primary essence of climate art is its communicative and educational aspects. Its main objective is to raise awareness, promote dialogue, and cultivate a lasting respect for our environmental surroundings. Through art as a means of expression and communication, artists explore the past, present, and future of the environment, using a variety of resources, forms, and contexts. Similarly, climate art places significant emphasis on evoking emotional responses, prompting feelings of concern and introspection. This reveals the communicative and pedagogical dimension of climate art, which has the potential to influence the behavior of viewers and motivate them to action (Kagan, 2014). In other words, climate art can influence the public's perception, offering perspectives for change through immersive and emotional experiences (Sommer et al., 2019).

1.2. The public urban space

Contemporary art advocates for the proactive involvement of artists in public spaces to address environmental issues on a broader scale. Nevertheless, the term "public space" itself has been a topic of contention (Kohn, 2008). As defined by Abbasia et al. (2016), public space is a fundamental element within a community, serving as a vital setting that facilitates outdoor activities in the modern context. In essence, public spaces are defined by

their accessibility and inclusivity, serving as a vital setting for the entire community.

The concept of public space has been the subject of numerous debates (Grodach, 2010; Low, 2022). The term “public spaces” encompasses a variety of locations, including squares, parks, and plazas, which are designed for social interaction, as well as streets and sidewalks, which facilitate connectivity. It is acknowledged that public space is accessible to all social groups and facilitates social interaction and temporary appropriation (Altman & Zube, 1989; Carr *et al.*, 1992; Habermas, 2020; Low, 2022). This suggests that public space exhibits physical characteristics of openness while simultaneously being a socially constructed place for interaction with other individuals and environments.

The public urban space represents an intermediate zone that can be accessed by a significant number of individuals without the need for specific identification, and it is connected to a variety of urban elements. In addition to its physical function, this space plays a crucial role as a social environment. It serves as a forum for debate on current issues, the establishment of social values by the public, and interaction with the environment, architecture, facilities, and other individuals.

Jürgen Habermas states that public space is a shared domain where individuals convene to discuss and address social issues. He traces the origins of this phenomenon to forms such as the salon or the agora, which were spaces for exchanging opinions and coexistence (Habermas, 2020; Lubenow, 2012). This approach underscores the significance of public urban space as an optimal setting for establishing a communicative educational platform that engages the community and facilitates communication (Jalaladdini & Oktay, 2012; Lubenow, 2012).

The public urban space represents a vital sphere of our social life, in which public opinion can be formed. This space should not be limited to an outdoor area alone; it should also function as a social environment where social values are shaped and communication is facilitated (Habermas *et al.*, 1974; Jalaladdini & Oktay, 2012; Lubenow, 2012). This conception of public urban space encompasses both physical and social aspects, such as accessibility and social interaction. This is evidenced by the presence of such concepts

as communication, opinion formation, and the development of social values.

The public domain of urban environments provides a setting for fostering public participation in artistic activities, offering potential opportunities to enhance urban life. In this context, contemporary public urban space can be divided into two main categories: social spaces, such as squares or parks, and quotidian spaces, such as streets and avenues (Jalaladdini & Oktay, 2012). Through the analysis of selected case studies, this article aims to explore the potential for art to effectively intervene in urban public spaces and examine its ability to raise awareness and sensitivity about climate change.

2. Climate art in the context of public urban space

In examining case studies, it has been deemed appropriate to select notable pieces of climate art with international acclaim that focus on the use of public urban space and are related to global warming. The selected works have been chosen for their ability to exemplify the aforementioned themes and will be discussed in detail. The selected pieces include works by the Dutch artist Daan Roosegaarde (n.d.), and the American artist Eve Mosher (n.d.). This analysis examines the impact of these artistic interventions on public urban spaces, aiming to foster educational initiatives and raise environmental awareness.

2.1. *Waterlicht* by Daan Roosegaarde.

Daan Roosegaarde examines the convergence of scientific technology, art, space, and people. In his *Waterlicht*, Roosegaarde (n.d.) employed blue LEDs and lenses to generate a virtual flood, influenced by weather conditions such as rain and wind (Image 1). This work also provides a reflection on the future. In collaboration with designers and engineers, he endeavors to integrate technology and art in order to create immersive and meaningful experiences.

Since 2015, this work has been presented in various cities, including Rotterdam, Amsterdam, London, Paris, New York, Toronto, Dubai, and others. The objective of *Waterlicht* (Roosegaarde, n.d.) is to increase public awareness of the rising water level



Image 1. *Waterlicht* (Roosegaarde, 2016-2022. Note. Source: Roosegaarde, n.d.

resulting from global warming. The installation seeks to convey the overwhelming power and poetic qualities of water. The installation employs a visual representation that simulates the impact of a flood in the Netherlands without the protection of dikes. This serves to illustrate the importance of recognizing and addressing human impact on the environment, particularly in relation to sea level rise.

The *Waterlicht* installation offers the public a distinctive sensory experience through the immersion of visitors in a virtual flood. This encounter prompts reflection on human actions that contribute to climate change, with a particular focus on sea level rise. The work transforms urban squares into dreamlike landscapes, stimulating the imagination and environmental awareness of those who experience it.

In 2018, Roosegaarde enhanced the *Waterlicht* installation in London's Granary Square with background music and in-person narration about the installation. Furthermore, a brief video has been produced to disseminate this artistic work to a wider audience (Studio Roosegaarde, 2022). It is, however, crucial to acknowledge that it is not possible to fully convey the physical, visual, and emotional experience

of the installation without having directly participated in the event itself.

Waterlicht generated a considerable amount of public interest. For instance, the article published in Rijnmond indicated that *Waterlicht* made its debut in Rotterdam at the Kunsthal museum and attracted 25,000 visitors in just three evenings (*Waterlicht in Museumpark trekt 25 duizend bezoekers*, 2021).

A comparable public impact was observed with the installation at the United Nations headquarters in New York. The United Nations' location along the East River in Manhattan provided a particularly meaningful backdrop for *Waterlicht*. As the spectators were absorbed in the captivating, dreamlike blue environment, the memory of the devastation wrought by hurricanes Sandy and Harvey hung palpably in the air. The view of Hunter's Point in Long Island City, a waterfront residential area highly susceptible to flooding during severe weather, served as a poignant reminder of the vulnerability of coastal communities. The skyline, cloaked in a misty blue hue, became a striking, unforgettable, and immersive representation of the looming threat posed to cities by the encroaching waters (Quito, 2018).



Image 2. *HighWaterLine* (Mosher, 2007). Note. Source: Aldredge, 2012.

In the staging of *Waterlicht* at The Bentway in Toronto, a number of institutions were involved in the installation process, including The Bentway Conservancy, the Urban Water TMU, the Consulate-General of the Netherlands, the University of Toronto's New College, and the Ontario College of Art and Design (Kirby, n.d.). The exhibition, which spanned the entire site, served as a tangible representation of the consequences of climate change, offering Toronto residents a glimpse into potential future scenarios if proactive measures are not taken. Dr. John Shiga, Chair of Toronto Metropolitan University's School of Professional Communication and member of the Urban Water TMU, played a pivotal role in the project, facilitating the involvement of student volunteers from various disciplines to serve as Water Ambassadors for *Waterlicht* (Kirby, n.d.). The ambassadors utilized their communication skills to facilitate meaningful dialogues with the public regarding the implications of climate change on Lake Ontario (Kirby, n.d.). Ilana Altman, Director of Programming at The Bentway Conservancy, reported a highly favorable reception from the public, with an estimated 25,000-30,000 individuals attending the installation over the weekend (Kirby, n.d.). Ms. Altman observed that a

significant proportion of attendees embraced the message of the installation and expressed a keen interest in further discussions about climate change and its implications for the city.

2.2. *HighWaterLine* by Eve Mosher

Like Daan Roosegaarde, Eve Mosher addresses the issue of sea level rise due to climate change. However, Mosher's project, *HighWaterLine*, represents an activist art form that lies at the intersection of arts, culture, and environmental sustainability (Mosher, n.d.).

The project *HighWaterLine* was initiated in 2007 in New York City (Mosher, n.d.). Mosher employs a sports field chalk marker to trace a blue line representing the anticipated future high tide line around Manhattan and Brooklyn in New York City (Aldredge, 2012) (Image 2).

In this work, Mosher integrates scientific data from a variety of sources, including topographic maps, satellite imagery, and research from NASA's Goddard Institute for Space Studies at Columbia University.

Subsequently, using a heavy roller, she traverses a distance of 70 miles along the New York coastline, delineating a blue chalk line on the ground at a height of three meters above sea level (Aldredge, 2012; *HighWaterLine*, n.d.). This project provided an opportunity for engagement with various groups of residents through workshops and participatory activities.

Furthermore, this initiative garnered attention through the incorporation of certain educational materials and a website, which were integrated as essential components of the project. The primary objective of this initiative is to disseminate information about the concerning, impactful, and stark realities of climate change (Doan, 2013; Kolbert, 2012). Although this action constituted a singular act of activism on Mosher's part, it also served as a powerful exemplar of public art, demonstrating a method of directly engaging the community with artworks rather than expecting the community to seek out art. This approach enables artists to assume the roles of social agents, communicators, or interpreters, thereby creating an emotional space conducive to reflection and awareness.

Mosher also considered the predictive aspect of her project in the aftermath of Hurricane Sandy in 2012, which inundated numerous areas previously identified. She collaborated with local communities to implement *HighWaterLine* in locations such as Dublin, Miami, and, in collaboration with the Institute for the History of Science, in Philadelphia (Sensing Change: *HighWaterLine*, n.d.).

Regarding the project *HighWaterLine | Miami*, Mosher, with the assistance of Urban Impact Lab, employed a multitude of participatory art techniques to cultivate awareness and foster authentic involvement concerning the matter of sea level rise and resilience (*HighWaterLine | Miami*, n.d.). The project commenced with the implementation of outreach initiatives and the dissemination of narratives across a diverse range of settings, including casual local assemblies and expansive communal discussions involving municipal authorities. The project placed a strong emphasis on inclusivity and engagement. The project team devised a range of multilingual avenues for involvement, tailored to participants' varying degrees of interest, comprehension, and comfort. It is noteworthy that the *HighWaterLine | Miami* team demonstrated an aptitude for translating scientific

findings into visually compelling and persuasive representations that elucidate the impacts of climate change in the Miami region (*HighWaterLine | Miami*, n.d.).

The fundamental premise of the project *HighWaterLine | Miami* is analogous to that of the *HighWaterLine* project in New York City. In both cases, a comprehensive investigation is conducted into the anticipated impacts of sea level rise on a specific geographical area. In areas such as Miami and Miami Beach, where inundation from rising sea levels is projected to reach six feet as soon as 2040, the most recent predictions were employed to generate a map delineating existing thoroughfares, parks, and communal spaces susceptible to submersion. The map thus served as the foundation for the subsequent course of action. Residents and stakeholders were provided with field chalkers containing powdered chalk imbued with a blue hue, and they proceeded to demarcate the six-foot sea level rise contours throughout both municipalities. In the months preceding the chalking event, extensive outreach efforts were conducted, which instilled participants with a sense of assurance and readiness to address the inevitable inquiries, impromptu interviews, and informal discussions that would undoubtedly arise from this attention-grabbing endeavor (*HighWaterLine | Miami*, n.d.).

The results of the project *HighWaterLine | Miami* are striking, demonstrating its profound impact on both the local community and beyond. The project facilitated the participation of over 500 local residents in a series of multilingual community convenings, storytelling workshops, and climate-solutions sessions. These events fostered dialogue and awareness around pressing environmental issues. One of the most remarkable achievements of the project was the completion of a massive, fully coordinated 26-mile participatory art project, which engaged over 50 residents in the visualization of the anticipated effects of sea level rise on local coastal communities. This immersive endeavor not only raised awareness but also inspired action by vividly illustrating the potential consequences of global warming. Furthermore, the project was successful in integrating climate change as a significant concern within local community organizations that had previously overlooked it. This resulted in an expansion of their mission and focus areas to include environmental sustainability. Such integration represents a profound

shift in priorities, reflecting the project's capacity to initiate transformative change at the systemic level. Moreover, the success of the project in *Miami* has led to the development of additional *HighWaterLine* installations throughout the United States and Europe, thereby amplifying its impact and inspiring similar initiatives worldwide. In conclusion, the project serves as an exemplar of the transformative potential of community engagement and artistic expression in addressing the pressing challenges posed by climate change. Moreover, the project garnered significant attention from both national and local media outlets, with notable coverage from The Weather Channel, Grist, BBC, and NPR (*HighWaterLine | Miami*, n.d.).

3. Analysis and discussion

3.1. Analysis of case studies

The aforementioned cases elucidate diverse aspects of urban public space, which can be classified into two primary categories. The first category pertains to social spaces, which are typified by squares or parks. Instances such as Daan Roosegaarde's *Waterlicht* exemplify the facilitation of gatherings in communal areas, where individuals can assemble, experience, and engage in discourse. The artistic installations in question endeavor to visually represent glacier melting and sea-level rise, to accentuate the phenomenological and emotional impact experienced by the public.

The second category encompasses quotidian spaces, such as streets and sidewalks. Eve Mosher's *HighWaterLine* exemplifies a socially engaged form of artistic activism, employing the artwork in a direct manner within the daily environments of residents (Nadir, 2015; Springett, 2022). This intervention occurs in a serendipitous manner throughout the cityscape, creating opportunities for spontaneous discussions and reflections on the pressing issue of global warming.

3.1.1. The social space

The term "social space" is used to describe the dynamic arena where social interactions occur, shaped by both physical environments and human relationships (Latané & Liu, 2006). It encompasses the locations where individuals congregate, interact, and engage with one another, influencing their

experiences and perceptions. In essence, social space is not merely the physical environment but also the social dynamics and interactions within it.

Waterlicht was predominantly displayed in social settings. Such environments are regarded as social settings where individuals can congregate and engage in discourse. In this context, it is possible to distinguish between two categories of audiences for public art: visitors and passersby. Some individuals specifically visit these areas with the intention of contemplating the artwork, in a manner similar to their experience of a gallery or museum. Others merely pass through and encounter the artwork by chance.

In this context, the contemporary British artist Hayley Newman (The Glasgow School of Art, 2013) introduces the concept of "Rubbernecking," which denotes the act of pausing, closely observing, and feeling a sense of curiosity about one's surroundings. Newman's concept of "Rubbernecking" is situated within a social-artistic framework. It entails the creation of artworks or performances that highlight the act of looking, examining how individuals react to and engage with what they perceive, particularly within public spaces. This concept may also encompass commentary on the media's influence in shaping our perceptions and inclinations to witness events, even when they may be distressing or intrusive. This highlights the growing recognition within artworks of the necessity to acknowledge and incite active involvement within urban public spheres. Moreover, it is understood that such works should be capable of effectively communicating with the audience through the use of phenomenological and emotional experiences.

For instance, Daan Roosegaarde's *Waterlicht*, situated in social spaces, offers a compelling examination of social dynamics by inviting the public to confront the tangible consequences of environmental crises within urban environments. The presence of *Waterlicht* in such a social context prompts the audience to reflect on their relationship with the environment and with one another. Those who view the artwork may congregate around it, engaging in discussions concerning topics such as global warming, environmental stewardship, and collaborative efforts. In this way, the artwork initiates social interactions and fosters a shared sense of concern and urgency regarding the ecological challenges currently facing our planet. The immersive experience

prompts spectators to reflect on the fragility of our ecosystems and the importance of collective efforts to address climate change. As Mark Francis (1989) notes, squares become participatory spaces where human action, visual perception, and connection with values allow for direct engagement with the artwork and the surrounding urban environment.

In other words, Roosegaarde's *Waterlicht* serves as a powerful manifestation of social space, inviting viewers to engage with pressing environmental issues within the context of shared urban environments. Moreover, this public space provides a distinctive setting that contributes to the formation of social identity, evokes memories associated with the place, and facilitates a connection between the past, present, and future. Furthermore, artworks contribute to the aesthetic quality of the square, transforming it into a kind of open-air gallery or museum. This aspect underscores the symbolic significance of public urban space, which in turn enriches social identity and perception of the city (Grodach, 2010).

3.1.2. *The quotidian space*

The term "quotidian space" is used to describe the everyday spaces that individuals inhabit and navigate as part of their daily routines. These spaces are distinguished by their familiarity and routine use, encompassing settings such as homes, workplaces, streets, and public transportation. Quotidian spaces play a pivotal role in shaping human experience, as they provide the setting for a multitude of activities, interactions, and encounters that occur regularly (Atmodiwirjo & Yatmo, 2019). In contrast to more extraordinary or specialized spaces, quotidian spaces are often taken for granted, yet they exert a significant influence on individuals' perceptions, behaviors, and social relationships. They reflect the rhythms and patterns of everyday life, functioning as the setting for the unfolding of daily rituals, routines, and experiences (Nadir, 2015; Wees, 2022).

Eve Mosher's *HighWaterLine* project offers a compelling examination of the intersections between art, community engagement, and the quotidian spaces. The objective of this project is to raise awareness about the impacts of climate change, particularly the threat of rising sea levels, by directly engaging with the everyday environments of urban communities (Nadir, 2015).

The fundamental concept underlying the *HighWaterLine* project is the act of delineating the projected high-water line resulting from sea level rise due to climate change. Mosher meticulously traces this line using chalk, paint, or other temporary materials along the streets and sidewalks of coastal cities and neighborhoods. By physically inscribing this boundary in public spaces, Mosher transforms the quotidian landscapes into sites of contemplation and discussion about the imminent environmental challenges facing these communities.

The selection of the quotidian space as the medium for *HighWaterLine* is a conscious and impactful decision. Streets, sidewalks, and other everyday environments are places that people frequent in their daily lives, often without giving much thought to their significance. Nevertheless, by delineating the high-water line in these familiar settings, Mosher disrupts the routine and prompts individuals to confront the reality of climate change in their immediate surroundings.

Moreover, by engaging with the everyday environment, *HighWaterLine* facilitates the integration of abstract scientific data with lived experience. In contrast to the conventional approach of presenting climate change as a distant or theoretical concept, Mosher's project makes it tangible and immediate by literally bringing it to people's doorsteps. This direct encounter with the projected impacts of sea level rise fosters a sense of urgency and responsibility within local communities, motivating individuals to take action and advocate for environmental stewardship.

Furthermore, *HighWaterLine* facilitates the transformation of quotidian spaces into platforms for collective dialogue and collaboration. As Mosher and volunteers collaborate to delineate the high-water line, they engage with residents, passersby, and local stakeholders, initiating discourse on climate change, resilience, and community action. Such interactions not only raise awareness but also foster a sense of solidarity and shared commitment to addressing environmental challenges.

Mosher's *HighWaterLine* project exemplifies the capacity of art to transform the mundane into something more meaningful. By infusing everyday landscapes with environmental significance, Mosher invites the public to reconsider their relationship with their surroundings and to envision alternative

futures that prioritize sustainability and resilience. This innovative approach enables *HighWaterLine* to transcend the boundaries of traditional art spaces, thereby becoming a catalyst for social change and collective action in the face of the climate crisis.

Mosher's project is situated in locations where people reside, work, and engage in leisure activities. Even if individuals are not aware of it, their daily contact with the artwork influences their attitude toward conserving it and their intellectual and sensory understanding.

3.2. Communicative-educational dimension through emotional and phenomenological experience

Climate art within urban settings provides a nuanced and emotionally resonant encounter, underscoring its capacity for communication and education. This immersive encounter prompts inquiry into its multifaceted implications and its potential to shape viewer behavior. The instances highlighted above exemplify the profound emotional and experiential rapport fostered between audiences and their environmental milieu.

Nevertheless, the precise impact of climate art on viewer conduct remains a challenging area to assess. The protracted nature of behavioral change, coupled with the inherent variability of artistic expressions, presents a significant challenge to empirical assessment. In contrast to controlled experiments where the reception of messages can be meticulously scrutinized, artworks operate within a realm of unpredictability in their transmission of climate-related messages, impeding the quantitative measurement of knowledge dissemination (Brenthel, 2016).

A group of scholars, including notable figures such as John Dewey, argue that emotional experience is an indispensable aspect of comprehending and reshaping the world (Dewey, 2005). Dewey's aesthetic philosophy emphasizes the interconnection between cognitive learning and experiential encounters. A central tenet of his framework is the notion that experiences contain latent possibilities that foreshadow future actions, engendering anticipatory expectations that prompt behavioral change (Pugh & Girod, 2007).

Dewey argues that aesthetic encounters have the potential to recalibrate our perceptual lens, thereby reconfiguring our relationship with the world at large (Pugh & Girod, 2007). This proposition suggests that climate art, by instilling individuals with transformative experiences, possesses the capacity to reshape their worldview and galvanize them towards proactive engagement with environmental challenges. The utilization of public art as a medium to highlight the issue of global warming prompts a profound examination of the interconnections between contemporary challenges, artistic expression, social issues, and environmental concerns (Schuermans *et al.*, 2012). The utilization of public urban spaces as a backdrop for artworks not only provides learning opportunities but also evokes emotions and fosters social actions and behaviors (Brenthel, 2016). It is posited that emotional experience can serve as a catalyst for individuals to adopt ethical and responsible conduct (Brenthel, 2016).

The incorporation of climate art in public urban environments prompts viewers to reflect on the intrinsic connection between these spaces and the phenomenon of climate change. Grodach (2010) states that artistic interventions in urban settings employ creative means to question and explore the complexities of social issues and conflicts, without necessarily proposing concrete solutions. This indicates that public urban spaces can function as communicative-educational vehicles by integrating art with pedagogy (Grodach, 2010). They can also be considered conducive environments for fostering dialogue and learning about the global challenges we face in contemporary society (Schuermans *et al.*, 2012).

In this context, artists play a pivotal role as communicators and educators, engaging the public in discourse about climate change and establishing meaningful connections between public urban spaces and this issue. The artist is conceptualized as a guide who does not directly impart knowledge to their viewers but instead encourages them to explore the vast territory of experiences, metaphors, and symbols, allowing them to express their observations and reflections and test them (Galafassi *et al.*, 2018; Schuermans *et al.*, 2012). Given what has been said, climate art provides a vicarious experience that allows viewers to visualize the complexity of the problem and learn from it, thereby empowering them

to articulate responses for themselves and others (Frasz, 2016).

The preceding observations suggest that the urban environment can be transformed into a medium for communicative and educational purposes through the experience of art. Such initiatives facilitate the exchange of ideas among individuals, thereby encouraging reflection and influencing their daily conduct (Reis, 2010).

Conclusions

This study examines the potential of public spaces as catalysts for enhancing understanding of global warming through artistic expressions. To achieve this objective, a concise literature review is conducted, synthesizing insights from theoretical research focused on public art and the environmental crisis. The study explores the social dimensions of public urban spaces as channels for communication and education, investigating how artistic experiences can effectively engage individuals and foster sensitivity toward environmental issues.

The analysis focuses on the impact of artistic intervention in public spaces, emphasizing its role in cultivating climate art as both a communicator and an educator. It is argued that public spaces are accessible to all, fostering social interaction and communication, and thus serve as a vehicle for both education and dialogue surrounding global warming. Furthermore, these spaces facilitate the dissemination of knowledge, encourage reflection on this pressing issue, and promote social participation. Furthermore, this approach draws upon representative cases from climate art studies, such as Daan Roosegaarde's *Waterlicht* and Eve Mosher's *HighWaterLine*, to examine their interventions in public urban spaces and how they effectively capture public attention to promote awareness.

In conclusion, the investigation of the influence of artworks on public behavior is an ongoing and complex endeavor. This article demonstrated how public urban art can serve as a catalyst for raising awareness about issues such as sustainability. Nevertheless, there is still much to be studied in this area. Future research will examine the manner in which artworks influence behavior, identifying the qualities that capture attention, provoke thought, and

inspire action. An understanding of these aspects can assist in the refinement of the role of public art in driving social change. Interdisciplinary collaborations and empirical studies can provide insights into the impact of art on public spaces, which can inform urban design, cultural policy, and community engagement. Ultimately, this can empower individuals to drive positive change.

References

- Abbasia, A., Alalouchb, C., & Bramleyc, G. (2016). Open space quality in deprived urban areas: User perspective and use pattern. *Procedia - Social and Behavioral Sciences*, 216, 194-205. <https://doi.org/10.1016/j.sbspro.2015.12.028>
- Aldredge, M. A. (2012, November 16). *A line made by flooding-artist Eve Mosher: I never wanted to be right*. Gwarlingo. <https://gwarlingo.com/2012/a-line-made-by-flooding-artist-eve-mosher-i-never-wanted-to-be-right/>
- Altman, I., & Zube, E. (1989). *Public Places and Spaces*. Plenum Press.
- Atmodiwirjo, P., & Yatmo, Y. A. (2019). Interiority in Everyday Space: A Dialogue between Materiality and Occupation. *Interiority*, 2(1), 1-4. <https://doi.org/10.7454/in.v2i1.56>
- Brenthel, A. (2016). *The Drowning World: The Visual Culture of Climate Change*. Lund University. https://lucris.lub.lu.se/ws/portalfiles/portal/7501416/Brenthel_The_Drowning_World.pdf
- Brighenti, A. M. (2010) *The Publicness of Public Space: On the Public Domain*. Università di Trento. <https://core.ac.uk/download/pdf/11830069.pdf>
- Buckland, D. (2013). Climate is Culture. En International Social Science Council, *World Social Science Report 2013: Changing Global Environments* (pp. 365-367). UNESCO Publishing. <https://doi.org/10.1787/9789264203419-en>
- Carr, S., Francis, M., Rivlin, L. G., & Stone, A. M. (1992). *Public Space*. Cambridge University Press.
- Denchak, M. (2017, July 17). *How you can stop global warming*. NRDC. <https://www.nrdc.org/stories/how-you-can-stop-global-warming>
- Dewey, J. (2005). *Art as Experience*. Perigee Book.

- Doan, A. (2013, November 26) *HighWaterLine: Visualizing climate change with artist Eve Mosher*. The Wild Magazine. <https://web.archive.org/web/20140131031911/http://thewildmagazine.com/blog/highwaterline-visualizing-climate-change-with-artist-eve-mosher/>
- Francis, M. (1989). Control as a dimension of public-space quality. In I. Altman & E. Zube (Eds.), *Public Places and Spaces* (pp. 147-172). Plenum Press. https://doi.org/10.1007/978-1-4684-5601-1_7
- Frasz, A. (2016). Can art change how we think about climate change: An interview with Anthony Leiserowitz. *GIA Reader*, 27(3). <https://www.giarts.org/article/can-art-change-how-we-think-about-climate-change>
- Galafassi, D., Kagan, S., Milkoreti, M., Heras, M., Bilodeau, C., Bourke, S. J., Merrie, A., Guerrero, L., Pétursdóttir, G., Tàbara, J. D. (2018). 'Raising the temperature': the arts in a warming planet. *Current Opinion in Environmental Sustainability*, 31, 71-79. <https://doi.org/10.1016/j.cosust.2017.12.010>
- Gehl, J. (2012). *Life Between Buildings: Using Public Space*. Island Press.
- Grodach, C. (2010). Art spaces, public space, and the link to community development. *Community Development Journal*, 45(4), 474-493. <https://doi.org/10.1093/cdj/bsp018>
- Habermas, J. (2020). *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Polity Press.
- Habermas, J., Lennox, S., & Lennox, F. (1974). The public sphere: An encyclopedia article (1964). *New German Critique*, (3), 49-55. <https://doi.org/10.2307/487737>
- Hahn, U. (2023). Artistic Imaginations of Climate Change: From the Far Away to the Here and Now. *Environmental Justice*, 16(3), 186-193. <https://doi.org/10.1089/env.2022.0063>
- HighWaterLine / Miami*. (n.d.). Urban Impact Lab. <https://www.urbanimpactlab.com/our-work/highwater-line>
- HighWaterLine*. (n.d.). Creative Carbon Scotland. <https://www.creativecarbonscotland.com/library/highwaterline/>
- Jalaladdini, S., & Oktay, D. (2012). Urban Public Spaces and Vitality: A Socio-Spatial Analysis in the Streets of Cypriot Towns. *Procedia - Social and Behavioral Sciences*, 35, 664-674. <https://doi.org/10.1016/j.sbspro.2012.02.135>
- Kagan, S. (2014, February 15). La pratique de l'art écologique. *Plastik*. <https://plastik.univ-paris1.fr/la-pratique-de-lart-ecologique/>
- Kaufmann, D. B., Palawat, K., Sandhaus, S., Buxner, S., McMahon, E., & Ramírez-Andreotta, M. D. (2023). Communicating environmental data through art: the role of emotion and memory in evoking environmental action. *Humanities and Social Sciences Communications*, 10(940). <https://doi.org/10.1057/s41599-023-02459-3>
- Kirby, L. (n.d.). *Public Engagement on Climate Change through Waterlicht*. Urban Water TMU. <https://www.torontomu.ca/water/freshwater-science---governance/outreach/climate-change-education/>
- Kohn, M. (2008). Homo spectator: public space in the age of spectacle. *Philosophy & Social Criticism*, 34(5), 467-486. <https://doi.org/10.1177/0191453708089194>
- Kolbert, E. (2012, November 4). *Crossing the line*. The New Yorker. <https://www.newyorker.com/magazine/2012/11/12/crossing-the-line-3>
- Latané, B., & Liu, James H. (2006). The Intersubjective Geometry of Social Space. *Journal of Communication*, 46(4), 26-34. <https://doi.org/10.1111/j.1460-2466.1996.tb01502.x>
- Lesen, A. E., Rogan, A., & Blum, M. J. (2016). Science communication through art: Objectives, challenges, and outcomes. *Trends in Ecology & Evolution*, 31(9), 657-660. <https://doi.org/10.1016/j.tree.2016.06.004>
- Low, S. (2022, November 17). *What is public space?*. OUP Academic. <https://doi.org/10.1093/oso/9780197543733.003.0002>
- Lubenow, J. A. (2012). Public Sphere and Deliberative Democracy in Jürgen Habermas: Theoretical Model and Critical Discourses. *American Journal of Sociological Research*, 2(4), 58-71. doi: 10.5923/j.sociology.20120204.02
- Lubenow, J. A. (2012). The Public Sphere 50 Years Later: Public Sphere and Mass Media in Jürgen
- Habermas. *Revista Transformação*, 35(3), 189-220.
- McCright, A. M., & Dunlap, R. E. (2000). Challenging Global Warming as a Social Problem: An Analysis of the Conservative Movement's Counter-Claims. *Social Problems*, 47(4), 499-522. <https://doi.org/10.2307/3097132>

- McKibben, B. (2005, April 22). *What the warming world needs now is art, sweet art*. Grist. <https://grist.org/article/mckibben-imagine/>
- Mosher, E. (n.d.). Eve Mosher. <https://www.evemosher.com/>
- Nadir, L. C. (2015). Walking the edge of the Earth. *American Scientist*, 103(2), 110-113. <https://doi.org/10.1511/2015.113.110>
- Nadir, L. C. (2015). Walking the Edge of the Earth: Eve Mosher's High Water Line Takes Climate Science to the Streets. *American Scientist*, 103, 110-113.
- Pugh, K. J., & Girod, M. (2007). Science, art and experience: Constructing a science pedagogy from Dewey's aesthetics. *Journal of Science Teacher Education*, 18, 9-27. <https://doi.org/10.1007/s10972-006-9029-0>
- Quito, A. (2018, March 24). A spectacularly foreboding light show calls for UN leaders to act on rising sea levels. Quartz. <https://qz.com/quartzy/1236577/a-spectacularly-foreboding-light-show-calls-for-un-leaders-to-act-on-rising-sea-levels>
- Reis, R. (2010). Public art as an educational resource. *International Journal of Education Through Art*, 6(1), 85-96. https://doi.org/10.1386/eta.6.1.85_1
- Rice, R.E., Rebich-Hespanha, S., & Zhu, H. (2019). "Communicating about Climate Change Through Art and Science." In J. Pinto, R. E. Gutsche, & P. Prado (Eds.) *Climate Change, Media & Culture: Critical Issues in Global Environmental Communication* (pp. 129-154). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-78769-967-020191010>
- Roosegaarde, D. (n.d.). *Waterlicht*. Studio Roosegaarde. <https://www.studioroosegaarde.net/project/waterlicht>
- Schuermans, N., Loopmans, M. P. J., & Vandenabeele, J. (2012). Public space, public art and public pedagogy. *Social & Cultural Geography*, 13, 675-682. <https://doi.org/10.1080/14649365.2012.728007>
- Sensing Change: *HighWaterLine*. (n.d.). Science History Institute. <https://www.sciencehistory.org/sensing-change-highwaterline/>
- Sommer, L. K., Swim, J. K., Keller, A., & Klöckner, C. C. (2019). Pollution pods: The merging of art and psychology to engage the public in climate change. *Global Environmental Change*, 59, 101992. <https://doi.org/10.1016/j.gloenvcha.2019.101992>
- Springett, S. (2022). Art-making for political ecology: practice, poetics and activism through enchantment. *Continuum*, 36(3), 478-494. <https://doi.org/10.1080/10304312.2021.2020725>
- Studio roosegaarde. (2022). *Waterlicht: a dream landscape about the power and poetry of water by Roosegaarde [Official Movie 2022]* [Video]. Vimeo. <https://vimeo.com/687925832>
- The Glasgow School of Art. (2013). *Hayley Newman, "Performing Performance"* [Video]. Vimeo. <https://vimeo.com/60546256>
- Tsui, D. (2020, February 12). *Are Art Exhibition on climate change harmful or helpful?* CoBo Social. <https://www.cobosocial.com/dossiers/art-exhibitions-on-climate-change/>
- Waterlicht in Museumpark trekt 25 duizend bezoekers*. (2021, December 20). Actueel nieuws, sport en achtergronden - Rijnmond. <https://www.rijnmond.nl/nieuws/174467/waterlicht-in-museumpark-trekt-25-duizend-bezoekers>
- Wees, N. (2022, May 8). *The Arts of the Street: Sense Perception, Creativity and Resistance in Everyday Urban Life* [Doctoral Thesis, University of Western Ontario]. Electronic Thesis and Dissertation Repository. <https://ir.lib.uwo.ca/etd/8689>