Murals & Mother Nature: Urban environmental art in Lisbon reveals great concern and appreciation for the environment

Ana Gunther

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Murals & Mother Nature: Urban environmental art in Lisbon reveals great concern and appreciation for the environment

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Abstract

Urban art is a novel dimension of the environmental movement. Utilizing highly trafficked areas, urban art has the potential to spread environmental messages both because of the size of the audience and because of the contrast between nature-centered art and the urban context. The paper discusses 15 environmental urban artworks in Lisbon and conducts a visual and thematic analysis. The analysis revealed five themes present in Lisbon: the power and beauty of nature, connection with nature, environmental loss and degradation, waste management, and climate change. The most prevalent theme in Lisbon was the connection with nature, followed by a tie between power and beauty of nature and environmental loss and degradation. The presence of these works revealed concerns for the impacts of urbanization on the natural environment in a multiplicity of ways. The analysis in this paper serves as a framework for how cities and artists can use the urban setting in environmental activism.

1. Introduction

The interface between urban art and environmental art is an area of great potential for environmental advocacy. Both art movements originated in the 1960s, and have begun to overlap in the early 21st century (Campos, 2021; Wildy, 2011). Urban art, a fluid art movement which contains any form of art made for the public urban setting, can reach a wide audience of permanent and temporary city residents. Meanwhile, any art that aims to engage with the natural world, coined “environmental art,” may be a more effective way to change behaviors surrounding the environment than solely presenting science (Klöckner and Sommer, 2021). Combining these two movements, urban environmental art may play a crucial role in protecting the environment.

Located in the middle of the country, Portugal’s capital is a city with sustainable and creative goals. In 2020, Lisbon won the European Green Capital Award for the city government’s efforts in establishing electric transport, sustainable energy usage, and green spaces (European Commission, 2020). Simultaneously, Lisbon ranks highly on the European Union’s “Cultural and Creative Cities Monitor” and displays a growing creative tourist economy (Henriques and Moreira, 2019). This intersection between sustainable and artistic urban development situates Lisbon as the ideal case study for urban environmental art.

While many recent researchers have focused on various aspects of sustainability, urban art, creative tourism, and creative urban regeneration in Lisbon, none has addressed the relationship between urban art and environmental advocacy (Campos et al., 2021; Henriques and Moreira, 2019; Estevens et al., 2020). Broadening to a global perspective, researchers are beginning to consider art as an environmental messaging tool, though not in the urban context (Davidson, 2015). One working paper has focused on the role of environmental art in an urban context to connect people with their environment and their community (Tunnacliffe, 2016). While the paper has many strengths in considering the positionality of the spectator, it doesn’t consider how urban art can play a role in the environmental movement. Here, there is a clear knowledge gap in analyzing environmental messages in urban art and their potential to inspire action.
In order to address this knowledge gap, this paper will consider the environmental topics present in fifteen urban art pieces in Lisbon, Portugal, and the strategies each artist uses to convey their message. A combination of visual analysis and thematic analysis will be used to identify environmental topics and strategies. Furthermore, the study aims to reveal how Lisbon can serve as an example for other cities to use urban art as a pathway to become more sustainable.

2. Background

Since the emergence of graffiti in the 1990s, the city of Lisbon has developed around the evolution of concepts of urban art. Initial opinions on graffiti were negative, as the explosion of illegal graffiti was seen as having a negative impact on the aesthetics of the city (Campos, 2021). These practices were seen as out of control vandalism, and graffiti was not considered “art.” On the global scale, the shift towards the acceptance of graffiti resulted from the “Banksy Effect” and the emerging art market for street art. The “Banksy Effect” refers to the notorious street artist Banksy who used the spray paint and stencils in the urban setting to express political messages. His radical art brought attention to the street art medium, and broadened the conception of what is considered “art” (Gil, 2018). Following Banksy’s success, art markets and art museums began to focus on street art, creating museums entirely dedicated to street art (Campos, 2021).

Globally, there are many tensions within urban art. While it began as graffiti, the phrase generally refers to any form of artistic expression that manifests itself in public parts of cities. This can include graffiti, murals, tiling, stencil art, sticker art, and many more fluid forms of art (Mauro, N.d.). Because of this variety of forms, urban art can be eclectic in style. As evidenced in the history of Lisbon, a large dichotomy between types of urban art is between formal and informal urban art. Formal urban art, also called political urban art, is government-approved art that improves the city by making it more creative and more economically successful. In contrast, informal urban art, also called social urban art, is an un-sponsored form of art that reflects individual or community values and can be used to express resistance to political forces (Estevens, 2020).

In Lisbon, formal urban art was legitimized from the 1990s to the present as a tool for the economic and cultural development of the city (Lopes, 2017). The shift from initial negative concepts of graffiti to accepting urban art as a positive art form began with the Expo 98 project, which aimed to use public art to improve Lisbon’s waterfront. The project was developed during a period of time in which European cities were targeted for urban regeneration. International events, such as fairs or exhibitions, were seen as a strategy for improving cities. These events were frequently hosted on the waterfronts in port cities. The 1998 exposition followed in this tradition. The theme of the Expo tied in the importance of the Tagus river, entitled “The Oceans, a Heritage for the Future.” Though the exposition did not explicitly have environmental aims, it used the natural power and beauty of the river to improve the urban environment (Ochoa, 2022). The art placed on Lisbon’s eastern waterfront is still present today. The success of this urban art
program revealed that urban art could positively impact not only the aesthetic of a city, but also the physical and social quality of the city.

After Expo 98, urban art played a bigger role in urban regeneration and touristification in Lisbon. A case study on the Mouraria neighborhood tracked how the neighborhood developed a culture of urban art to appeal to the “creative class” that looked for trendy, cheap neighborhoods to live in. The city government also identified Mouraria as a target for urban regeneration through urban art because of its position near the city center (Estevens, 2020).

The idea of Lisbon’s “creative class” turned outward as urban art became a way for Lisbon to achieve international status as a “multicultural city.” This idea materialized through the creation of the Galeria de Arte Urbana (GAU) in 2008. The GAU formed part of the Lisbon City Council’s committee for cultural heritage, and it aimed to prevent illegal graffiti and promote urban art in a positive and acceptable way (Campos, 2021). The role of urban art in the city was solidified in the city’s strategic vision for 2012, which positioned developing creativity and culture as a way to develop Lisbon (Grondeau & Pondaven, 2018).

In the 1960s, while street art was first developing in New York City, the environmental art movement began with two watershed exhibitions centering on the environment. Nature had always been a popular subject for artists, from the romanticism of the 1830s to Van Gogh and Monet’s expressive nature scenes in the late 1800s. However, a key shift towards the environmental art movement occurred in 1968 and 1969 with the Earthworks and Earth Art exhibitions. The artists in these exhibitions linked their work in the land, thereby grounding their work in the surrounding environment (Wildy, 2011). The early environmental artists often explored the relationship between humans and the environment and expressed concerns for the degradation of nature. In the 1990s, these messages shifted from more descriptive means to more activist aims. (Thurber, 1997).

This shift revealed the possibility for art to play a role in environmental perspectives. Recently, behavioral researchers have found that activism through presenting science and information has backfired, leading people to have more polarized views on the environment (Kahan et al., 2012). However, the environmental psychology approach has considered whether artistic communication might be a more effective way to create change. Art can communicate messages about the environment by evoking emotions, educating an audience, storytelling, and more (Davidson, 2015). A study on art and the 21st UN climate summit in Paris discussed a framework for the process of changing perspectives. The framework has three stages: 1) an emotional response, positive or negative, 2) an evaluation of the artwork, and 3) a reflection on the artwork. The study tested their model on audiences at the 21st UN climate summit, and found that viewing the artworks led study participants to experience a greater amount of support for climate policy (Klöckner and Sommer, 2021). Additionally, a survey of environmental artists motives behind choosing to address the environment in their work found that many artists wanted to honor their connection with nature, recognize environmental problems, and hoped to contribute to sustainable development (Kindvall, 2015).
In the 2010s and 2020s, urban artists also took on climate change and the environment as central topics (Giamporcaro, 2019). Street art is a particularly strong platform for this type of art because the environmental message is in direct contrast with the urban environment, which provides clear evidence of humans altering nature. The public nature of the street is also ideal for environmental messaging because it reaches a wide audience and can motivate collective action (Perovich, 2018). One working paper focusing specifically on environmental art in urban settings discussed a “creative feedback loop,” in which the artist, environment, and viewer engage with each other reciprocally. Their paper defined environmentally engaged urban street art as “street art that carries either environmental messages and/or uses natural mediums to disrupt the mainstream experience of the urban” (Tunnacliffe, 2016, pg 5). This paper discusses yet another strength of urban art for environmental messages—that experiencing unexpected art in an urban setting may make more of an impact on the viewer, thus strengthening the psychological impact on the viewer’s perspectives and behaviors.

These topics surrounding art advocacy and behavioral change through art are crucial strategies given the urgency of climate change. According to the UN’s Intergovernmental Panel on Climate Change, present CO\(_2\) emissions by human society have already all but guaranteed at least 1.5°C of future warming. Though governments have started to reduce their emissions, the changes are not enough to reduce climate impacts to a safe level. (IPCC, 2022). Furthermore, the World Meteorological Organization’s State of Global Climate report from 2021 discussed how these climatic changes have the potential to set off shifts in other parts of the earth cycle, such as sea ice loss, ocean rising and warming, ocean acidification, and more. These changes, along with increased frequency of natural disasters, would have overwhelming effects on the health and safety of the human population (WMO, 2021). Given the stakes of the climate crisis, exploring any strategy with the potential to communicate the importance of changing the way humans interact with the earth is necessary. This study hopes to contribute to climate change activism by discovering the impacts of urban art.

3. Methods

3.1 Overview

A thematic analysis will be used in order to identify the most important topics and messages present in Lisbon’s urban environmental art culture. The analysis will be grounded on three key stages. In the first stage, the selection phase, a broad search will be initiated in order to identify urban art with a strong environmental message. Once the artworks have been narrowed down, each selected work will be visited. In the field, a visual analysis will be conducted. Once all sites have been visited, a thematic analysis will be used across all the pieces to identify and sort the works into key environmental messages. These qualitative methods and analyses will satisfy the objective to examine Lisbon as a case study for using urban art to inspire environmental action.
3.2 Art Selection

Urban environmental art will be selected based on relevance and geographic diversity. In order to understand the evaluation of relevance, the terms “urban art” and “environmental art” must be defined. For the purpose of this study, the definition of urban art will be borrowed from assistant professor Ulrich Blančé of Heidelberg University. In a research paper, he defined street art as art “applied to surfaces in the urban space that intentionally seek communication with a larger circle of people” (Blančé, 2015, pg 33). The distinction here, between street art and urban art for this study, is that urban art is legal or commissioned art, while street art is self-authorized. The majority of selected works will be urban art. The definition of environmental art will also be adapted from a research paper on art and sustainability. The paper defines environmental art as “an artistic process in which an artist engages with the natural environment” (Wildy, 2011, pg 108). In the interest of focusing on works with environmental intent, this paper narrows the definition towards artworks where the environment forms are essential to the work's meaning. Thus, the more relevant art works chosen for the study will have used an environmental message meant for a large audience. Additionally, preserving geographic diversity will ensure representation of art works by a variety of artists with different target audiences. For example, works in the center city may appeal to tourists, while art in the peripheries might be geared towards the local community. To preserve this diversity, works will be selected in the center, periphery, east, and west neighborhood parishes of Lisbon illustrated in Figure 1.

![Figure 1: Map of twenty four freguesias (parishes) in Lisbon, Portugal (Assembleia Municipal Lisboa, 2012)](image)

Most of the works in this study were selected from browsing on the website of Lisbon’s Galeria de Arte Urbana (GAU). The GAU is a part of the Department of Cultural Heritage from Lisbon’s City Council, and their site contains a large amount of Lisbon’s commissioned urban art (Galeria de Arte Urbana, 2022). Their gallery was filtered for artworks containing nature scenes,
environmental materials, images of climate change, and other clear environmental symbols. The projects within GAU that proved to be the most relevant for this study were works from the MURO festival, the Underdogs Gallery, and two projects entitled Natureza Viva (alive nature) and Reciclar o Olhar (recycle or look). After the initial choice of works with basic environmental elements, a screening process was conducted involving researching the artists to ensure that there was environmental intent behind the work. After the final fifteen works were selected, the addresses of each piece was selected and organized into routes for visitation and analysis.

3.3 Field Methods

The field methods will initiate the analysis of the works and prepare for the thematic analysis. All works will be approached by foot in order to preserve the manner in which they were intended to be discovered. Once standing at a distance that balances seeing the work in its entirety without losing detail, a photograph will be taken for future analysis. The GPS coordinates will also be recorded to create a map of the study sites and ensure that the study is replicable.

Next, the work will be observed for two minutes without notetaking. After the observation period, the visual analysis will begin. The framework for visual analysis will be inspired by the Levels Visual Analysis present in the article “Mind the trap: street art, visual literacy, and visual resistance” (Bogerts, 2018). Their visual analysis involves seven steps or “levels” presented in table 1. The space (S Level), material (M Level), iconological (I level), and audiencing (A level) dimensions will be the primary levels of visual analyses used in this study.

<table>
<thead>
<tr>
<th>Level</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>Legal</td>
<td>Authorized or unlawful</td>
</tr>
<tr>
<td>S</td>
<td>Space</td>
<td>Location or architectural surface of the image</td>
</tr>
<tr>
<td>T</td>
<td>Time</td>
<td>Historical context in which the art was made</td>
</tr>
<tr>
<td>M</td>
<td>Material</td>
<td>Technique and material used</td>
</tr>
<tr>
<td>P</td>
<td>Producer</td>
<td>Social position or perspective of producers</td>
</tr>
<tr>
<td>I</td>
<td>Iconology</td>
<td>How symbols are depicted</td>
</tr>
<tr>
<td>A</td>
<td>Audiencing</td>
<td>Social, political, or economic reactions by the audience</td>
</tr>
</tbody>
</table>

Table 1: Levels of visual analysis listed by letter, title, and description from (Bogerts, 2018)

3.4 Thematic Analysis

The thematic analysis will be conducted after all fifteen pieces are visited and analyzed for visual elements. The process of the thematic analysis will be drawn from a paper that conducted a thematic analysis of art created during the coronavirus pandemic (Lakh et al., 2021). Their process involves six steps, listed here: 1. Familiarize with images and identify items of

These steps will be tailored for the purposes of this research. The research steps will be: 1. Familiarize with images online and identify items of interest, 2. Create initial categories, 3. Conduct literature review to provide background for themes, 4. Visit artworks and conduct visual analysis, 5. Review of themes, 6. Define and name themes, 7. Sort works into themes, 8. Write up findings, analysis and discussion. In the first stage, the visual theme selection process will also be supported by research conducted in the art selection process that identified the artist’s intent behind the work. This research, along with the research conducted in the additional third step will support the validity and objectivity of the research. The second additional step is step seven, when the study works will be sorted into the themes for analysis. It is possible that works may belong to multiple theme categories, in which case all relevant themes will be listed in the discussion. This process will identify the greatest concerns for environmental action in Lisbon.

4. Results and Discussion
4.1 Identified Works

Fifteen works were selected in eleven different parishes of Lisbon (Figure 2). The works were geographically distributed within Lisbon with some in the center, some in the periphery, some along the water. Works overlapped in the same parish for four parishes, while the other seven parishes contained just one. All works were identified as formal artworks, with websites attributing the work to certain artists or sponsoring galleries. Fourteen of the works were discovered and photographed. The fifteenth was gone, but photographs from the Gallery of Urban Art’s website were used to analyze the work. The locations of the fifteen artworks are presented in a map in Figure 2, and GPS coordinates will be provided in Table 3 in sections 4.3.

![Figure 2: A. Map of fifteen study sites in Lisbon B. Map of freguesias (parishes) and the number of study sites in each freguesia (Assembleia Municipal Lisboa, 2012)](image-url)
Art was identified in both commercial and residential urban areas. Ten works were visible from the street, while five were set back from the street in alleys. Different parts of the built urban environment also served as canvases for the fifteen pieces. Eight works were made vertically on the sides of buildings, four were made horizontally on walls, one was made on multiple sides of the pillars holding up a bridge, and the final one work was made on a large cylindrical trash can. Fourteen of the works were traditional murals involving the two dimensional paint on a surface, while just one used three dimensional materials.

4.2 Identified Themes

The resulting themes will be discussed in the order they be individually explored further on in the results and discussion. For each theme, work that inspired the initial category creation will be discussed, followed by the background research and the process of including each theme in the final five themes for the research. This includes steps one through six of the thematic analysis process listed in section 3.4. Step seven will be conducted in section 4.3 and step eight will be conducted in sections 4.4 through 4.8. The six themes are presented below, in Table 2.

<table>
<thead>
<tr>
<th>Environmental Themes</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Power and beauty of nature</td>
<td>Davidson, 2015</td>
</tr>
<tr>
<td>2. Connection with the environment</td>
<td>Tunnaclife, 2016</td>
</tr>
<tr>
<td>3. Environmental loss and degradation</td>
<td>Ballard, 2017</td>
</tr>
<tr>
<td>4. Waste management</td>
<td>Michalowska, 2021</td>
</tr>
<tr>
<td>5. Climate Change</td>
<td>Bentz, 2020</td>
</tr>
</tbody>
</table>

Table 2: Five study themes presented in the order analyzed in results and discussion with corresponding source materials

The first theme, on the power and beauty of nature, was inspired by Pastel’s Léthē mural in Benfica. While the mural has strong messages about environmental loss and climate change, which will be discussed in further sections, the vibrancy and beauty of the flowers in the context of the urban environment was striking (“Léthē by Pastel,” 2021). In the literature process, the importance of the theme was validated by a paper on the psychology and activism of environmental art which discussed the possibility of environmental art to “convey the power and beauty of nature and wildlife” (Davidson, 2015, pg 2). This theme was further validated by multiple works in the study that used halos and flower crowns to present the spiritual and physical beauty of elements of nature. The final theme title was borrowed from Davidson, 2015, because of its appropriate wording.

The importance of the connection with the environment was discovered through Symbiosis by Mariella Gentile in Carnide. Through its title and Gentile’s artist statement on her website, it was clear that the relationship between humans and the environment is at the forefront of this work (“Simbiose,” 2020). The initial theme idea was supported by works in the study that...
presented both humans and nature in close proximity. A working paper with great influence in this research, “The power of urban street art in re-naturing urban imaginations and experiences” articulated the importance of the theme with the phrase “[urban art] reconnects the natural and social worlds within an increasingly urban existence” (Tunnacliffe, 2016, pg 3). The ultimate theme title was chosen to focus on the potential for urban art to connect people to the natural environment in an urban context. While there is overlap between the first two themes because presenting beautiful images of nature has the effect of connecting people with their environment, the selection of both themes was justified by the difference between images of beautiful nature and images of humans interacting with nature.

Shifting from positive conceptions of the environment towards concerns for the environment, the theme of environmental loss and degradation in urban art was also initially inspired by Pastel’s Lēthē. Research on the intent behind the artist’s choice of flowers revealed that Pastel chose flowers from a survey of Portuguese flowers in extinction, thus communicating environmental loss (“Lēthē by Pastel,” 2021). A second, similar mural, Mario Belém’s Better to be lost here somewhere than on my way to nowhere justified the theme as it used images of plants with the Portuguese concept of nostalgia called “Saudade” (“Antes,” 2021). The theme was supported by a paper on species extinction and planetary aesthetics in contemporary art. The paper discussed how art can be an approach for the “recognition of the sudden loss of species” (Ballard, 2017, pg 3). For the purposes of this study, the idea of extinction art was broadened to include all forms of environmental loss and degradation.

The second proposed theme for concerns about the quality of the environment was inspired by Bordalo II’s many works throughout Lisbon. His famous series, which uses various forms of trash to create sculptures of animals, discusses how humanity’s excessive material consumption is destroying the planet (“About,” 2022). The theme was confirmed with the presence of another series, Recycle or Look, which painted around 150 waste collection trucks and glass recycling cans for the purpose of increasing recycling behavior and cleaning the urban environment (“Galeria de Arte,” 2022). The source for this theme was a paper on plastic debris in art, which discussed how the “artistic attitude towards waste... makes a significant commentary about the future of the Earth” (Michalowska, 2021, pg 1). The title of waste management was selected because of how directly the two series are connected to ideas of waste and recycling.

The final theme, climate change, emerged from artist SMILE’s Commitment Mural. The mural celebrates Lisbon’s position as a 2020 European Green Capital and sets goals for climate action and CO₂ emissions for 2030 and 2050 (“Urban art about,” 2020). Another discovered work on the same topic was the More Jobs, Fewer Emissions mural created by a climate activist group. A paper entitled “Learning about climate change in, with and through art” validated the fifth theme. The paper discussed how art, as a form of climate change education, can empower people to visualize futures with positive changed relationships with the environment and the climate (Bentz, 2020). Though this theme encompasses the theme of environmental loss and degradation, the theme was chosen because of works present in Lisbon related to climate change.
activism. Many works in this study, particularly those focusing on extinction, implicate the effects of climate change but will not be considered in the theme unless they strictly reference the changing climate.

4.3 Thematic and Strategic Sorting

<table>
<thead>
<tr>
<th>Name</th>
<th>Artist</th>
<th>Location</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfama dos Namorados&lt;br&gt;Alfama of lovers</td>
<td>Ana Cristina Dias</td>
<td>Santa Maria Maior&lt;br&gt;(38.7112979, -9.1298237)</td>
<td>Connection with the environment</td>
</tr>
<tr>
<td>Antes perdida por aqui algures, do que a caminho de nuenhores Better to be lost here somewhere than on my way to nowhere</td>
<td>Mário Belém</td>
<td>Sao Vicente&lt;br&gt;(38.7181782, -9.1303501)</td>
<td>Environmental loss and degradation</td>
</tr>
<tr>
<td>Gaia</td>
<td>Violant</td>
<td>Arroios&lt;br&gt;(38.7207857, -9.1381098)</td>
<td>Environmental loss and degradation</td>
</tr>
<tr>
<td>Half Chimp</td>
<td>Bordalo II</td>
<td>Beato&lt;br&gt;(38.7262228, -9.1120286)</td>
<td>Waste management</td>
</tr>
<tr>
<td>Lèthè</td>
<td>Pastel</td>
<td>Benfica&lt;br&gt;(38.7560523, -9.2022404)</td>
<td>Power and beauty of nature&lt;br&gt;Environmental loss and degradation</td>
</tr>
<tr>
<td>Lisa</td>
<td>Tami Hopf</td>
<td>Santa Maria Maior&lt;br&gt;(38.7115740, -9.1299052)</td>
<td>Connection with the environment</td>
</tr>
<tr>
<td>Mural do Compromisso&lt;br&gt;Commitment Mural</td>
<td>SMILE</td>
<td>Campolide&lt;br&gt;(38.7153811, -9.1625118)</td>
<td>Climate change&lt;br&gt;Connection with the environment</td>
</tr>
<tr>
<td>Mais Emrego, Menos Emissões&lt;br&gt;More Jobs, Less Emissions</td>
<td>Climax Mural Artists</td>
<td>Arroios&lt;br&gt;(38.7275277, -9.1389540)</td>
<td>Climate change</td>
</tr>
<tr>
<td>Natureza Viva&lt;br&gt;Alive Nature</td>
<td>Klit, Mosaik, Regg</td>
<td>Alcântara&lt;br&gt;(38.7065518, -9.1782691)</td>
<td>Power and beauty of nature</td>
</tr>
<tr>
<td>Reciclar o Olhar&lt;br&gt;Recycle or Look</td>
<td>Margarida Esteves</td>
<td>Misericórdia&lt;br&gt;(38.7143719, -9.1525574)</td>
<td>Waste management</td>
</tr>
<tr>
<td>Rio Tejo&lt;br&gt;Tagus River</td>
<td>Edis1</td>
<td>Alcântara&lt;br&gt;(38.7065136, -9.1779697)</td>
<td>Environmental loss and degradation</td>
</tr>
<tr>
<td>Simbiose&lt;br&gt;symbiosis</td>
<td>Mariella Gentile</td>
<td>Carnide&lt;br&gt;(38.7579991, -9.1790916)</td>
<td>Connection with the environment</td>
</tr>
<tr>
<td>The Language of Flowers</td>
<td>Jacqueline de Montaigne</td>
<td>Santo António&lt;br&gt;(38.7188094, -9.1554372)</td>
<td>Power and beauty of nature&lt;br&gt;Connection with the environment</td>
</tr>
<tr>
<td>The World is in our Hands</td>
<td>Rocket01</td>
<td>Parque das Nações&lt;br&gt;(38.7727314, -9.1030744)</td>
<td>Connection with the environment</td>
</tr>
<tr>
<td>Untitled</td>
<td>Thiago Mazza</td>
<td>Parque das Nações&lt;br&gt;(38.7631371, -9.0993733)</td>
<td>Power and beauty of nature</td>
</tr>
</tbody>
</table>

Table 3: Alphabetical list of study works with titles, authors, locations, and corresponding themes. Original titles listed first, translated titles listed second. Translated titles will be utilized from here on out.
Above, table 3 lists the fifteen works by name, author, and location, and sorts each piece into its corresponding theme or themes. Each work will be introduced and analyzed in sections 4.4–4.8 discussing each theme and its contents. Each theme contained anywhere from two to six works. The waste management and climate change themes contained two pieces each. Followed by the power and beauty of nature and environmental loss and degradation, which each contained four. The final theme, connection with the environment, contained six pieces. There were three instances of works for which two themes were necessary to cover the purpose of the artwork. These pieces were Lēthē by Pastel, Commitment Mural by SMILE, and The Language of the Flowers by Jacqueline de Montaigne. Notably, two instances of overlap were between the power and beauty of nature theme and the connection with the environment theme. As discussed in section 4.2, these themes are distinct, but connected.

4.4 Power and Beauty of Nature

![Figure 3: A. Untitled by Thiago Mazza. B. Language of the Flowers by Jacqueline de Montaigne. C. Lēthē by Pastel. D. Alive Nature by Klit, Mosaik, Regg. All photographs taken by Ana Gunther.](image)

The power and beauty of nature theme contained four works: Lēthē by Pastel, The Language of the Flowers by Jacqueline de Montaigne, and Untitled by Thiago Mazza (Figure 3). The works are located far from each other, in the neighborhoods of Benfica, Santo António, and Parque das Nações. The works by Pastel and Mazza were both created in 2021, and were

Pastel’s Léthē brought the power of nature into an urban scene because the effect of the flowers at such a large scale in comparison to the surrounding buildings highlights their beauty. Recalling the levels of visual analysis presented in table 1, Pastel used the S level (space) to immerse the viewers in his mural. The work is painted on the entire building from edge to edge. This scale highlights the power of the flowers because they are the same size as the buildings. The importance of flowers is revealed in the I level, iconography. Flowers are a pleasant, positive symbol of nature that represent beauty. Pastel used the contrast between the black background and the bright, glowing flowers to further highlight their power and beauty. Thus, this work was sorted into the power and beauty of nature theme.

The second work in the theme, The Language of the Flowers, used similar tactics to that of Pastel’s to express the power of nature. However, de Montaigne’s message focused more on the communicatory power of flowers rather than just their beauty. In the S level, space, Language of the Flowers demonstrated a similar structure to Léthē. The work is vertical and consumes the building. The iconography reveals the difference in the effects of the consuming nature of the work. De Montaigne also uses flowers, but the use of the halo shows the spiritual and religious power of nature. The gold in the halo, combined with the white background and the light pink tones emphasizes the beauty of the mural, and by extension the icon of flowers. To explain the iconography, the mural lists different types of flowers and their messages (ex. Dahlia: commitment, orange blossom: eternal love, Camelia: longing). The Language of the Flowers belonged in the theme because of the power of flowers in communication.

Next, the untitled mural by Thiago Mazza communicated the power and beauty of nature through the scale, vibrancy, and storytelling of the flowers. The work represents various Portuguese flowers, but focused on the thorny artichoke—the cardo (“Mural by Thiago Mazza,” 2021). Througt the space level, Mazza used the length of the mural to tell the story of the cardo. From the left to the right, Mazza painted the flower at the beginning and end stages of its life (“Mural by Thiago Mazza,” 2021). However, given that the cardo represents resurrection, the work represents the cyclicality of nature. Between the space level and the audiencing level, the mural is broken up by stairs, which allows the viewer to walk through the mural as if they were walking through flower fields. Mazza also used bright colors to enhance the icon of the flower. He used bright pinks, yellows, reds, and purples, all of which are rarely present in urban settings, to highlight the beauty of the flowers.

The mural on the underside of Lisbon’s famous bridge, Alive Nature, glorified the environment by bringing a vivid depiction of nature into an urban setting. The artists used the space level—the wrap-around pole—to depict the ocean and the trees, mimicking the structure of the river and the bridge. The symmetry between the two sides creates balance and harmony in
the composition of the work, supporting a pleasant feeling about the nature depicted. The context of the project was also relevant for the purpose. The project was inspired by the beauty of the Serra da Arrábida park outside of Lisbon and wanted to combine themes of alive nature and enchanted forests. The artists, in creating this natural world under the bridge, wanted to celebrate the beauty of nature in a context where it is lacking (Guerreiro, 2014).

The presence of art that glorifies nature in an urban setting reveals how depictions of nature may have the potential to make urban spaces feel more natural in the way that trees and green spaces do. Urbanization has resulted in creating environments that are fully artificial—made up entirely of buildings and concrete. Over time, residents of cities have realized that having nature in the urban setting is both visually and physically appealing. This realization led to a new urban aesthetic that constructed the city in harmony with nature (Blanc, 2013). However, in some cases it is not possible to retrofit small scales of urban areas with trees or other green spaces. Perhaps, in these areas, murals that highlight the beauty and power of nature can contribute to creating a more natural urban aesthetic.

4.5 Connection with the Environment

The theme on connection with the environment was the most prevalent in Lisbon, containing six works: *Alfama of Lovers* by Ana Cristina Dias, *Lisa* by Tami Hopf, *Alive Nature* by Klit, Mosaik, and Regg, *The World is in Our Hands* by Rocket01, *Commitment Mural* by SMILE, *Symbiosis* by Mariella Gentile, and *The Language of the Flowers* by Jacqueline de Montaigne (Figure 4). The works are located in Santa Maria Maior (2), Alcântara, Parque das
Nações, Campolide, Carnide, and Santo António. The first two works, *Alfama of Lovers* and *Lisa* were created for the 2016 Paratissima exhibition (“Lisa Paratissima,” 2016). Next, *The World is in Our Hands* was part of the 2021 MURO festival in Lisbon (“Rocket01,” 2021). The *Commitment Mural* was sponsored in 2020 by Lisbon’s Municipal Government to celebrate Lisbon’s achievement as the European Green Capital of 2020 and set emissions goals for 2030 and 2050 (“Urban art about,” 2020). Gentile’s *Symbiosis* was created for the Gallery of Urban Art’s project, A Lata Delas, which sponsors female artists to create murals in Lisbon (“Symbiosis,” 2020). The final work by de Montaigne was produced in 2022, curated by the Because Art Matters gallery (“The Language of Flowers,” 2022).

Cristina Dias’s *Alfama of Lovers* created an intimate experience for the viewer that expressed the connection of people to each other through nature. The work is hidden in the alleyways, and it is small in scale and wraps around the corner of the building. These space level choices create a more personal experience which brings the viewer to understand the connection of the people in the work. On the I level, Dias used the tree to show the space in which young lovers are connecting with one another. Considering the structure of intimacy and the icon of the tree, the work creates a love of nature in the viewer.

Located next to *Alfama of Lovers*, Tami Hopf’s *Lisa* used the imagery of a woman holding birds to express how humans can connect to nature by fostering and protecting it. On the S level, the work is similar to *Alfama of Lovers* in that the positioning in an alleyway creates a more proximal experience. The I level communicates strongly about the purpose of the work. Like *The Language of the Flowers*, Hopf uses a halo to convey religiousness and spirituality. The woman’s hair is mostly flowers and where the woman’s eyes would be, there are birds. These details convey that the woman is a part of nature. The birds flying out of her hands and eyes show that humans have the capacity to improve nature by creating a genuine connection with it.

In this theme, the *Commitment Mural* depicted how Lisbon’s future will emerge from a connection with nature. The choices in the S level to make the mural so long creates the effect of showing a progression from left to right. On the left, the woman blowing the dandelions shows Lisbon creating goals for the future. The winding leaves that connect the dandelion on the left to the seeds in the hands on the right shows that nature is the creator or progress. Without connecting with Nature, Lisbon cannot move towards a more sustainable, lower emissions future.

The next work, *Symbiosis*, also used its length to depict the cyclicality of the relationship between humans and the natural world. The left side of the mural depicts a woman, breathing out CO₂ and turning into a bird. From the left to the right, the bird turns into honey, which is coming out of bees. The bees pollinate the flowers, which are creating O₂. These icons of various parts of life—human, animal, plant, elemental—coexist in the work and transfer materials between each other to keep the cycle of life going. The presence of the woman in this work illustrates how humans are a part of the natural cycle, and can contribute to symbiosis between humans, animals, and plants by connecting with their environment.
Returning to *The Language of the Flowers* by de Montaigne, the work showed how humans can use nature to connect with each other. This messaging is similar to that of *Alfama of Lovers*. The work considers human connection devices with the explanation of the iconography of the flowers. The mural lists different types of flowers and their messages (ex. Dahlia: commitment, orange blossom: eternal love, Camelia: longing). This list shows the viewer how they can communicate with people through nature.

Finally, *The World is in Our Hands* addressed the theme by depicting a woman protecting the world. The iconography level is key here, in which the woman’s grasp around the earth shows her supporting it. The bright flowers and the animals dancing in a halo around her head creates harmony in the cycle of life on earth. Rocket 01 also intended to depict the reciprocal idea that humans are in the hands of nature. He wrote, “by wrapping the figure in plants, I show that... plants and flowers are a part of us and we trust them deeply” (“Rocket01,” 2021)

Similar to the implications of the power and beauty of nature in Lisbon, this theme illustrates a desire to re-connect with nature in Lisbon. Urbanization presents a threat to the relationship between people and nature (Smith, 2013). This connection can be restored by education, better policy, or increasing green spaces in cities. Though a non-traditional method, by adding urban art focused on human connection with nature, the work can remind residents to find green spaces and appreciate nature. This art can also serve an educational purpose. These murals are doing important work, as connecting people with nature is a key element of protecting it and preventing climate change.

### 4.6 Environmental Loss and Degradation

A. Better to be lost here somewhere than on my way to nowhere by Mário Belém  
B. Gaia by Violant  
C. Tagus River by Edis1  
D. Létêhê by Pastel

*Figure 5: A. Better to be lost here somewhere than on my way to nowhere* by Mário Belém. *Gaia* by Violant. *Tagus River* by Edis1. *Létêhê* by Pastel. All photographs taken by Ana Gunther.

Four works were discovered in the category of environmental loss and degradation: *Better to be lost...* by Mário Belém, *Gaia* by Violant, *Tagus River* by Edis1, and *Létêhê* by Pastel. The works are located in São Vicente, Arroiois, Alcântara, and Benfica. The work by Belém and by Pastel were both sponsored in 2021 by the Underdogs gallery (Dias Real, 2021; “Létêhê by Pastel,” 2021). *Gaia* by Violant was created in 2015 as a part of the Festival TODOS (Galeria de...

*Better to be lost...* by Belém used the Portuguese concept of Saudade to express both loss and hope with respect to the environment. This form of audiencing connects to the viewer's cultural emotions. Saudade refers to a form of longing or nostalgia, and Belém has used it to discuss sadness for elements of the environment that are gone. The woman in the mural stares at the vast, dark hole in the plants longing for lost nature despite being surrounded by vibrant leaves and flowers. The icon of the plants and flowers, however, creates hope with their brightness. The phrase “rather lost here somewhere than on the road to nowhere” refers to how humanity is lost heading towards the depths of environmental degradation, though this is still hope because humans are not yet on the road to nowhere.

Violant’s *Gaia* used the sadness of the goddess of the earth to communicate the environmental degradation that humans are causing. In the I level, the image of *Gaia* immediately connects to environmental art. Her skin is dry and cracked like the earth, and her face holds sadness and longing. By personifying nature and making it sad, Violant expresses the sadness of environmental loss. The water at the bottom of the mural is rising, showing the rising sea level in response to anthropogenic climate change.

In partnership with Carlsbad, Edis1’s *Tagus River* conveyed loss through the explicit mention of the importance of dolphins in the Tagus River. In the space level, the mural is set off from the street in a courtyard, requiring the viewer to make an effort to engage with the work. This requirement is enhanced by the QR code on the mural, which allows the viewer to experience more of the artwork via augmented reality on their phone. After scanning the QR code, the virtual reality teaches the viewer facts about appreciating and protecting dolphins. It says that Lisbon is the only European capital with dolphins, and that waste items like cotton swabs or straws can end up in the river and have negative effects on the dolphins. On the work itself, the icon of the larger, more realistic dolphin next to the smaller transparent one shows the concern for dolphin extinction. Edis1 also uses painted newspaper clippings to express explicit phrases like “ANP/WWF recommends measures to protect dolphins in the Tagus.” The mural also celebrates the importance of the Tagus when it discusses the “enormous importance of this estuary in marine biodiversity.” Edis1 uses concerns over dolphin extinction and reappearance to convey environmental loss.

Similarly, *Lḗthē* by Pastel also used extinction to convey the degradation of the natural environment. This work was discussed previously in section 4.4. Here, it takes on an additional meaning with the type of flowers Pastel selected to paint in this mural. Pastel used a survey of flora in extinction in Portugal to select flowers the illustrate how humans are affecting and depleting the environment (“Lḗthē by Pastel,” 2021). Pastel also uses wildflowers that grow through the cracks in buildings and facades and enlarges them to glorify them. This glorification highlights the lack of appreciation humans have for elements of the environment, and thus cause its degradation.
Urban art focusing on environmental degradation reflects the impacts of urbanization on the health of the environment. Urban growth has boomed in the past century, and will reach over 60% of the world’s population living in cities by 2050 (Zipperer et al., 2020). However, this urbanization causes deforestation, changes in hydrology, increased pollution, and stress on plants and species. The fragmentation of habitats can cause local extinctions, which would inspire the two artworks within this theme focusing on species extinction or endangerment. The other two works may simply reflect more generally the concerns for the way urban populations are affecting the environment.

4.7 Waste Management

A. Half Chimp by Bordalo II
B. Recycle or Look by Margarida Esteves.

Two works were discovered under the theme of waste management: Half Chimp by Bordalo II and Recycle or Look by Margarida Esteves. The two selected works were located in Beato and Misericórdia, but this theme is present throughout the city as both works contribute to a larger series of urban art focused on waste management. Half Chimp, created in 2017, forms part of Bordalo II’s extensive work in Lisbon creating animals that are affected by pollution out of waste materials. Margarida Esteves’s trash can from 2014 is a part of the Recycle or Look project, which was a collaboration between the Gallery of Urban Art and the Municipal Directorate of the Urban Environment ("Galeria de Arte,” 2022). The project aimed to promote recycling and urban hygiene by painting trash trucks and glass recycling bins. Though the can selected is no longer present in the city, it remained part of the study because the Recycle or Look project was of great relevance to the study, and because Esteves’s recycling can connect to the environment through its depiction of nature.

Bordalo II’s Half Chimp and other works in his trash animals series communicated the importance of waste management by showing that waste can be repurposed. On the space level, the Half Chimp sculpture is placed on the side of a building in the alleyway. When the work was visited, the alleyway was a scrap yard for waste material that made up other Bordalo II statues.
that were formerly in the alley as well. This scrap waste has the effect of showing how the waste materials become art. Here, the M level (material), is relevant to the analysis. Using waste as art changes our concept of the multiplicity of ways humanity can recycle materials. Furthermore, using the iconography of animals combined with the waste materials illustrates the potential consequences of excessive consumption and improper disposal for waste. Animals like monkeys form part of the natural world, and are adversely affected by pollution. Here, Bordalo II implores the viewer to be more responsible with their consumption and waste.

Where Bordalo II uses waste to make environmental art, Margarida Esteves’s work in the *Recycle or Look* series made environmental art on waste disposal. The cans are placed on the corners or sidewalks of streets, so their placement in the S level may allow the work to blend into its surroundings. In the I level, the use of birdhouses and plants winding up the can creates a playful, whimsical feel. The colors, and the use of bright leaves strands out from the colors of the street, further creating a magical feeling. Furthermore, the viewer must engage with this work when they physically place their waste through the art space. Like Bordalutso II, Esteveses’s recycling can remind the viewer of what they are trying to protect with their recycling actions.

The presence of environmental urban art focusing on waste management in Lisbon may reveal a concern for waste in the city. Urban waste presents both health and aesthetic concerns for the city government, and the works present in this study may reflect an outlet for addressing those concerns. Furthermore, waste has the possibility to create a circular economy in Lisbon. By recycling well and collecting waste materials, the city government can support initiatives to turn waste into products (State of Green, 2022). A final reason why waste management artwork may be present in Lisbon is to change attitude and behaviors towards recycling. A 2010 paper on recycling found that social pressure can increase recycling behavior (Pratarelli and Mainguy, 2010). By creating a city-wide culture of waste management, the art can create collective social pressure that can change behaviors and make Lisbon a more sustainable city.

4.8 Climate Change
The climate change theme also contained just two works of art: *Commitment Mural* by SMILE and *More Jobs, Fewer Emissions* by the artists of the Climax movement. The works are located in Campolide and Arroios. The *Commitment Mural* was sponsored in 2020 by Lisbon’s Municipal Government to celebrate Lisbon’s achievement as the European Green Capital of 2020 and set emissions goals for 2030 and 2050 (“Urban art about,” 2020). The *More jobs, fewer emissions* work was created by multiple artists from the Climax movement and the mural served to promise a climate justice protest on November 18, 2021 (“Mural: More jobs,” 2021).

Lisbon’s *Commitment Mural* used natural iconography and the audiencing of words to communicate the urgency of climate change and compel viewers to contribute to the effort. First, on the S level, the length of the mural creates a sense of change from the left to the right. The placement of the icon of the dandelion from the left connecting to the seeds on the right illustrates how nature, combined with the climate action plan, will plant the seeds of Lisbon’s future. The A level, audiencing, used words to connect with the viewer on the tangible goals for change. Listing Lisbon’s green capital status creates pride in Lisbon residents and compels them to work towards the goals for the future.

The *More Jobs, Fewer Emissions* mural took a similar approach towards climate messaging and used a combination of words and icons representing energy justice and climate change. The mural is located next to two other political murals on the tragedy of the Mediterranean and on racism. The artists used icons like windmills and smokestacks to represent various approaches to energy. By wrapping the smokestacks in leaves and turning them into windmills, the mural illustrates the necessary transition in energy usage to reduce Portugal’s impact on the climate. The icons of people protesting, combined with the audiencing of the phrase “more jobs, fewer emissions” creates a direct call for the viewer to engage with the fight against climate change.

The choice to focus on climate change in an urban context may reflect the disproportionate climate impacts that cities are likely to face as compared to rural areas. Cities face increased issues with heat island effects and air pollution, and are more vulnerable to
climate change due to dynamics of inequality, poverty, or limited services (OCHA, 2022). Additionally, the proportion of people living in cities will only increase in the future, positioning them as important pieces of the climate change strategy (Satterthwaite, 2010). This role of cities may be particularly relevant in Lisbon because of its status as a sustainable European city. Thus, Lisbon may be more likely than other cities to develop urban art that focuses on climate change.

5. Conclusion

The study of fifteen urban environmental artworks in Lisbon reveals that the environment is a great concern to residents, artists, and government members. A high proportion of environmental artwork was present. The most prominent theme among these works was art intended to connect the viewer with nature. Communicating the beauty of nature and its potential to be degraded were also important themes present behind the connection with nature. Artworks focusing on climate change and waste management were also present, though to a lesser extent. These five themes reveal the different ways in which people in Lisbon are associating with the environment. Furthermore, it depicts the pathway of urban art to affect residents' opinions and behaviors on climate change.

Future research may open up new ways to consider how urban environmental art is affecting the city. Potential research on the neighborhoods of the artworks and the class status of the residents may reveal dynamics of the art fostering urban regeneration by bringing nature into the urban setting. Or, research on neighborhoods and touristification could determine the target audience of these types of artwork. Nonetheless, the study illustrates the importance of considering new methods of reaching people with environmental messages, and the benefit of bringing depictions of nature into the urban context.

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