The importance of Environmental Graphic Design in urban spaces

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Abstract. Environmental graphic design (EGD) from its creation has proven that its development has emerged to serve the needs of modern society and in particular of the part of the population living in urban centers. EGD is being recognized for its role in humanizing and simplifying the complexities of the built environment. Well-designed signage and environmental graphic programs help improve the aesthetic and psychological aspects of an environment, in addition to fulfilling their communication role of informing, directing and identifying. At the core of the growing demand for Environmental Graphic Design are the demands of the modern world. Cities face a variety of challenges as a result of the negative effects of globalization. EGD can be used to «humanize» a city, create connections between citizens and with the city and to make a city or a neighborhood more pleasant and functional for them. Visual pollution, prevented by the uncontrolled display of signs, is another problem that cities face. Implementing guidelines for sign control is essential to maintaining and improving the visual quality of historic places. EGD is used to create a legible city. The goal is to provide easily understandable information at every single step and to improve the overall city experience for both visitors and citizens.

1 Introduction

This research project aims to investigate how environmental graphic design (EGD) can help designers overcome the challenges faced in many modern cities, which negatively affect their social and economic well-being as well as the lives of their inhabitants. How does EGD attempt to create legible surroundings? In which way does it encourage social interactions? In this field research, the methodology used is an extensive multidisciplinary literature review. Information has been collected from books, studies, papers, journals and articles, both in print and electronic media, mostly in the fields of architecture, urbanism, graphic design, fine art and environmental graphic design. Relevant case studies and in-situ art installations have been examined.

Playing an important role on the way that people use and perceive the built environment, EGD stands at the convergence of graphic design, architecture, interior design, landscape design, digital and industrial design. Thus, it has an important part in shaping urban landscapes, office buildings, museums, convention centers, airports, public parks, shopping centers and entertainment complexes [1]. Concerning urban life, signage and wayfinding enhance the feelings of safety and well-being in unfamiliar and often stressful environments such as hospitals, cities and airports. Furthermore, a "sense of place" is being created for such so called "non-places" [2].

Accordig to Calori & Vanden-Eynden, "a growing number of people in the design, construction, development, marketing, and policy arenas have gained an understanding of signage and EGD's role in humanizing and demystifying the complexities of the built environment. They have found that well-designed signage and environmental graphic programs not only fulfill their communication function of informing, directing, and identifying but also serve to enhance the aesthetic and psychological qualities of an environment" [3].

Globalization, migration, internet, consumerism, modernist architecture have been pointed out as factors that have contributed to the creation of multicultural cities, with alienated social life where public spaces are limited to consumption and tourism and don't reflect inner life [4]. In these cities people feel, loneliness, insecurity and that the city "doesn't belong to them". Segregated and alienated neighborhoods or areas are often created due to socio-economic inequalities and negative perceptions [5]. Isolated - abandoned areas create stronger feelings of insecurity for residents and visitors and often end up as areas of increased crime and economic and social decline [6]. Another issue of concern in many cities is the phenomenon of uncontrolled display of

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commercial signs, which has been described as 'visual pollution', indicating the degradation of the visual quality of places due to signage. Studies in disciplines such as architecture, planning, behavioral science and environmental psychology have investigated the effects of disorderly commercial signs on the visual quality of urban areas, as well as their impact on people's quality of life. Consumer culture, city center management, city marketing and urban tourism have been linked to the degradation of shopping streets, squares and entire cities [7].

2 Brief history of EGD

The development of the EGD is driven by technical advances, the needs created by the industrial revolution, urbanisation, the creation of a consumer culture and its integral relationship with art, architecture and cultural movements over time. [1]. The move from rural to urban areas and the simultaneous development of transport has led to the need for signage and guidance. At the same time, the development of consumer culture made advertising signs a feature of the built environment [8,1].

The modernist movements of the early 20th century, such as the Bauhaus and De Stijl, emphasized the integration of art, graphic design and architecture, laying the foundation for Environmental Graphic Design. In the 1960s and 1970s, designers such as Paul Rand, Saul Bass and Massimo Vignelli pioneered the development of integrated wayfinding systems and branding programs for transportation hubs, cultural institutions and public spaces [1].
The Society for Environmental Graphic Design (SEGD) was formed during this decade to share technical information and business advice among designers in response to the sudden growth of the field. Environmental graphic design was now beginning to take shape as a specialist design discipline. Developments in technology, the growth of consumer culture and the digital revolution further influenced the evolution of EGD.

In the new millennium with the widespread adoption of new digital technologies, the possibilities for Environmental Graphic Design became limitless. Digital signage and interactive installations have become increasingly prevalent, providing real-time information and enhancing user engagement [1].

3 The need for Environmental Graphic Design nowadays

The growing demand and need for Environmental Graphic Design in today's world has been driven by the needs of the modern world, but also by the problems that have arisen from it. More specifically: Modernist architecture has made it more difficult for people to understand buildings and led to the need for complementary wayfinding tools such as signs and maps. The expansion of cities with the simultaneous growth of complex infrastructures such as transport

hubs, hospitals, etc. requires the use of EGD to guide and connect the different parts in these complex environments. Nowadays buildings are constantly changing owners, titles and purposes, making identities more ephemeral. Branding and graphics play a greater role than architectural form in defining an organization's identity. Higher vehicle speeds, especially on national roads, have required signs to be adapted to make them recognizable [8].

The growing social awareness of addressing the needs of people with disabilities and the introduction of relevant legislation has created design standards for inclusive navigation in all spaces. The insatiable desire of today's society for progress and improvements has created greater expectations in all areas. This is particularly evident in exhibition design and in the design of shops and entertainment venues. EGD is used in order to accomplish the growing expectations and the increasing competition of companies and institutions that have resulted from these expectations. With the increase in global migration and tourism, buildings and various spaces serve people of different nationalities, resulting in the requirement for designing graphics and signs that overcome language barriers and facilitate navigation for these people, especially in places such as hospitals, transport and tourist destinations. [8].

4 The practice of Environmental Graphic Design

The practice of EGD involves the creation of a well-organized and visually consistent communication system for a given area in the built environment. This area can be of any scale, from a single building to a complex of buildings, a city, or a transportation network connecting multiple sites at a regional or national level. EGD addresses the complex communication needs of these areas by focusing on three main areas: signage and wayfinding, interpretation and placemaking [3].

Its main objective is to help people make meaningful connections with the places they visit or live [3].
This field encompasses a wide range of disciplines, including graphic design, architecture, interior design, landscape design, digital and industrial design [9]. EGD is used in a variety of applications including wayfinding systems, architectural graphics, signage programs, exhibition design, retail design, and themed or branded spaces. The use of digital technologies and systems that display dynamic content through motion graphics and allow interaction between users and content is becoming increasingly common [9].

The combination of interactive design and Environmental Graphic Design is called Experiential Graphic Design [10]. Experiential Graphic Design expands the profession of Environmental Graphic Design as it absorbs new technologies to deliver content through dynamic experiences [10,11]. Regardless of the terminology used, (Environmental

or Experiential), the main goal is the same, to help people create meaningful connections with the places they visit or live [9]. EGD uses a variety of methods and design approaches to create these connections, however, at the core of each of these methods of connection is a single driving force - human need [9].

4.1 Environmental Graphic Design and urban narratives

EGD introduces a narrative in a physical space in order to create a strong experience.

A narrative environnement is a constructed place that tells a story to a specific audience or encourages them to create their own stories [12]. Stories can be deliberately created to mislead, to control behavior or to inform and inspire [13]. The design of these environments intends to guide the audience through the story [12].

Examples of narrative spaces include exhibitions, brand experiences, urban design and public interventions. In narrative environments the space acts as a medium for communication through a synthesis of materials, structures and technologies [13]. Narrative environments involving cultural places such as heritage sites, museums and historic trails, stimulate curiosity, inform and facilitate both educational and experiential learning. On the other hand, commercial narrative environments like brand experiences, event planning and hospitality, effectively convey brand messages in innovative and compelling ways, while generating a positive financial return on investment. City narratives and Placemaking fall into this category as well, because in addition to providing cultural activities, their primary objective is to attract investment and improve the prosperity of a city or district. Community-based and civic narrative environments designed for libraries, parks, and public squares, for instance, seek to ignite the public's imagination, address social inequalities, and empower individuals and groups to take actions that foster a fairer and more cohesive society [13].

Narrative environments involving urban interventions challenge the way space is constructed and lived. They encourage discussion, explore dominant histories and enable individuals and groups to take action in their communities [13].

Most large cities are hosting a multitude of communities and well managed and well-designed ones can accommodate this multiplicity. However, urban decay, marginalization and the economic forces of redevelopment can disrupt this coexistence and bring to the surface contested histories, identities and meanings of places. In this case, narrative environments can contribute to the development of new perceptions of the environment. Creating narrative environments that are centered around community and designed for spaces such as libraries, parks, and public squares can help address issues of social inequality and empower individuals and groups to take action in order to build a more just and united society [13].

The design of public spaces is vital because they provide a setting for communication and community relations between people and can also serve as places for collective memories that allow citizens to connect with their cultural past and gain social identity [14].

4.2 Ethnography in design

In recent times, designers across all disciplines have adopted a more human-centered approach to design. Instead of focusing solely on the product, the emphasis has shifted to understanding the user's experience with the product.

Ethnography in design is a research method that involves observing people in their natural environment in order to understand a phenomenon from the perspective of the actual community being studied. It is a qualitative research approach that encourages the researcher to build empathy for the community being studied instead of quantifying data as in market research. The goal is to discover why a problem exists. For example, to understand why a neighborhood is segregated from the rest of the city factors such as physical infrastructure, beliefs, history and the range of citizens are key elements to consider [5].

Information gathered from this type of research can inform all aspects of the design process, from understanding the appropriate construction materials for a sign element to creating effective communication systems to solve problems beyond navigation [5].

4.3 Signage and Wayfinding

Wayfinding stands at the core of EGD for the improvement of people's experience in a specific environment [11], and could be defined as the process of finding the way to a destination. Wayfinding design, provides guidance, as well as the means to help people feel comfortable in their environment [15]. Its main goal is to help people create a mental map of a particular location or environment [3]. While factors such as building design, lighting and landscaping also contribute to wayfinding, signage is often the main reference point when people feel uncertain or lost in complex environments (16). However, well designed environments actually need fewer signs [16,3]

Wayfinding is present everywhere in the built environment and operates simultaneously at different scales. At the city level, it can be observed in the layout of streets, sidewalks and street signs: A large entertainment complex has its own wayfinding ecosystem. Airports are notorious for their wayfinding systems. Everything from campuses to train stations to shopping malls maintain their own ecosystem while contributing to the overall context of the area or city [17,18].

Signage and wayfinding contribute to a sense of personal well-being and security in unfamiliar and high-pressure environments such as airports, hospitals

and entire cities. It can also create a unique sense of place for a given location while enhancing brand image [3].

The job of a wayfinding designer is to make it easy for people to navigate a space by creating a system that brings structure and organization to the space while maintaining its unique character [15].
There is often a misconception that the term "wayfinding" refers only to signage [17]. Effective wayfinding solutions often involve more than just signage. Wayfinding is supported by well-defined paths, additional visual cues such as identifiable landmarks, printed maps and, more recently, handheld devices with GPS and augmented reality capabilities [3].

Electronic and dynamic media are becoming increasingly popular as additional tools for wayfinding [15]. Digital signs and interactive kiosks can provide complex and specific information in complex environments. Mobile phones have become the main wayfinding tool thanks to GPS technology that allows the geographic location of the phone to be tracked [3, 15].

Despite the rise of digital mapping and augmented reality applications on mobile devices, physical signs are still valuable and necessary. They do not require technology to work and it is also not a granted that everyone has access to mobile devices [3]. Furthermore, the design of signs and their visual elements also aims to add character and give people a subconscious sense of place [19].

In modern cities, where people often feel insecure and fearful with the idea that they may become disoriented and lose their way, proper signage is a very important factor in making them feel safer during navigation [4].

4.4 Interpretation

Interpretation communicates the history of a place. Interpretive information describes the meaning of a concept or subject, an object, a location, a circumstance, a historical character, a company and its goods, and so on. The most common way of presenting interpretive information is through exhibition [3].

EGD related interpretive programs can add depth to the narrative by using sign systems, graphics, and other visual elements that reflect the history, people, culture, and architecture of a place [3].

4.5 Placemaking

Placemaking gives a location a unique identity [3]. It aims to create meaningful connections between people and a particular place. It uses various communication techniques to shape experiences in that place [20].

Signage and interpretive exhibits can help create a 'sense of place' such as gateways, gathering places and landmarks [3]. A sense of place refers to the idea that

people feel the spirit of the place [5]. Lynch calls it a "sense of home" that helps to achieve a positive sense of co-emotional safety [21].

Placemaking enhances various sectors such as education, business, transport, retail, sport and urban and public environments. EGD designers, in a human-centred point of view, use the principles of visual communication to make urban designs easily understood by visitors. They ensure that the place defined through urban design 'comes alive' in a way that effectively communicates its purpose, highlights the site's context and clearly conveys its cultural and artistic significance to visitors [20].

Various tools such as gates, signs, interpretive exhibits, signage, public art and monumental sculptures are used to convey a sense of place to visitors. Branding and its design tools are very often utilized to create a distinct visual identity that enhances the overall character and individuality of a place [20].

4.5.1 Placemaking και Identity

Identity design creates a strong sense of place, visually differentiating one place or space from others. Both placemaking and identity design utilize the physical characteristics of the place, the people related to it, its functions, its history, its cultural significance, and the qualities that make the place unique, with the aim of enhancing the overall experience and highlighting the unique identity of a particular place [20].

Placemaking & Identity at EGD, is a collaborative design approach involving various professionals, clients and the public of the place. By taking into account all stakeholders' views, the goal is to create a design solution that visually expresses the essence of a place [20].

Successful placemaking projects often incorporate effective wayfinding systems. [20].

4.6 Branding and EGD

To create a branding image in a physical environment, a robust branding strategy involves the use of signage and EGD programs [3].

Branding is no longer limited to identity design alone. Experience design has emerged as the next important professional specialization to help companies differentiate themselves [15].

Today, the concept of experiential marketing aims to engage all senses to offer an immersive brand experience by creating physical environments of corporate spaces where people can experience and feel the "brands" they interact with [22].

The concept of experience design also applies to wayfinding, as environments and signage must be designed with the user in mind to create a positive visitor experience. In this area, cultural spaces are leading the way by creating coordinated and

appropriate experiences for visitors, in line with typical practices in the commercial world.

Branding has now been adopted by cities, cultural organizations and institutions that were traditionally not associated with this type of marketing approach. Environmental graphics and wayfinding design are effective tools for creating or enhancing branding from companies and universities to urban centers and events such as the Olympics. Wayfinding is closely linked to branding as it is an important communication element for an integrated visitor-customer service program [15].

5 Tackling Visual Pollution

In places where advertising and retail stores have a strong presence, signs are the voice of the place and shape its identity [19]. To achieve an attractive and pleasant built environment, commercial signs should be well designed, and reflect the characteristics of the buildings and their associated locations. Initiatives aimed at reducing visual pollution or preserving the historic character of city centers have demonstrated the importance of controlling commercial signage to maintain and improve the visual quality of public spaces. The concept of visual quality relates to the level of order between physical elements of the built environment, such as building features and commercial signs. The "good form" or "pragnanz" of the city, according to the principles of Gestalt psychology, constitutes the high visual quality of a public space. The appearance of public spaces influences people's behavior and according to Portella [7], studies have identified specific design features that users tend to view positively or negatively. She claims that high visual quality is important because it can improve safety and encourage positive behavior, as well as encourage community participation

Author Harley Sherlock in his book "Cities are Good for Us" [23] highlights the importance of creating "decent environments" in city centers, which can effectively prevent the decline of both activities and population in such areas. According to him, the expression "decent environments" does not just mean attractive buildings but that users feel pleasure and interest in the appearance of cityscapes. Historic city centers should provide a high visual quality that appeals to different user groups with different interests in public space. This visual quality should reflect the historical heritage and the social and economic vitality of the center [7].

One of the negative approaches applied to increase the visual quality of commercial and historic city areas is the standardization of design, which often leads to a lack of uniqueness and sense of place and consequently to the fact that all towns look the same [7]. Another negative approach, is the total uniformity of signs, and even the lack of signs, with a particular focus on commercial signs [8]. The lack of commercial signs can harm the social and economic vitality of these places because in many cases, these media promote a commercial atmosphere and attract consumers, visitors and investors [7].

Commercial signs can also increase the legibility and imageability of places, contributing to wayfinding.

Pedestrians can recognize these means as landmarks that help them navigate through the city [7]. There must be a balance between the need for visibility of signs and the problems caused by visual clutter and information overload [8].

In England, there is a national approach that helps local authorities guide and control commercial signage in historic city centers. [7]. Cities such as Bristol and Bath have implemented strategies to improve the visibility and image of public spaces. Under the action name "Legible City", the City Design Group in Bristol aims to create an understandable image of the city through signs, routes, street furniture design, public art, publicity and marketing [24,7,25].

In the case of Bath, the local authority implements aesthetic controls that regulate commercial signs and building facades to protect the visual quality of the historic center. These regulations ensure that commercial signs and the physical features of buildings, such as the façade, scale, cladding, proportions and materials, are in harmony with each other [24,7,25]. The Local Plan recognizes the importance of commercial signs in promoting the economic and social vitality of downtown areas and they also have a significant impact on the visual quality of the street. In Bath, the approach to commercial signage control adopted emphasizes the importance of well-designed shop fronts and advertisements, which can enhance the landscape and stimulate commercial activity. There is also space for innovation, provided that the overall design of these media is aligned with the character of the city. This plan highlights the importance of the design, scale and proportion of commercial signs in relation to the facades of the buildings for which they are intended, as well as those adjacent to them [7,25].

5.1. Legible cities

The idea behind legible cities is to enhance people's understanding, experience and enjoyment of the city by providing them the right information at the right time. This is achieved by incorporating information, identity and artwork to create an integrated system of movement and information that connects users to their destinations. Whether tourists, residents, business people, walkers, cyclists, etc., the goal of legible cities is to provide easy-to-understand information at every step. This can benefit business, transport, culture, tourism and most importantly, the people of the city. Legible cities can help achieve wider social, economic and cultural benefits and promote civic pride [26].

The legible cities approach uses technology, given and 'constructed' routes to help people better understand and navigate a city [27]. The real promise of legible cities, and in many cases the key to the success of a smart city, lies in adding the humanistic dimensions of people's experience, knowledge and the rich culture of museums, libraries and educational institutions to the curated routes. This makes a city more sustainable, innovative and connected. Events, activities, transport and other data linked to places

could provide the content for new ways of engaging with a city [27].

Bristol was the first legible city followed by Legible London [26]. The main focus of the Bristol Legible City project is to improve placemaking and wayfinding projects. The project includes directional signs, street information boards, printed walking maps, visitor information and artwork [24, 27].

Legible London was launched in 2007. It has made the concept of the Legible City a reality and set a global standard. It is a wayfinding system designed to help people navigate the city of London on foot and feel confident about exploring new areas. It includes various tools such as signage, printed maps, digital maps, smartphone apps and public transport information to provide a comprehensive system for walking for both locals and visitors [26].

Legible London, encouraged Londoners to walk more, which not only reduced pressure on the transport system, but also reinforced a positive health activity and increased public safety, as increasing the number of people on the streets prevents crime [16].

The Legible London project is considered one of the most extensive wayfinding schemes in the world and has been replicated in more than 50 cities worldwide. Legible London-inspired solutions have appeared in Sweden, China, Australia, China, the USA, Canada and Russia, as well as across the UK [26].
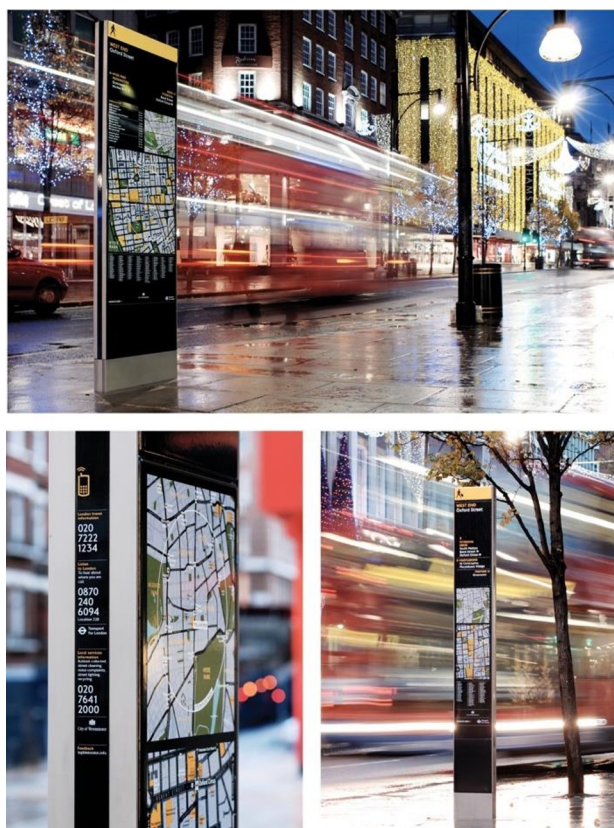
Fig. 1. Legible London.

5.2 Creating the sense of place

In the process of creating a legible city, the main concern is to create a new sense of place. By building and enhancing a sense of place, cities can make better use of their potential, extend what they offer to all residents and visitors, and create new opportunities for the future [24].

Andrew Kelly author of Building Legible Cities and management and business planning consultant for the Bristol Legible City project, points out that cities need to rethink how they present themselves to their residents, businesses, visitors and the outside world. To thrive in the 21st century, cities need to focus on how they communicate and promote their unique qualities. The cities that will be successful will be those that effectively connect people, places and transport systems, are welcoming, easily accessible and have a clear and understandable layout. An important factor in the success of such projects is collaboration between all those who live and work in the city [24].

To create a 'sense of place' it is important to understand its unique qualities and incorporate them into the design. Careful design can highlight what makes a place special and communicate this in a way that is comfortable, attractive and exciting for visitors. To achieve this, it is vital to conduct extensive research and work with the community throughout the design process [5].

5.2.1 City identity

City identity, in simple terms, can be said to be the expression of culture in the environment. There are cities that may look beautiful but lack identity elements. The recognition of a place as distinct from others is a fundamental aspect of identity in the city. Uniqueness emerges from the expression of tradition, beliefs and generally from the knowledge and culture of the society [14]. The identity of a community is defined by its shared beliefs, norms and interests that bind individuals together. Public spaces are a way of creating a shared identity for a city that reflects its current context [14].

In his book *The Art of Placemaking*, Robert Fleming [28] recommends that planners work with interdisciplinary teams to create cultural context and connections and then work with the community to develop metaphors that the community can recognize as their own.

5.3 Public installations

Successful Public Installations projects give spaces meaning and content. They use a variety of materials and media to communicate, connect and inspire people interacting with the space. Public installations can take the form of artworks, monuments, landmarks, gateways, signage, environmental elements, even branded corporate elements [29].

In the EGD sector, which focuses on creating experiences that connect people to their environment, public installations are carried out at an architectural scale. They use elements such as color, shape, typography, light and shadow, symbols, images and various forms of media to engage, inform, entertain or mobilize people for a specific purpose or action [29]

Art installations are often local landmarks that define a community and create a sense of place. Public art that communicates effectively goes beyond simply creating a visual representation of a place or object; it seeks to interpret a moment in time of an issue or community [30].

5.3.1 Example of Public installation to communicate social messages and influence social attitudes

Speaking of Home was a public artwork designed to give voice to Minnesota's growing immigrant population and was implemented as a 46-meter-long installation telling the stories of 23 young Americans living in the Twin Cities area. The immigrants were represented by photographs mounted on the large windows of the skyway bridge, accompanied by translucent text frames with silkscreened text. The panels contained excerpts describing immigrants' journeys to the United States, reasons for leaving their homelands, and individual meanings of the word "home". The installation was designed to be experienced from both inside and outside the Skyway Bridge [31].

The project attempted to symbolically invert the relationship between the city's native citizens and recent arrivals, positioning immigrants as immobile spectators as the natives passed and moved through the city.

Speaking of Home was the first project of a pilot program that aimed to present innovative approaches in order to transform skyways from impersonal, monotonous, constricted passageways into environments that enhance the daily lives of citizens [31]. The project achieved success by not only improving the daily experiences of individuals but also positively influencing the social awareness of the community. [31, 32]. Due to its success, the project was honored with an award from SEGD [31]. Project creator Nancy Ann Coyne states that her intention was to activate public consciousness and bring a new awareness and respect for recent immigrants. She used public space to create a place that connected newcomers and native residents with a shared sense of belonging and home [32]. Coyne [32] suggests that use of EGD such as public installation and creative placemaking in neglected and uninteresting physical spaces in cities internationally could "add value to the infrastructure and community while humanizing the environment". She also considers Speaking of Home as an example of built environment transformation from a "no-place" "into a place that sparks critical thinking and curiosity, wonder, and joy, a place people enjoy and feel safe in".

Fig. 2. *Speaking of Home*, installation, by Nancy Ann Coyne.

Fig. 3. *Speaking of Home*, installation, by Nancy Ann Coyne.

Fig. 4. *Speaking of Home*, installation, by Nancy Ann Coyne.

5.4 Example where Environmental Graphic Design is used to improve the perception of a degraded and alienated neighborhood

A case study exploring how EGD can be used to improve the perception of a segregated neighborhood and reconnect it with the city's larger population is described in the journal *Visible Language* [5]. The focus of the study is East Liberty, a neighborhood in Pittsburgh, Pennsylvania, that has suffered from neglect and failed renewal efforts for over two decades. Despite recent redevelopment efforts, many people still avoided the area. The study examined various methods, including storytelling, interpretive graphics, and placemaking tools to create a meaningful identity for the neighborhood. In addition, it looked at how digital design elements can be integrated into the overall experience of the place.

The research showed that EGD, can help improve people's perception of a developing neighborhood.

East Liberty showed a 65% improvement in perception due to the use of these design elements. It concluded that further exploration of this approach could be beneficial for other similar neighborhoods [5].

Conclusions

The research led to the following conclusions, showing that EGD can tackle the chaos created by spaces that lack identity.

How does EGD attempt to create legible surroundings?

• Designers can modify visual anomalies in public spaces to create an identity that reflects the unique characteristics of a site or city.

• In a world where everything is becoming more and more similar, the creation of unique and adapted with the environment places is highly valued and is the great challenge for the cities of our time.

In which way does EGD encourage social interactions?

• A city has its own identity when its image reflects the tradition, beliefs and culture of the community. Engaging the community in the design process of public spaces fosters a sense of belonging and responsibility that is vital to the health of the place and the community.

• Designers should consider the objective aspects of the city such as urban structure and image and the subjective ones such as ethnicity and community beliefs and demands. If these aspects are not taken into consideration, it will create a feeling among people that the city 'doesn't belong to them'.

The use of EGD in public spaces can contribute to economic development, the humanization of a city, the sense of safety and security, the connection of people to the place and to each other, and the creation of a sense of belonging and pride for the place where all people in the community live, work and socialize, without discrimination.

References

1. R. Poulin, *Graphic Design Architecture A 20Th-Century History A Guide To Type, Image, Symbol, And Visual Storytelling In The Modern World Pre-20Th-Century Influences* (Rockport Publishers, 2012)

2. M. Augé, *Non-places: Introduction to an anthropology of Supermodernity* (Verso, 1995)

3. C. Calori, D. Vanden-Eynden, *Signage and Wayfinding Design* (Wiley, 2015)

4. E. Atamaz, Int. Ref. J. Des. Archit. **0**(10), 165–175 (2017)

5. A.T. Schwanbeck, Visible Lang. **48**(2), 84–107 (2014)

6. J.A. Vokoun, *Diamond in the Rough: Telling the Story of Hough's League Park with Temporary* (Master's thesis, Kent State University, 2011) [h](#)

7. A. Portella, *Visual Pollution* (Routledge, 2016)

8. C. Berger, *Wayfinding : designing and implementing graphic navigational* (RotoVision, 2009)

9. H. Mark, *What is Environmental Graphic Design? Part 1: What's in a Name?*, (rsmdesign, 2019)

10. segd, What is XGD?, segd.org

11. Segd, What is Environmental Graphic Design (EGD)?, segd.org (2013)

12. T. Austin, Interiority, **1**(2), 153–172 (2018)

13. T. Austin, *Narrative environments and experience design: Space as a medium of communication*, (Routledge, 2020)

14. H. Eshaghzadeh Torbati, Civ. Eng. J. **4**(8), 1949 (2018)

15. D. Gibson, *Wayfinding Handbook Information Design for Public Places* (Princeton Architectural Press, 2009)

16. H. Mark, *What is Wayfinding? Part 3: Wayfinding is More Than Just Signage* (RSM Design, 2018)

17. C. Cody, *What is Wayfinding? Part 1: It's All About Human Needs* (Rsmdesign, 2018)

18. E.M. Schwartz, *What is Wayfinding? Part 2: The City as a Model* (RSM Design, 2018)

19. R. Poulin, *Archigraphia Redux* (Graphis, U.S., Incorporated, 2017)

20. Segd, *What is Placemaking and Identity* (2014)

21. K. Lynch, *The Image Of The City* (MIT Press, MA, 1960)

22. M. Onem, D. Hasirci, IOP Conference Series: Materials Science and Engineering, **960**(2) (2020)

23. H. Sherlock, *Cities are good for us* (Paladin, London, 1991).

24. A. Kelly, *Building Legible Cities* (Bristol Cultural Development Partnership, 2001)

25. R. Samuel, *Creating the canvas for public life in Bath : public realm and movement strategy for Bath city centre* (Bath and North East Somerset Council, 2010)

26. T. Fendley, *The future of city wayfinding. Symposium Papers Abstracts & Speaker Biographies International Institute for Information Design* (2015)

27. E. Kuslansky, *Legible Cities: The humanistic smart city model* (Smart Cities World, 2019)

28. R.L. Fleming, *The art of placemaking: Interpreting community through public art and urban design* (Merrell Publishers, NY, 2007)

29. Segd, What is Public Installation Design? segd.org. (2014)

30. J. Lorenc, L. Skolnick, C. Berger, *What is exhibition design* (RotoVision, 2007)

31. Segd. Speaking of Home. segd.org. (2013)

32. S. Heller, *Immigrants Are People, Too*, printmag. (2017)