

Visual Codes of the City: Landscape Features in Metropolitan Logos

Kentin Görsel Kodları: Büyükşehir Logolarında Peyzaj Özellikleri

Arzu ALTUNTAŞ¹

¹Department of Landscape Architecture,
Faculty of Fine Arts and Design, Siirt University,
Siirt, Türkiye



Nurbanu ÖZKARTAL²

²Department of Design, Vocational School of
Higher Education for Design, Siirt, Türkiye



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Corresponding author / Sorumlu Yazar:
Arzu ALTUNTAŞ

E-mail: arzualtuntas@yahoo.com.tr

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ABSTRACT

Urban identity is the unique and dynamic character formed by the coming together of the historical, cultural, ecological, natural and social layers of a place. The most concentrated visual reflection of this character and the pioneering tool of urban branding are reflected through city logos. In this research, the use of natural and cultural landscape elements in the visual representation of urban identity was examined with a structured methodology based on the current corporate logos of 30 metropolitan municipalities in Türkiye. The main purpose of the study is to analyze in detail the frequency of use, distribution and semiotic meanings of natural landscape elements (mountain, water, vegetation, topography) and cultural landscape elements (architectural structures, monuments, agricultural products, historical ruins) in the formation of urban identity through these logos. The Visual Content Analysis technique was used in the process of converting the data into a quantitative format and evaluating it and the obtained categorical data were examined with statistical models such as frequency analysis, Cohen's Kappa reliability coefficient, the Shannon-Wiener Diversity Index and the Pearson Chi-Square test of independence. Statistical modellings clearly show that coastal cities emphasize natural landscape (especially water and sea) elements, while cities with high historical depth emphasize cultural and architectural landscape elements. This study reveals how cities transform their invisible cultural heritage and natural resources into a visual urban memory and emphasizes the importance of preserving local urban landscape elements.

Keywords: Urban identity, city logos, visual content analysis, natural and cultural landscape, semiotics.

ÖZ

Kentsel kimlik, bir mekânın tarihsel, kültürel, ekolojik, doğal ve sosyal katmanlarının bir araya gelerek oluşturduğu özgün ve dinamik karakterdir. Bu karakterin en yoğunlaştırılmış görsel yansıması ve kentsel markalaşmanın öncü aracı ise kent logolarıyla yansıtılmaktadır. Bu araştırmada, kentsel kimliğin görsel temsilinde doğal ve kültürel peyzaj öğelerinin kullanımı, Türkiye'deki 30 büyükşehir belediyesinin güncel kurumsal logoları üzerinden yapılandırılmış bir metodoloji ile incelenmiştir. Çalışmanın temel amacı, logolar üzerinden, kentsel kimlik oluşumunda doğal peyzaj öğeleri (dağ, su, bitki örtüsü, topografya) ile kültürel peyzaj öğelerinin (mimari yapılar, anıtlar, tarımsal ürünler, tarihi kalıntılar) kullanım sıklığını, dağılımını ve göstergebilimsel (semiyotik) anlamlarını detaylı bir şekilde analiz etmektir. Araştırmanın kavramsal çerçevesi, yerin ruhu (genius loci), mekânsal aidiyet ve kent imgesi kuramları üzerine oluşturulmuştur. Verilerin nicel formata dönüştürülmesi ve değerlendirilmesi sürecinde Görsel İçerik Analizi tekniği kullanılmış olup, elde edilen kategorik veriler frekans analizi, Cohen'in Kappa güvenirlik katsayısı, Shannon-Wiener Çeşitlilik İndeksi ve Pearson Ki-Kare (Chi-Square) bağımsızlık testi gibi istatistiksel modellerle incelenmiştir. Literatür bulguları ve istatistiksel modellemeler, kıyı kentlerinin doğal peyzaj (özellikle su ve deniz) öğelerine, İç Anadolu ve tarihi derinliği yüksek kentlerin ise kültürel ve mimari peyzaj öğelerine ağırlık verdiğini açıkça göstermektedir. Bu çalışmada, kent markalaşması ve peyzaj tasarımı kesişiminde, kentlerin görünmez kültürel miraslarını ve doğal zenginliklerini nasıl görsel bir kentsel belleğe dönüştürdükleri ortaya konulmuş, küreselleşmenin getirdiği yersizleşme tehdidine karşı yerel kentsel peyzaj unsurlarının korunmasının önemi vurgulanmıştır.

Anahtar Kelimeler: Kentsel kimlik, kent logoları, görsel içerik analizi, doğal ve kültürel peyzaj, göstergebilim.

Introduction

Urban identity is a fundamental concept expressing the physical, social and cultural characteristics of cities as a complex, multidimensional and dynamic phenomenon (Relph, 1976). The physical form of a city transforms into one of the most critical indicators of the cultural expressions, historical accumulation and ecological infrastructure of the society it hosts. In this context, urban identity is not merely a retrospective concept related to the preservation of the past, but it is also a very important necessity in shaping the future of cities, increasing urban resilience and ensuring sociocultural belonging (Lalli, 1992; Tweed & Sutherland, 2007). Throughout the historical process, cities have reflected their geographical and topographical potentials, climatic features and the sociocultural values produced by the societies living on them onto spatial forms (Kaymaz, 2013). The interdisciplinary reading of these reflections occurs at the intersection of landscape architecture, urban design, sociology and visual communication design. The urban environment has ceased to be a pile of structures solely meeting the physical need for shelter and has transformed into a cultural text where meanings, memories and symbols are coded.

In the context of the landscape architecture discipline, urban identity expresses the relational dynamic of natural and cultural landscape elements with each other and with urban people (Gültürk & Şişman, 2015). In the process of human perception of a place, the visual expression of concrete elements comes to the forefront and this expression constitutes the urban image (Lynch, 1960). Natural landscape elements such as mountains, hills, plains, streams, lakes, seas, flora and fauna are environmental components that constitute the biophysical infrastructure of the city, existing without direct human intervention but determining the city's settlement character (Swanwick, 2002). In contrast, cultural landscape elements are spatialized forms of human labor and cultural accumulation added to nature as a result of anthropogenic processes, such as mosques, churches, clock towers, bridges, monuments, examples of traditional civil architecture, industrial buildings and even locally specific agricultural production (olive, tea, hazelnut, fig, etc.) (Aliağaoğlu & Çetinkaya, 2021; Rapoport, 1992). UNESCO's Historic Urban Landscape approach also recommends integrating natural and cultural components into urban planning and management processes as an inseparable whole (UNESCO, 2011). Historic urban landscape areas revive collective memory by carrying traces of the past to the present and allow the city to preserve its unique identity (Aşur & Perihan, 2025). Accordingly, landscape architecture undertakes the tasks of designing physical open spaces, preserving the abstract aura of the city known as the "genius loci" (spirit of place) and transmitting it to the future through visual communication tools (Oktay & Bala, 2015).

Literature review

In today's increasingly globalizing and homogenizing world, the problem of cities standardizing, losing their uniqueness and becoming similar to one another (placelessness) emerges as a serious urban threat (Relph, 1976). Neoliberal policies and the typical structural forms of international capital damage the urban fabric and erode urban identity. Against this danger, local governments turn to city branding strategies to emphasize their cities' unique character, strengthen the sense of belonging and stand out in global competition (Ashworth & Kavaratzis, 2009; Eshuis & Klijn, 2012). The strongest, most widespread and most concentrated tools of these branding strategies in the visual

communication dimension are municipal emblems and city logos (Kavaratzis & Hatch, 2013). A city's logo functions not just as a simple graphic image representing its corporate hierarchy, but also as an "urban memory" transmitter that synthesizes its historical roots, natural wealth, agricultural potential and architectural heritage on a single visual plane (Aliağaoğlu, 2011). The paths, edges, districts, nodes and landmarks that Kevin Lynch (1960) pointed out in the perception of urban environments are carried over to logos, which are two-dimensional graphic designs in the modern era, symbolically reproducing the cognitive map of the city. Semiotic analyses reveal that by deciphering the denotation and connotation layers carried by a visual, urban logos are texts symbolizing the ideological, cultural and ecological stance of the city rather than merely being pictures (Jencks, 1977; Venturi et al., 1977). While a mountain silhouette symbolizes the sublimity, resilience and ecological richness of the city; a stream form can represent continuity, life, purification and commercial fluidity. A successful city logo requires the use of simplified but "concrete" landscape elements with high cultural and natural reference, rather than a pile of numerous complex colors. Logos containing concrete landscape elements are cognitively processed much faster and are more easily internalized by large masses (De Smedt & De Cruz, 2010; Henderson & Cote, 1998).

When national and international literature is examined, there is a rich academic foundation offering in-depth analyses on city logos and urban identity components. On a global scale, for example, in a study conducted for the Magetan region of Indonesia (Agosin & Retamal, 2021), it was found that the regional logo was inspired by the topographical structure (the majesty of Mount Lawu) and endemic bird species (Jalak Lawu) and that blue and green colors reflected the natural environment. Similarly, in research conducted in the Menteng historical district (Indonesia), it was emphasized that landscape design, open space quality and sociocultural aspects are key elements of historical identity (Ujang, 2012). In Bucharest, Romania, it was determined that commercial signs and urban graphics are fundamental markers of the city's multicultural past (Vesalon & Cretan, 2019) and in the case of Lijiang (China), how public art and cultural landscape enrich visual identity was proven (Hu & Yang, 2025). When the literature on the axis of Türkiye is scanned, highly valuable academic studies focusing directly on the geographical and cultural analysis of municipal logos stand out. Aliağaoğlu (2011) mapped a geography of meaning through the logos of cities in Türkiye; Aliağaoğlu and Çetinkaya (2021) examined the effects of globalization on changing municipal logos and touched upon the difficulties in preserving local identity. In a study conducted on the province of Tokat, it was revealed that in district municipality logos, human landscape elements such as mosques, clock towers, dams and agricultural products are frequently encountered, alongside physical landscape features reflecting the character of the city such as streams, mountains, plains and vegetation (Aliağaoğlu & Uğur, 2018). In case studies conducted on the provinces of Erzurum (Aliağaoğlu & Uğur, 2018), Denizli (Belge, 2018; Uğur, 2020), Kocaeli (Uzun & Özcan, 2014), Samsun (Yıldırım, 2018), Giresun (Şenol, 2020) and Balıkesir (Aliağaoğlu & Mirioğlu, 2020), it has been repeatedly proven how the mountains, seas and historical monumental structures of the city play a dominant role in visual representations at the metropolitan scale.

The problem of this study is to determine what the distribution of landscape elements preferred in the corporate logos of 30 metropolitan municipalities in Türkiye is, whether these elements are natural or cultural and how geographical

location statistically affects this distribution in the visual acceptance of urban identity. While existing studies in the literature are generally limited to examining the logos of a single city or the districts of a province, in this research, the corporate emblems of all metropolitan municipalities in Türkiye are addressed comparatively over a quantitative model from a holistic perspective and in the context of landscape architecture.

Material and Methods

Material

The main material of this research consists of the current official municipal logos of 30 cities legally holding metropolitan status within the borders of the Republic of Türkiye (Adana, Ankara, Antalya, Aydın, Balıkesir, Bursa, Denizli, Diyarbakır, Erzurum, Eskişehir, Gaziantep, Hatay, İstanbul, İzmir, Kahramanmaraş, Kayseri, Kocaeli, Konya, Malatya, Manisa, Mardin, Mersin, Muğla, Ordu, Sakarya, Samsun, Şanlıurfa, Tekirdağ, Trabzon, Van) (Figure 1). In the study, each examined logo was obtained directly from the corporate websites of the respective metropolitan municipalities (official web addresses with gov.tr / bel.tr extensions) in high-resolution digital data format and turned into an object of analysis. Logos are the most legitimate visual identity documents officially adopted by the local authorities of the cities, processed all over the city from letterheads to urban furniture, from landscape arrangements to monumental structures.

Figure 1.
Metropolitan Municipality logos



To systematically analyze the contents of the logos, a comprehensive landscape elements classification template (codebook) was developed based on taxonomic approaches in landscape architecture literature (Swanwick, 2002). This material set is grouped under two main categories:

Natural Landscape Elements (Biophysical Characters) include components reflecting the city's natural boundaries and ecological identity. The material elements examined in this scope are as follows:

1. *Geological and Topographical Forms*: Mountain, hill, valley and plain silhouettes.
2. *Hydrological Forms*: Sea, wave, lake, stream, river and waterfall icons.

3. *Botanical Forms (Flora)*: Tree, leaf, flower and forest representations (Evaluated purely as natural vegetation, excluding agricultural production tools).

4. *Zoological Forms (Fauna)*: Symbolic animal figures that are endemic, specific to the region or hold mythological value.

5. *Cosmic and Meteorological Elements*: Celestial symbols such as the sun, star, crescent and cloud.

Cultural and Human Landscape Elements (Anthropogenic Characters) encompass historical, architectural and agricultural identity components shaped by human intervention in the space. The material elements examined in this scope are as follows:

1. *Religious and Civil Architecture*: Mosque, minaret, church, temple, dome, traditional housing texture, castle walls and towers (clock tower, watchtower).

2. *Infrastructure and Industrial Structures*: Bridge, dam, factory chimney, ship, road and modern engineering structures.

3. *Agricultural and Farming Products*: Plant production symbols reflecting the economic and agricultural cultural landscape of the region, such as wheat spikes, cotton, hazelnut, olive, tea and fig.

4. *Archaeological and Historical Artifacts*: Ancient city ruins, statues, historical columns and regional motifs.

These 30 materials were coded over the semantic equivalents of the graphical elements they contain without any intervention and used as the fundamental input for statistical analyses.

Method

To examine the graphic materials constituting urban identity within an objective and scientific framework, the Visual Content Analysis model, which enables qualitative visual data to be converted into quantitative and measurable formats, was used in this study (Neuendorf, 2002; Parry, 2020). Visual content analysis is a research design aimed at defining the meaning layers contained in visuals in a systematic, objective and quantitative manner. Furthermore, a statistical infrastructure was established to evaluate the fundamental components of urban identity using numerical methods and the entire process was operated over concrete data obtained from open sources.

The visual content analysis process was carried out in structured stages adhering to the quantitative visual analysis principles defined by Neuendorf (2002). First, the Codebook Development stage was completed. A binary coding matrix was created for the natural and cultural landscape elements listed in the Material section. If the relevant landscape element was visually or symbolically present in the examined metropolitan municipality logo, a value of "1" was entered into the matrix; if it was not present, a value of "0" was entered. To test the reliability of the coding, a preliminary analysis was conducted on 5 randomly selected metropolitan logos during the Pilot Coding stage. To minimize the margin of error based on human perception and interpretation and to prove the objectivity of the coding, an Inter-coder Reliability assessment was performed. The coding process was carried out simultaneously by two researchers. The degree of agreement between the two independent coders was measured with Cohen's Kappa (κ) formula, which is frequently used in statistical literature. Cohen's Kappa coefficient is a method that calculates the true agreement rate by excluding agreement that could occur by chance.

Cohen's Kappa formula (Eq. 1) is as follows:

$$\kappa = \frac{P_o - P_e}{1 - P_e} \quad (\text{Eq. 1})$$

In this formula:

- P_o : The ratio of the total number of observations where both coders made the same decision (both said 1 or both said 0) to the total number of observations (Observed Agreement).

- P_e : The expected agreement rate by chance.

The procedural steps were carried out as follows: The coders evaluated 9 different categories (a total of 270 data points) across 30 logos. In the matching analysis performed, the coders reached full consensus on 254 of the 270 data points ($P_o=254/270=0.940$). The expected agreement by chance (P_e) calculated over marginal probabilities was found to be 0.52. When inserted into the formula:

$$\kappa = \frac{0.940 - 0.52}{1 - 0.52} - \frac{0.420}{0.48} \approx 0.875$$

The calculated $\kappa=0.875$ value is within the "excellent agreement" limits according to statistical standards and confirms the scientific replicability of the applied method. Following the reliability test, the actual data was coded and transformed into a quantitative dataset.

The quantitative data obtained from the visual content analysis matrix were analyzed with descriptive and inferential statistical methods.

1. Frequency Analysis and Percentage Distributions: How often each natural and cultural landscape element featured in the logos was repeated was calculated with a simple percentage formula (Eq. 2).

$$P = \left(\frac{f}{N} \right) \times 100 \quad (\text{Eq. 2})$$

In this equation, P represents the percentage value, f represents the number of logos (frequency) containing the relevant landscape element and N represents the total number of metropolitan logos constituting the entire population ($N=30$). Which element is more dominant in the urban image was determined through this method.

2. Shannon-Wiener Diversity Index: To measure the diversity of landscape elements in the visual representations of urban identity, the Shannon-Wiener Index, which is normally used in the science of ecology to measure biodiversity, was adapted to the semiotic context and integrated into the analysis. This formula (Eq. 3) numerically demonstrates how "complex" (multi-layered) or how "simple/singular" a symbol a logo uses to express urban identity.

$$H' = \sum_{i=0}^s p_i \ln(p_i) \quad (\text{Eq. 3})$$

Here, S expresses the number of different landscape categories found in a logo (richness); p_i expresses the ratio of the i . landscape element to the total elements. A high H' value proves that the logo does not reduce urban identity to a single symbol but uses historical, ecological and cultural references in a hybrid manner.

3. Pearson Chi-Square (X^2) Test of Independence: It was assumed that geographical location is one of the most important determining factors in the visual formation of urban identity. Since the literature posits the dominant effect of geography on identity, the following hypothesis was tested in the research:

- H_0 (Null Hypothesis): There is no statistically significant difference in the use of hydrological (water/sea) landscape elements in the logos of coastal metropolitan cities and inland metropolitan cities.

- H_1 (Alternative Hypothesis): There is a statistically significant difference in the frequency of using natural water elements in the logos of coastal metropolitan cities compared to inland metropolitan cities.

Pearson Chi-Square formula (Eq. 4) is as follows:

$$\chi^2 = \sum \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \quad (\text{Eq. 4})$$

Here, O_{ij} refers to the observed frequencies and E_{ij} refers to the expected frequencies calculated according to row and column totals. The Degrees of Freedom was calculated with the formula (Eq. 5)

$$df = (r - 1)(c - 1) \quad (\text{Eq. 5})$$

and the significance level (p -value) was set at $\alpha=0.05$.

Results

As a result of the Visual Content Analysis applied to the corporate logos of 30 metropolitan municipalities in Türkiye, how nature and culture are used in balance in the formation of urban identity was determined in detail. The obtained results reveal that cities exhibit a rich diversity in preserving urban memory in their landscape symbolism.

Findings Related to Natural Landscape Elements

The most frequently encountered natural landscape element in the logos is hydrological forms associated with water and the waterfront. Particularly in the logos of coastal metropolitan cities, wave forms, the blue color spectrum and iconographic lines directly representing the sea predominate. High-altitude cities in the Central Anatolia, Eastern and Southeastern Anatolia regions have based their landscape identities directly on their topographical superiority. The results are presented in Table 1.

Table 1.
Usage form and frequency of natural landscape elements in logos

Natural Landscape Category	Symbolization Form	Observation Frequency (f)	Percentage (%)	Metropolitan Examples
Water/Sea/Stream	Blue wave, water drop, waterfall, river	18	60.0%	İzmir, Antalya, Samsun, Mersin, Ordu, Trabzon
Mountain/Hill/Topography	Sharp triangles, green curves, peak silhouettes	14	46.6%	Kayseri (Erciyes), Erzurum (Palandöken), Denizli
Flora (Natural Plant)	Tree forms, plane leaf, forest texture	12	40.0%	Bursa (Çınar), Kocaeli, Sakarya
Cosmic Elements	Sun, star, crescent	10	33.3%	Antalya (Güneş), Diyarbakır, Ankara (Yıldızlar)
Fauna (Animal)	Bird, rooster, fish local fauna symbol	5	16.6%	Denizli (Horoz), Şanlıurfa (Balık)

As seen in Table 1, the water element takes place as an urban emblem in 60% of the 30 examined logos. It is understood how large a place water occupies in urban identity as a dominant landscape element that determines the life, trade, tourism and ecological boundary of the city. In cities with mountainous geographies such as Erzurum and Kayseri, mountain forms (topography) that make up the natural silhouette of the city, such as Erciyes and Palandöken, formed the backbone of logo designs.

The results of the Chi-Square test conducted to measure the relationship between the use of hydrological elements (water/sea) by coastal metropolitan cities and inland metropolitan cities are as follows:

- Out of a total of 30 metropolitan cities, 14 are coastal cities (Those with a coast to the sea). The remaining 16 are inland.

- Observed Values (O): 13 of the coastal cities have a water/sea element in their logo, 1 does not. Of the 16 inland cities, only 5 have a water element (river/lake representation) in their logo, while 11 do not.

- Expected Values (E): There is a total of 18 cities using the water element.

Expected value for coastal cities = $(14 * 18) / 30 = 8.4$

Expected value for inland cities = $(16 * 18) / 30 = 9.6$

• Chi-Square Calculation:

$$X^2 = \frac{(13 - 8.4)^2}{8.4} + \frac{(1 - 5.6)^2}{5.6} + \frac{(5 - 9.6)^2}{9.6} + \frac{(11 - 6.4)^2}{6.4}$$

$$X^2 = 2.51 + 3.78 + 2.20 + 3.30 = 11.79$$

For $df=1$ degree of freedom, the $X^2=11.79$ value is statistically significant at the $p=0.0006$ level ($p<0.05$). This result rejects the H_0 null hypothesis and confirms the H_1 hypothesis. It has been statistically proven that the physical and biogeographical characters of cities are integrated into their corporate identities directly and meaningfully, not coincidentally.

Findings Related to Cultural Landscape Elements

Cultural landscape is the practice of a society transforming the geography it inhabits with its own values over the historical process. Municipalities make a strong reference to their deep historical roots, religious heritage and productive powers (genius loci) by using cultural landscape elements (Oktay & Bala, 2015). The results regarding the use of cultural landscape elements in the logos of 30 metropolitan municipalities are presented in Table 2.

Table 2.
Usage form and frequency of cultural landscape elements in logos

Cultural Landscape Category	Symbolization Form	Observation Frequency (f)	Percentage (%)	Metropolitan Examples
Religious and Civil Architecture	Mosque, minaret, dome, tower, castle, city walls	21	70.0%	İstanbul, İzmir, Erzurum, Ankara, Konya
Agricultural Products	Spike, cotton, hazelnut, olive, fig	11	36.6%	Tekirdağ, Ordu, Şanlıurfa, Manisa
Historical/Archaeological Motif	Ancient columns, regional kilim/stone patterns	8	26.6%	Gaziantep, Diyarbakır, Mardin
Modern/Infrastructural Structure	Bridge, dam, modern industrial form	4	13.3%	Adana, Sakarya

Among cultural elements, architectural structures received the highest frequency (70.0%). The field where the "landmark" concept defined by Lynch (1960) is most intensely transferred to logo design is cultural elements. Many metropolitan cities use monumental structures that have secured an unshakable place in

the city's memory and define the city's silhouette as the center of the urban image. For instance, minarets and domes shaping the historical silhouette of Istanbul, the Clock Tower symbolizing İzmir, Kocatepe Mosque/Atakule in Ankara or the Double Minaret Madrasah in Erzurum are the first cultural landscape signs that come to mind when the city's name is mentioned. Likewise, in

cities with strong rural and regional identities, agricultural production patterns have found a place in the logo as an urban tool supporting regional identity. Adana's cotton, Ordu's hazelnut and Tekirdağ's sunflower are concrete proofs of urban agricultural identity.

Symbolic Stratification: Shannon-Wiener Diversity Index

Results also show that hybrid structures (Wahyurini, 2012) stand out rather than one-dimensional logos. A large part of the cities uses both natural and cultural elements within the same composition. Specifically, the proportional assessment indicates that 16.6% (5 cities) of the sample logos consist exclusively of purely natural landscape elements, and 16.6% (5 cities) feature exclusively purely cultural elements, whereas the remaining 66.8% (20 cities) utilize a hybrid composition. The calculated Shannon-Wiener Diversity Index average was determined as $H' = 1.34$. This value mathematically expresses that instead of reducing urban identity to a single symbol (e.g., just a modern letter typography), metropolitan logos in Türkiye attempt to enrich the urban narrative by intertwining the sea, the mountain, a historical bridge and an agricultural product. For example, the logo of Antalya Metropolitan Municipality centers not only the sun and the sea (natural landscape) but also the historical Fluted Minaret form (cultural landscape), masterfully synthesizing its tourism-focused climatic identity with its historical Seljuk identity.

Discussion

These comprehensive results obtained over the visual representation of urban identity strongly confirm that cities are not just administrative regions whose physical borders are managed, but also organic structures with symbolic, historical and psychological depth (Aliağaoğlu & Çetinkaya, 2021). The structural distribution of landscape elements in logo designs also reveals many theoretical arguments regarding the formation of urban identity and spatial belonging.

Natural landscape elements represent the place attachment between nature and space, which is humanity's most fundamental ontological bond. Recent studies further elucidate that place is a multi-layered phenomenon encompassing cognitive and emotional elements alongside its physical structure. In this context, maintaining the social meaning and emotional experiences attributed to a place—defined as "perceptual sustainability"—is highly critical for human-centered urban management (Uzunali & Yigit Uzunali, 2025). According to environmental psychology and urban design research (Kaymaz, 2013; Knez, 2005), emphasizing elements representing the natural environment such as water, mountains and vegetation in urban areas directly increases the residents' sense of belonging to that place (Liu et al., 2020). The Chi-Square analysis results regarding coastal cities' tendency towards water forms show complete parallelism with the universal perception of water in urban memory (the awareness of being a source of life, a boundary marker, freedom and a port city) (Gospodini, 2004). From a visual aesthetics perspective, natural landscape elements create organic forms rather than sharp corporate lines in design language, increasing the logo's imageability and its power to appeal to human senses (Ahmad Patria et al., 2024; Henderson & Cote, 1998).

On the other hand, cultural landscape elements dominating logos with a very high rate like 70% (especially monuments and religious/civil architecture) symbolize the city's continuity in the "time" dimension (Tweed & Sutherland, 2007). As expressed in Lalli's (1992) Urban Identity Scale, urban belonging is strictly

related not only to spatial forms but also to the past within those forms, meaning the "spirit of place" (genius loci). The use of minarets, clock towers or ancient ruins in logos is a tribute to the legacy of past generations who produced the urban fabric. These structures are not merely piles of stones, but "realms of memory" (lieux de mémoire) carrying the society's memory (Aşur & Perihan, 2025; Nora, 1989). For instance, placing Izmir's Clock Tower or authentic stone civil architectural forms like Erzurum's Double Minaret Madrasah at the center of their visual identities reflects a devotion to the existential roots of the city and the Historic Urban Landscape integrity advocated by UNESCO.

The use of agricultural products (36.6%) in urban logos points to the formation of a different ecological identity. Despite the intense pace of urbanization and the loss of agricultural lands, metropolitan cities harboring olives, wheat or hazelnuts in their logos show that agriculture is not solely an economic activity but a "character" drawing the sociocultural destiny of that geography (Aliağaoğlu, 2011). This situation reinforces the unbreakable bond between the ecological services of the landscape and the anthropological meaning humans assign to it.

Although this study does not conduct a longitudinal temporal analysis of logo transformations to measure socio-cultural changes over time, cross-sectional findings evaluated alongside current literature (Gültürk & Şişman, 2015; Ujang, 2012) suggest that multi-layered landscape designs in city logos conceptually represent a strong point of resistance against the threat of uniformization brought about by globalization. The increasing pressure of globalization and neoliberal urbanization policies cause the problem of "placelessness" by making the physical spaces of cities monotonous (glass skyscrapers, identical shopping malls, standardized roads) (Relph, 1976). The weakening of visual landscapes damages the psychological bond residents establish with the city and impoverishes urban identity. Against this danger, metropolitan administrations cling to authentic, site-specific landscape symbols through city branding strategies (Ashworth & Kavaratzis, 2009). Architectural and topographical symbols integrated into logos revitalize the local culture, distinguishing the city from others in the national arena (Lucarelli & Berg, 2011).

However, the trend in recent years in the international arena and local governments toward overly simplifying some logos and turning them into minimalist and corporate wordmark designs detached from local geography harbors a serious risk (Adamus-Matuszynska & Dzik, 2024). In a semiotic context, this extreme abstraction creates a "symbolic gap" in visual communication, preventing the logo from eliciting an emotional resonance in the eyes of the public and triggering urban memory (Acuti et al., 2018). Even if urban logos follow contemporary graphic design trends, a "corporatization" image entirely stripped of local cultural codes and natural landscape elements eliminates the city's unique spirit (genius loci) (Muratovski, 2012).

Conclusion

Urban identity, far beyond a city being merely a physical pile of buildings, road networks and infrastructure, is a multidimensional and dynamic phenomenon that reflects the historical, cultural and ecological accumulation of the society living in that geography. In this context, cities being able to preserve their uniqueness against the threat of uniformization and placelessness created by globalization is possible by making their natural and cultural landscape heritages visible. Metropolitan municipality logos, which are the most concentrated tool of urban branding and visual communication, are the most

fundamental visual materials that transfer the city's "spirit of place" (genius loci) to the masses in a symbolic language, strengthen urban belonging and form the city image.

Within the scope of this research, the Visual Content Analysis conducted on the current logos of 30 metropolitan municipalities in Türkiye and the applied statistical models (Cohen's Kappa, Shannon-Wiener Diversity Index and Pearson Chi-Square) have concretely revealed how cities strategically use landscape elements in balance in the formation of their identity. The obtained results statistically prove that the geographical and cultural context plays a determining role in the visual representation of urban identity. The fact that coastal cities, for example, use water and hydrological landscape elements as a dominant figure with references such as Trabzon's sea wave and boat form, Ordu's sea-forest emphasis bringing blue and green together and Van's lake silhouette, is proof of how nature shapes urban boundaries and economic life. Similarly, geological forms constituting the topographic silhouette of the city represent the sublimity and natural ecological boundaries of the city, as in the example of the Mount Erciyes silhouette in the Kayseri logo.

Results have shown that cultural and human landscape elements are at least as critical as natural elements in the preservation of urban memory. Examples such as İzmir's Clock Tower, Erzurum's Double Minaret Madrasah, Diyarbakır's historical city walls, Konya's double-headed eagle and Şanlıurfa's Balıklıgöl and minarets prove how the architectural masterpieces of the past are kept alive as "landmarks" in modern urban logos. In addition to architectural elements, agricultural landscape products, which are part of regional development and rural culture, have also been frequently preferred in identity marking. Examples like Malatya's apricot and Manisa's grape are visual proofs that honor the economic and ecological roots of the city. The calculated diversity index also confirms that the vast majority of logos present these natural and cultural elements in a hybrid structure, thus exhibiting the urban image in a multi-layered structure, far from a one-dimensional approach.

In conclusion, city logos are not mere graphic design products, but sociological seals that carry the past, nature and cultural depth of the city to the future. In recent years, under the influence of global trends, the tendency of local governments to overly simplify their logos and transform them into minimalist corporate lines detached from local geography carries the risk of creating a "symbolic gap" in urban communication and fading urban memory. In future urban design, brand management and landscape planning studies, it is of great importance to integrate the topography guiding the city's silhouette, the centuries-old architectural texture and the local ecology into the corporate identity. The sustainability of urban belonging can only be guaranteed by keeping these natural and cultural landscape heritages, which reflect the true spirit of the city, alive in the visual memory as much as in physical spaces.

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