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Architecture as a determinant in shaping the identity of a city: A case study of Almaty

This article identifies the determinants contributing to the configuration of a city's identity. It presents the outcomes of a study on modes of expressing identity, exemplified through the case of Almaty, Kazakhstan's largest urban conurbation. Based on a public opinion analysis, a set of factors is identified that contributes to shaping Almaty's city identity. The findings indicate that modern architecture is important for preserving and expressing the identity of the city and region, which, in turn, is a source of investment and tourism interest in a particular area. Globalization, more than ever before, accentuates the challenge of searching for and preserving the identity of cities and regions. The importance of studying identity problems lies in the fact that the findings can be used to develop strategies for sociocultural and economic transformations of a city.

Keywords: modern architecture, city identity, factors shaping identity, regional architecture, Almaty

1 Introduction

Architecture serves as a powerful lens that facilitates understanding the identity and essence of a city. Beyond its practical functions, architecture encompasses the historical, cultural, and social narratives of a place, often becoming a visual reflection of its evolution (Sardak et al., 2021). Cities are defined not only by their inhabitants and geographical boundaries, but also by their architectural forms, which reflect collective values, aspirations, and memory. This connection is especially noticeable in cities such as Almaty, where the architectural landscape has been transformed under the influence of various cultural eras, sociopolitical changes, and urban development strategies (Nocca, 2017).

In today's globalized world, the formation of city identities has gained significant relevance (Bell & De-Shalit, 2011). The identity of a city is a specific form of territorial identity associated with the dominance of certain factors that give rise to associations with a particular territory for city residents or tourists. These factors include nature and landscape (e.g., Venice as "the city of canals", Ulan-Bator as "the world's coldest capital"); architecture and cultural symbols (e.g., Paris and the Eiffel Tower, New York and Manhattan's skyscrapers, Barcelona and Sagrada Família Church); and functional specialization (e.g., Milan as "the fashion capital", Cambridge as "the university").

The issue of identity is an unchanging companion to pivotal moments in history, particularly during periods of shifting social structures. In such complex periods, a need for self-identification arises among individuals and communities, encompassing various forms of identity such as ethnic, social, professional, religious, and territorial (Beyers, 2016). Interest in the study of territorial identity, which includes the identity of a city, is driven by historical

processes of state integration into global networks.

In the early 1990s, as a result of the disintegration of the Soviet Union, the post-Soviet republics, including Kazakhstan, underwent a challenging process of forging their own identities (Bahga & Raheja, 2018). These identities, distinct from the overarching Soviet identity, began to reflect the features of local history and culture in these newly independent states. This process involved a re-evaluation of the cultural and value dominants within society, and it left its mark not only in architecture but also in the urban environment (Sarttarova et al., 2014). This transformation was not a complete break from the Soviet past. It drew upon the rich experience of Soviet architecture and engaged in a dialogue with other cultures to construct new elements of regional architecture (Jahn Kassim et al., 2018). Over the past three decades of independence, through the construction of a new capital city in Astana and the revitalization of other urban areas, a fresh identity has taken shape for Kazakhstan.

As the largest city in Kazakhstan, Almaty embodies a rich tapestry of architectural styles, combining Soviet-era buildings, modern high-rise buildings, and buildings that celebrate local traditions. This eclectic architectural character distinguishes Almaty from other Central Asian cities and serves as a prominent marker of its identity. Studying the architecture of Almaty opens a unique look at how the historical changes of the city from a Silk Road outlet and a Soviet centre and to a bright modern metropolis are reflected in its physical space. The contemporary international image of Kazakhstan is primarily visualized through the perception of its architecture, which embodies a synthesis of artistic representations from both local and global cultures. It is this balance between the universal principles of architecture and local characteristics that have become the foundation of modern regional architecture in Kazakhstan. Regional architecture is a comprehensive concept that pertains to the formation and development of the material and spatial environment of a specific territory. It encompasses not only the design and construction of buildings, structures, and urban environments, but also considers local traditions, culture, and historical context.

The notion of city identity is a crucial element in creating the uniqueness of a city and its place in the world. It can serve as a unifying factor for the urban community around shared values, customs, and traditions. To achieve this, addressing the city's common issues requires the involvement of a wide range of stakeholders, including citizens, urban planners, and authorities (Alzemeneva & Mamaeva, 2021). One form of expression of this identity is architecture, which not only shapes the living environment of people but also transmits the material aspects of regional culture to future generations. This study examines the role of architecture as a determining factor in shaping Almaty's identity by analysing how architectural styles, urban planning decisions, and symbolic structures influence the perception of place. Considering the complex relationship between Almaty's architecture and its evolving urban identity, it emphasises the importance of thoughtful architectural and urban planning to preserve the city's unique character while adapting to modern urbanization processes. The research comprises the following stages: defining the conditions for the formation of city identity, taking into account the influence of natural-climatic, historical, anthropogenic, functional, cultural-symbolic, and sociocultural factors; exploring public opinion regarding the perception of the city's identity; and identifying the role of modern architecture as a factor in shaping city identity (using Almaty as an example).

2 Literature review

The architectural identity of Almaty was formed by a unique combination of historical

influences, sociopolitical changes, and manifestations of culture, as stated in various academic works. Thus, Glaudinov (2016) offers a comprehensive overview of the evolution of Kazakh architecture, highlighting how changes in design reflect a broader sociopolitical landscape. His work lays the foundation for understanding how Kazakh architecture has transformed over time, moving from traditional forms to more modern ones, while maintaining a clear national identity. Moreover, Truspekova (2019) examines the specific architectural characteristics of Almaty, defining how the city's buildings reflect its urban identity and resonate with regional culture. Her analysis identifies key elements that contribute to Almaty's identity, especially post-Soviet influences that are blended with Kazakhstan's historical styles. Truspekova and Sharipova (2022) expand on these ideas and analyse stylistic choices in public institutions across Kazakhstan, identifying architectural trends that combine past Soviet influence with contemporary markers of Kazakh identity. Their study focuses on the stylistic continuity and transformation in Almaty's public architecture after 1991. Galimzhanova et al. (2020) consider Kazakh identity in the architecture of mosques, paying special attention to the application of the principle of *ijtihad*; that is, the Islamic concept of interpretation and creativity. They investigate how religious architecture interprets modern but culturally rooted Kazakh identity through design and symbolic elements.

Furthermore, Tatygulov et al. (2009) provide an in-depth look at the life and contributions of Toleu Basenov, an innovative architect whose work laid a foundation for Almaty's urban landscape. Their study of Basenov's heritage emphasizes the importance of individual architects in shaping the architectural character of the region. They highlight its influence as a tool on creating projects that harmonize local traditions with modern architectural needs. In their work on urban planning and the history of the architecture of Almaty, Qapanov and Baimagambetov (1998) trace the development of planning and zoning of the city. In particular, they discuss the city's adaptive response to changing urban needs. In this regard, it is worth noticing that Frampton (2020) developed the concept of critical regionalism, which can be applied to the context of Almaty. The researcher advocates architectural practices that respect and adapt to local culture and geography while avoiding superficial regionalism. This theoretical position supports the analysis of Almaty's architecture. This particularly concerns the contemporary attempts to balance global trends with Kazakh cultural motifs, reflecting the unique duality of Kazakhstan's post-Soviet identity. Comparative studies of the architectural evolution of cities with Soviet and European influences, such as Tallinn and Helsinki (Berger et al., 2019), highlight how former Soviet cities navigate post-Soviet identity through architectural adaptations. These studies help put Almaty in a broader framework, in which cities seek to balance the legacy of the Soviet era with the desire for modernization and local identity.

In a broader geographical context, Gehl (2010) emphasizes the importance of designing human-centred cities where architecture fosters social interaction and local identity. His ideas about collaboration between public spaces and architectural forms to stimulate social life echo Almaty's efforts to create attractive public spaces that reflect culture, aligning them with the goals of preserving local identity in urban design. This integration of regional and international perspectives demonstrates that the formation of Almaty's architectural identity is influenced not only by local and historical factors but also by global trends. Accordingly, cities seek to preserve a unique identity under globalization pressures. These international studies and theoretical foundations help determine how Almaty's architecture reflects its regional roots and aspirations within the globalized urban landscape.

Finally, Mendikulov's (1948) early work on the national architecture of Almaty addresses the

problems of integrating traditional Kazakh elements into urban design. His ideas are fundamental to understanding the historical struggle for the balance of national identity and modernity that continues to influence the architectural narrative of Almaty.

These studies reveal the complex interaction of historical, cultural, and environmental factors in the formation of Almaty's architectural identity. They also provide a basis for analysing the architectural landscape of Almaty as a determinant that shapes the city's identity through the built environment.

3 Materials and methods

To achieve a multifaceted understanding of the role of architecture in urban identity formation, a range of empirical, theoretical, and qualitative methods were used for a comprehensive analysis of the architectural identity of Almaty. Thus, the deduction was applied to analyse Almaty in its regional context, narrowing it to specific areas, streets, and individual buildings. Accordingly, the inhabitants of the city were considered to be subjects of sociohistorical development that affect regional identity. An analysis of academic sources, related to urban identity, architecture, and regional features, was carried out to establish theoretical frameworks and identify factors affecting the city's identity. Apart from that, project documentation and urban development strategies of Almaty were analysed to contextualize the architectural evolution of the city and assess the purposefulness of its design.

Furthermore, to assess the spatial configurations and structural characteristics of Almaty, a graphoanalytical method was applied. It involved mapping and visual analysis of key architectural features, land-use models, and urban plans that create the city's identity. Geographic information systems (GISs) were used to illustrate architectural models of the city and identify natural, anthropogenic, and cultural-symbolic elements that embody the identity of Almaty. Field studies were conducted to document and analyse the spatial environment of Almaty, focusing on structures and monuments that demonstrate the properties of identity. Moreover, observation allowed researchers to gain firsthand insight into the interaction between architecture and its social and cultural context, including the public perception of the city's identity.

A sociological survey called Citizen Survey was carried out from September 2022 to December 2023 by the Almatygenplan Research Institute and the Institute of Applied Urbanism, supported by the Administrative Office (*Akimat*) of Almaty. The resulting dataset is integral in shaping the discourse for project seminars fostering collaboration among residents and businesses across diverse city districts. A total of 801 participants from various cities in Kazakhstan, seventeen to sixty years old, took part in the survey, comprising 471 women (58.8%) and 330 men (41.2%). In terms of occupation, those surveyed included 55.8% employed, 36.9% students, and 7.3% unemployed. The intermediate survey data were published in an article (Aukhadiyeva & Karatseyeva, 2022). The survey was used to determine respondents' perception of the city's architecture. The online survey was conducted using the Survio app. It included questions on how architectural features contribute to residents' sense of place and identity. Focusing on both macro and micro levels, the survey collected data about neighbourhoods, residential clusters, streets, and prominent buildings in Almaty. Participants were asked to rank the factors contributing to the city identity of Almaty, categorized into natural (climate and landscape) and anthropogenic (encompassing architecture, urban environment, cultural symbols, and city images). They were also requested to assess the impact of socioeconomic factors on the city's image formation. Respondents also had the option to

identify more than one factor associated with the city's uniqueness.

The collected data were analysed to determine the recurring themes and determinants of Almaty's identity. Qualitative data from the literature review and field observations were coded thematically, and quantitative data from the sociological survey were statistically analysed to reveal patterns of public perception of the city. Through a comparative analysis, these findings were summarized to offer a comprehensive view of the architectural factors shaping Almaty's identity. Consequently, this multilevel methodological framework made possible a thorough study of architecture as a determinant in shaping Almaty's unique urban identity. Gained results also shaped discussions about preserving identity during globalization.

4 Results and discussion

4.1 Key aspects of contemporary city identity

Inhabiting a specific country, individuals perceive territorial identity, aligning themselves with natural features, architecture, and culture that act as transmitters of place symbols (Krupskyi et al., 2019). These symbols arise through meanings that are significant to the individual at a territorial level and become more specific within the context of a city or settlement. Fedotova (2016) defines urban identity as "the totality of urban meanings that enable residents to identify themselves with the city through meaningful symbolic means (images, concepts, codes, and more)". The urban environment, encompassing architectural structures, public spaces, streets, and parks, plays a distinctive role in shaping city identity when collective and individual memory creates symbolic images, associations, and myths linked to specific elements of a given city. Within the framework of his "genius loci" concept, Iskhojanova et al. (2022) emphasized that the "genius (spirit) of a place" "enables individuals to identify themselves with the environment".

What is the role of architecture in the identification of a city? Previous research has revealed that regional architecture is shaped by various local factors and has a significant impact on residents' self-identification. Regional architecture plays a crucial role in preserving cultural heritage and fostering the sustainable development of a region (Amit, 2004). One key aspect of contemporary city identity is its image. Lynch (1960) emphasized that a city's image must be clear and well defined. According to him, mental images of a city are associated with three fundamental aspects: paths, edges, and districts. These aspects shape the perception of the city as a whole and define its functional structure. The city's image should reflect the values and identity of its residents. If the city's image does not mirror the cultural identity of its inhabitants, it can lead to disorientation and dissatisfaction. On the other hand, cities that have been able to express their cultural identity often become attractive to tourists and investors.

As noted by Gehl (2011), the cultural identity of a city is shaped through the interaction of its residents with the environment, social institutions, and historical heritage of the region. Gehl's theory of the regional image of a city provides the foundation for understanding the identity of Almaty. According to Gehl (2010) and his "city for people" concept, physical, social, and cultural characteristics have contributed to the formation of Almaty's image (Figure 1). Preserving and popularizing these attributes can aid in maintaining and strengthening the cultural distinctiveness of the city and the regional image.

Figure 1: Identity of a city (source: Fedotova, 2016).

Factors shaping city identity are categorized by researchers into natural features, which are primarily related to stable or persistent factors (geographical location of the city, climate, landscape, flora, etc.), and artificial features, which are created through human influence on the urban environment and are typically stable or changeable (symbols, brands, buildings, bridges, etc.; Korotseyeva & Akhmedova, 2022). In this study, the following factors are identified in the formation of urban identity: natural factors (climate, landscape, flora, fauna) and anthropogenic factors. The latter are further divided into two groups: material-spatial factors (architecture and spatial environment) and cultural-symbolic factors (images, myths, and historical associations).

4.2 Natural factors in shaping identity

Natural factors encompass a wide array of aspects that can exert influence on both architecture and human life. Residents and visitors characterize Almaty as a green city, nestled at the foothills of mountains. The climate of Almaty is moderately continental, with low humidity during the summer months and high humidity during winter. The average temperature in January is −6 °C, and in July it reaches 24 °C. Most precipitation falls in the spring and autumn. The city stands at an elevation of approximately 800 m, creating conditions for the mountain breezes that cool the city and supply cleaner air from the mountains.

For Almaty, one pivotal determinant pertains to its natural position within a valley nestled between mountain ranges, located at the intersection of two tectonic plates. Consequently, seismic activity in the city is sustained at a notably high level, often reaching up to 9 or 10 on the Richter scale. Furthermore, a pronounced temperature inversion phenomenon and inadequate air circulation within the city's basin, particularly during the winter season, are observed. The deficient air quality is exacerbated by factors such as vehicular emissions, industrial discharges, waste incineration, and smog caused by winter heating. Regrettably, seismic vulnerability and environmental issues constitute intrinsic facets of Almaty's image. In recent years, Almaty has witnessed a surge in initiatives aimed at ameliorating its environmental circumstances. These endeavours encompass the modernization of industrial enterprises and the establishment of a network of bicycle lanes and pedestrian zones, contributing to a reduction in air pollution levels.

Landscape serves as the foundation of city identity. The key elements shaping the development of the contemporary urban structure of Almaty are the mountain rivers, which historically attracted people to settle and inhabit the region. In the nineteenth century, the orientation of streets in north–south and east–west directions was adopted due to the topographic conditions. The layout of the blocks, with their shorter sides facing the mountains, facilitated optimal city ventilation. This planning principle persisted as the city expanded to the southwest in the mid-twentieth century. Distinctive public spaces within the city, contributing to its unique character, are the promenades running alongside the mountain rivers that flow through the city.

The geographical location of Almaty, the diversity of unique natural landscapes, and the presence of natural reserves in the suburban area, along with the rich cultural heritage of nomadic traditions, play a significant role in shaping the city's identity. These conditions attract a considerable number of both domestic and international tourists. One promising direction for the development of tourism in Kazakhstan is ecotourism. The number of tourists interested in protected areas of Almaty and the surrounding region is on the rise, and new forms of organized tourism are emerging, including historical and educational tourism, agrotourism, cycling,

equestrianism, and water-based activities.

A unique natural feature of Almaty is its apple orchards. The apple tree originating in Kazakhstan, specifically *Malus sieversii*, is considered the ancestor of all apples worldwide. This fruit had its beginnings on the foothills of the Zhongar and Trans-Ili Alatau in the northern Tian Shan Mountains, where forty varieties of *Malus sieversii* grow. The genetic purity of the *Malus sieversii* apple tree has garnered significant interest among international tourists. The preserved and newly revitalized apple orchards form the basis for tourist "apple tours" and "apple routes" in the Almaty region (Shadmanova et al., 2019).

Another endemic, the golden treasury of the region's flora, is the wild tulip. In terms of the diversity of wild tulips, Kazakhstan holds a leading position globally, with 120 species of wild tulips found on the planet, forty-two of which thrive in Kazakhstan. These facts are elaborated upon in an article published in *The Astana Times* (Akhmetkali, 2023). The images of mountains, apples, and tulips are actively incorporated into the symbolism of urban events and are conveyed through ornamental and decorative architectural elements.

4.3 Almaty's anthropogenic factors in city identity formation

A city's uniqueness is most vividly exemplified within its physical environment, shaped by various factors: natural and historical conditions, architectural and cultural traditions of its inhabitants, and economic resources. In characterizing a city, terms like "sense of place" and "cultural identity" are frequently invoked, serving the purpose of comprehending, contemporaneously utilizing, preserving, and transmitting information about the city's history and culture to future generations. These concepts are imperative for sustaining a city's uniqueness because it cannot develop in isolation but is subject to external influences. All these factors are characteristic of modern cities in Kazakhstan, a country that ranks ninth in the world in terms of territory (2.72 million km²). Located at the heart of Eurasia, Kazakhstan occupies a pivotal position at the crossroads of numerous trade routes, including the ancient Silk Road. The historical heritage of Kazakhstan is exemplified by a series of significant archaeological discoveries, showcasing the achievements of ancient inhabitants, both nomadic and settled populations. Experts have identified ancient cities of great historical and cultural significance within the country's borders (Baitenov et al., 2019).

The climate of Kazakhstan is distinctly continental, characterized by cold winters and hot summers. Due to the vast expanse of its territory, there is substantial climatic variation in different regions of the country. The northern areas experience severe and cold climates with prolonged winters, and the southern regions have a milder and warmer climate with hot summers and short winters. The country's topography consists of 63% steppes, 25% deserts and semi-deserts, 10% mountains, and 2% forest-steppes, predominantly in the north (Ministry et al., 2022).

Following the dissolution of the USSR and its attainment of independence in 1991, Kazakhstan actively engaged in global economic, cultural, and environmental processes. In Kazakhstan, there are eighty-nine cities and 6,859 rural settlements. The largest cities are Almaty (population 2,191,314), Astana (1,383,291), and Shymkent (1,205,889; Qazstat, 2023a; Qazstat, 2023b). Most modern cities in Kazakhstan developed in the twentieth century. Many of them have traditional urban planning, characterized by a grid of streets and blocks, which was inherited from the Soviet era. Typically, the central parts of these cities contain critical infrastructure, such as government institutions, banks, shopping centres, educational, cultural,

and sports facilities, as well as housing. Residential areas and industrial facilities are often located in the peripheral regions of the cities.

One well-developed area of settlement in Kazakhstan is the Almaty agglomeration, with its central city, Almaty, which was the country's capital from 1929 to 1997. Following the relocation of the capital to Astana in 1997, Almaty retained its status as the financial, research, educational, and cultural hub of the nation. The geographical location of Almaty has contributed to the formation of a distinctive spatial environment and a pronounced architectural identity. The city's uniqueness is defined by its position at the foothills of the Trans-Ili Alatau Mountains, ranging from 600 to 1,650 meters above sea level. A majestic panorama of snow-capped peaks encircles the city, creating its unparalleled character (Figure 2). Several mountain rivers intersect the city. Its suburban areas are used for recreation, tourism, and various sports activities.

Figure 2: Panorama of Almaty (photo: Deonisy Mit).

The city's historical roots extend over two millennia, a legacy prominently etched into its architectural fabric. It experienced accelerated development during the twentieth century, particularly during the Soviet era. Subsequent to the dissolution of the Soviet Union in 1991, the city embarked on a fresh socioeconomic trajectory. This transformation was marked by an upsurge in the city's population due to internal migration, expansion of urban territory through the incorporation of suburban areas, and heightened construction activities encompassing residential, commercial, athletic, office, and educational edifices. The urban landscape also witnessed the establishment of a metro system, contemporary transport interchanges, an extensive network of cycling routes, and pedestrian precincts. Simultaneously, efforts were made to enhance accessibility for individuals with limited mobility, promoting an inclusive urban environment.

The architecture of Almaty has inherited elements from various historical periods of its development. Forms and elements of buildings in styles such as Baroque, Modernism, Soviet Classicism, and others have been adapted and enriched with motifs from national art (Abdrasilova & Aukhadiyeva, 2022; Truspekova & Sharipova, 2022). This amalgamation has given rise to an eclecticism that has become an integral part of the city's architectural character and cultural identity. The modern architecture of the city is influenced by international trends and can be compared to the architecture of European countries. It is of paramount importance to identify and systematize the aspects that shape the city's identity in the context of globalization when considering the processes of development.

4.4 Material and spatial elements (architecture and urban environment) in Almaty

Urban planning aspects, including planning principles, functional zoning, and building types, have shaped the spatial structure of the city (UIA Architects, 2021). The master plans for Almaty, implemented during different periods in its history, reflect the special features of these historical epochs. Modern Almaty comprises eight administrative districts. In terms of topography, they can be categorized into two types: the southern foothill districts (Almaty, Auezov, Medeu, Bostandyk, and Naurizbay) and the northern plain districts (Alatauskiiy, Zhetysu, and Turksib; Figure 3).

Figure 3: Almaty's administrative districts (source: authors).

For the expression of identity, significant importance is attributed to the conveyors of a city's unique qualities. Architecture (buildings, memorial structures, parks, squares, and streets) stands out as the most prominent source for disseminating information about the history, culture, and natural environment of the region. The interpretation of motifs from traditional art and architecture is a paramount characteristic of regional architecture in Kazakhstan. It allows the determination of a city's identity and establishes a connection between architecture and the culture of the people residing in the given territory. Based on the study of art and architectural heritage, analysing various elements such as national symbolism, decorative and applied arts, and traditions of folk architecture (form creation and local building materials), methods for transforming the urban environment can be developed. The study of the morphological context of the city has revealed distinctive features of Almaty's planning and development:
– The extensive northern part of the city mainly consists of private residential areas and industrial territories (representing the post-initial stage of the city's development);
– The block development of the historical central part of the city features two- to five-storey buildings along streets with a north–south or east–west orientation, and monumental public structures (created in the first half of the twentieth century);
– Residential districts in the peripheral areas of the southern and western parts of the city are characterized by multistorey panel buildings in the style of Soviet modernism, which incorporate service structures such as retail outlets, schools, preschools, and clinics (built in the second half of the twentieth century).

High-rise residential complexes are currently being built across the city, and commercial, entertainment, and business centres are being developed (Abdrassilova & Danibekova, 2021). The functional and spatial structure of Almaty is a consequence of the historically evolved city model and contemporary society's demands for a comfortable lifestyle and economic advancement. The central part of the city is replete with distinctive architectural structures characterized by a pronounced identity, built at the end of the nineteenth century and throughout the twentieth century (Cheshmehzangi, 2020). These structures reflect a regional architectural character, encompassing motifs of Kazakh national decor (in the design of residential and public buildings) and associations with traditional memorial craftsmanship (in the elements and forms of public buildings). In the twenty-first century, the city's architecture is evolving within the framework of global trends and is being shaped through the synthesis of modern principles of form generation, new construction materials, and building technologies (Figure 4).

Figure 4: Almaty's architecture in the twentieth and twenty-first centuries (source: authors).

4.5 Cultural and symbolic elements of identity formation (decorative elements, images, myths, and historical associations)

The urban environment of Almaty is replete with symbolic elements, including monuments that allude to ancient Scythian art (e.g., the Golden Warrior Monument) and memorials dedicated to historical events. It features designs inspired by Kazakh decorative and applied arts, characterized by intricate carvings and geometric patterns on building facades, murals, wrought-iron fences, and various artistic elements in parks and squares. These elements reflect the city's history and culture, actively contributing to the representation of its identity. In addition to the visual aspects of local traditions, the city's social life incorporates numerous

cultural events such as Nauryz, City Day, the Apple Festival, Fountain Day, the Book Festival, cinema and music festivals, traditional marathons through the city streets, competitions at high-elevation ski resorts, and more (UN General Assembly, 2022). Large urban gatherings reenact local history and the urban myths of Almaty, encompassing themes such as the "city of apples", "city of fountains", "green city", and so on (Figure 5).

Figure 5: Scenes from public life (source: authors).

4.6 Sociological survey results

The examination of regional identity issues is of contemporary relevance in architecture studies in Kazakhstan. The outcomes derived from the synthesis of theoretical research serve as the foundation for establishing normative documentation and practical recommendations during project development (UNESCO, 2015; UNFCCC, 2022). One effective means of design involves the participation of the population in the discussion, refinement, and formulation of new projects. Citizen involvement is facilitated through various avenues, including sociological surveys, interactions between designers and residents, and collaborations with volunteer organizations, among others. The employment of survey questionnaires as a means to gauge public opinion gained widespread traction, allowing for the identification of citizens' preferences on pertinent urban life matters. The survey outcomes have yielded significant contributions, establishing a robust foundation for systematic study and nuanced consideration of public opinion. The insights derived from the Citizen Survey conducted are not only academically enriching but also serve as a critical foundation for steering the sustainable development trajectory of the city. Most participants were residents of major cities with a population exceeding 1 million, accounting for 78.7%, and the fewest (3.1%) were respondents from rural areas (Table 1).

Table 1: Survey results.

City size, population	Responses	Percentage
Megalopolis of national significance (> 1,000,000)	629	77.7
Large city of regional significance (250,000–1,000,000)	66	8.1
Small city of regional significance (100,000–250,000)	41	5.0
Large town of local significance (50,000–100,000)	25	3.1
Small town of local significance (10,000–50,000)	24	3.0
Rural settlement	25	3.1

Source: authors.

Based on the responses gathered during the survey, conclusions can be drawn regarding the preferences of Almaty residents and visitors. It is noteworthy that the study of Almaty's identity involved not only city residents but also inhabitants of other locations in Kazakhstan. In essence, we obtained both internal and external evaluations of the city's image. Respondents ranked the priority of factors shaping urban identity as follows: 62.9% of respondents primarily associate Almaty with its natural context (mountains, nature reserves, and unique landscapes). Anthropogenic material factors (buildings and structures of historical value, historical and cultural landscapes, and memorial structures) are considered important by 51.8% of those surveyed, whereas for 39.1% of individuals the city is primarily characterized by its

anthropogenic nonmaterial factors (traditions, folklore, and symbols). Meanwhile, 36.5% of respondents emphasized the role of functional factors (businesses and infrastructure), and 23.4% of participants considered social conditions (migration, education, and healthcare) in characterizing Almaty's image (Figure 6).

Figure 6: Factors shaping city identity (source: authors).

Based on the survey results, it can be concluded that urban residents identify their city based on their perceptions of the features of the surrounding environment, architecture, and symbolic representations characteristic of Almaty. Architecture, which takes into account the landscape and reflects history, serves as an active actor in urban identity. Architectural forms and styles demonstrate the unique material and symbolic characteristics of the region, as well as the socioeconomic and political context of the time. These findings have wielded direct influence over the ongoing developments within the General Plan of Almaty City until 2040.

The active integration of countries and cities into the global economy and culture carries the risk of eroding local identities (Figure 7). However, it is important not to view globalization as a negative factor leading to the loss of city and regional identity. The involvement of international architects in the design of buildings and structures in Astana and Almaty shows that globalization can stimulate the development and preservation of cultural traditions as they become objects of creativity for the international community (Abdrassilova & Aukhadiyeva, 2021).

Figure 7: City symbols (source: authors).

It is essential to emphasize that identity is dynamic and can change depending on historical, social, and political changes in society. Architecture is one way to express the cultural characteristics and identity of a people. Currently, Kazakhstan's architecture continues to evolve and adapt to reflect modern trends and global challenges facing contemporary society. It strives to become increasingly innovative and unique, incorporating modern design and the latest construction technologies.

4.7 Factors contributing to the formation of Almaty's identity

The analysis of factors specific to Almaty shows that city identity is formed based on various components reflecting both its unique natural features and the cultural heritage of the nation. Research has shown that three main groups of factors play a leading role in shaping the city identity of Almaty.

Natural factors, such as the steppe and mountains, play a key role in shaping the city's image, reflecting its unique landscape. Landscape features, such as changes in terrain elevation, are crucial for the identity of Almaty, creating a special atmosphere of fluidity and dynamism.

Anthropogenic factors epitomize a dynamic interplay with the natural environment: the distinctive climate and topography have profoundly shaped the material and spatial fabric, characterized by architectural manifestations reflecting historical legacies, prevailing economic dynamics, and the level of technological advancement, thereby encapsulating urban identity. The study of anthropogenic impact in Almaty has revealed the following factors:

increased emissions originating from industries and residential buildings reliant on coal, risks associated with compromised air quality, and the use of transportation that adversely affects air quality (AQLI, 2024). In addition, recent observations in urban centres underscore a significant increase in traffic congestion, which has emerged as a prominent concern. Furthermore, deficiencies in the waste management infrastructure exacerbate environmental challenges.

Sociocultural factors transmit the ideas of urban identity through public events, forming and supporting the city's community. Conducting such events in various administrative districts of the city contributes to the activation of citizens, their involvement in studying the city's history and their participation in public hearings and reconstructive activities.

The prioritization of factors shaping urban identity, as identified by respondents, underscores the importance of both natural context and anthropogenic and sociocultural aspects in perceiving the image of Almaty. This analysis highlights the complex interaction of various elements that define the city's identity and shape its unique and culturally rich atmosphere. The research findings suggest that architecture and the physical environment play a significant role in shaping Almaty's urban identity.

The cultural identity of the city is a multifaceted phenomenon reflecting a long-term process of shaping individual and collective self-awareness within the context of cultural and social influences. It encompasses interconnected aspects such as interaction with cultural traditions, construction of cultural identities, and participation in intercultural and interreligious dialogue. The results also emphasize the role of national virtues and cultural symbols in shaping society's collective identity. National virtues such as hospitality and unity are closely linked to the region's historical and cultural traditions and play an important role in shaping national unity.

National symbols, encompassing both unofficial representations such as the snow leopard, golden man, dombra (a lute), yurt, samruk (a mythological bird), and shanyrak (yurt crown), as well as official ones like the coat of arms, flag, and anthem, function as vital components of national identity. They serve to fortify the connection between the city and its inhabitants. In the contemporary world, where sociocultural and political dynamics are constantly shifting, the meanings of identity symbols can undergo change and reinterpretation. However, both traditional symbols deeply rooted in history and new ones influenced by modern trends play a significant role in shaping what renders the city of Almaty unique and distinctive.

5 Conclusion

City identity is a symbolic resource that shapes the perception of the urban environment for a population based on meaningful symbolic elements associated with the natural environment, history, and culture of a territory. Our research has shown that the identity of Almaty, in essence, is primarily constructed under the influence of natural factors (landscape and climate) and anthropogenic factors (material: architecture and material-spatial environment, and nonmaterial: symbols, images, and myths).

Natural factors significantly influence territorial identity (including the city's identity) through landscape features and climate, including building orientation, the choice of construction materials, and structures. Anthropogenic factors (architecture, infrastructure, and the urban spatial environment), taking into account special geographical features and topography, establish the foundations of the city's architectural style, which holds crucial significance for

city identity. Cultural-symbolic factors draw on traditions, customs, and cultural values, which can construct symbols and images of urban identity. The study has shown that the city's identity is a collection of perceptions about the city, which in Almaty is shaped by a complex interplay of geographical and cultural-historical features. Architecture in Almaty is perceived by residents and visitors as one of the principal sources of urban identity.

The model of urban identity is formed within a geographical context, in which the ritual of reproducing local identity is carried out through the material-spatial environment (foothill terrain, morphology of historical quarters, architectural designs, parks, and fountains) and is expressed in enduring images ("the city at the foot of the mountains", "the apple city", "the garden city", "the city of fountains", "the cultural capital", etc.). Transmitters of city identity in architecture encompass decorative elements in building design (brise-soleils, balcony railings, façade ornamentation, and murals).

The significance of studying the identity of Almaty lies in the fact that this city embodies characteristics that, when examined, can determine the direction for exploring the identity model of other cities in Kazakhstan. Undoubtedly, this will be reflected in the transformation of the urban environment, attracting investors and tourists.

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