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EVOLUTIONARY ANALYSIS OF SAMARKAND'S URBAN SQUARES BY HISTORICAL STAGES

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Annotation: *This article analyzes the historical stages of development of the central squares in Samarkand and their architectural and urban planning evolution. It examines the formation characteristics of squares across various periods, including Afrasiab, the medieval Timurid era Registan Square, the Russian Empire period, as well as Soviet and contemporary urban planning stages. The article highlights the functional transformation of urban squares from commercial and administrative hubs into cultural, tourist, and social spaces. It includes practical recommendations for planning modern public spaces while preserving the historic urban environment.*

Keywords: *Urban square, central squares, Registan, Afrasiab, public space, urban planning, planning, functional zone.*

Аннотация: *В данной статье анализируются исторические этапы развития центральных площадей города Самарканда и их архитектурно-градостроительная эволюция. При этом изучены особенности формирования площадей в периоды Афрасиаба, средневековой эпохи Тимуридов площадь Регистан, Российской империи, а также советского и современного градостроительства. В статье освещаются процессы трансформации функционального назначения городских площадей-от торговых и административных центров до культурных, туристических и общественных пространств. Работа содержит полезные рекомендации по планированию современных общественных пространств с сохранением исторической городской среды.*

Ключевые слова: *Городская площадь, центральные площади, Регистан, Афрасиаб, общественное пространство урбанистика общественное пространство, планирование, функциональная зона.*

INTRODUCTION

Samarkand is one of the oldest urban centers in Central Asia, featuring a complex spatial system of urban squares (Registan, intersections, bazaars, and administrative areas) shaped through centuries of evolutionary development. This system has undergone a process of continuous transformation starting from ancient Afrasiyab through the Timurid, Russian Imperial, Soviet, and contemporary periods. In the analysis of the historical stages of development of Samarkand's central squares and their architectural-urban evolution, the

following sites were reasonably considered as research objects. Specifically, as the central squares of the city, these include the Registan square, Bibi-Khanym square, public spaces around the Siyob bozor, the precincts of Gure-Amir, the entrance area of Shohi Zinda, open spaces adjacent to Afrosiyab, the surroundings of the Ulugbek observatory, and for comparative analysis, the central squares of the Soviet period.

Samarkand is one of the oldest and continuously developed cities in Central Asia, with an urban structure formed through centuries of historical processes. The city's urban environment, particularly its system of central squares, evolved under the influence of social, political, and economic factors across various historical epochs.¹³ The formation process of Samarkand's city squares can be conditionally divided into several historical periods.[1] The historical part of Samarkand is designated as a UNESCO World Heritage site, "Samarkand – Crossroad of Cultures," where key monuments such as Registan, Bibi-Khanym, Shohi Zinda, Gure-Amir, the Ulugbek observatory, and Afrasiyab are considered a unified urban-cultural system. Ancient Period: Afrasiyab (6th Century BCE – 13th Century CE): The initial formation of Samarkand's city squares is linked to the territory of Afrasiyab. served as the core of ancient Samarkand, where central open spaces primarily developed around palace and religious complexes. 6th–4th Centuries BCE: Early urban centers (Marakanda period).

7th–8th Centuries, palace complexes and ceremonial squares (as depicted in the Afrasiyab wall paintings). Open spaces in Afrasiyab exhibited the following characteristics: Proximity to central authority, Served for ceremonial and political gatherings, Frequently functionally linked to the citadel (ark). During this period, squares were not yet independent urban planning units, but rather developed as structural elements of the palace-complex system.¹⁴

Materials and Methods The initial urban center of Samarkand, with Afrasiyab serving as its main core, was formed in the territory of Afrasiyab, where the city's citadel and public squares developed. During this period, the urban morphology exhibited an organic character, with streets naturally conforming to the surrounding landscape. The central squares fulfilled administrative and religious functions. It is considered one of the oldest urban centers in Central Asia.

In his book "The Formation of Feudal Architecture in Central Asia (5th–8th Centuries)" (Tashkent, 1966), V.A. Nielsen discusses the ancient part of Samarkand-Afrasiyab-noting: "Due to the ruggedness of the terrain, the city acquired... the shape of an irregular triangle in plan" (p. 16). He highlights that its layout took on an uneven, irregular triangular form due to the terrain's influence. This demonstrates that the formation of urban centers and squares was closely linked to the natural environment, topography, and water networks.

Therefore, when analyzing historical city squares, it is necessary to consider their relationship with the natural environment alongside their geometric shape. Nielsen evaluates

¹⁴ Axmedov, M. Q. (1995). *History of Central Asian Architecture* [O'rta Osiyo me'morchiligi tarixi]. Tashkent: O'zbekiston publisher https://en.wikipedia.org/wiki/Afrasiab_Museum_of_Samarkand, Afrasiab Museum of Samarkand.

Samarkand on the eve of the Arab conquest as one of the largest cities in Central Asia. This implies that the city center, its squares, and public buildings constituted a highly developed urban system. As a major city, it can be concluded that Samarkand's central squares held regional significance rather than merely local importance. [2,6]

In the ancient city of Afrasiyab, squares functioned not only as public spaces but also served as the compositional centers of the city. Important architectural structures were arranged around them, ensuring the visual and functional unity of the urban environment. This urbanistic approach persisted in subsequent periods—most notably during the Timurid era-laying the foundation for the development of grand ensembles like the Registan square. Thus, the Afrasiab stage emerged as Samarkand's initial urban model, demonstrating key features such as a centralized composition, functional zoning, an organic street network, and the prioritization of public spaces. These principles served as a vital foundation for the city's future urban development.

Urban structure of Afrasiyab

Element	Description	Function
Citadel	High point	Administration
Shahristan	Central zone	Residential
Rabad	Outer area	Commerce
Square	Center	Public
Streets	Organic	Circulation

An analysis of the archaeological plan of Afrasiyab has revealed the city's early urban structure. The urban center took shape around the citadel and public squares, with the street network developing organically. In his work "The Formation of Feudal Architecture in Central Asia (5th–8th centuries)", V.A. Nielsen demonstrates that public buildings, the citadel, and the shahristan within Central Asian cities developed in an interconnected manner. On page 11, the author notes that "the palaces of rulers, temples, and other public buildings were located inside the shahristans," indicating that spaces intended for civic and public life were formed within city centers. Speaking of Samarkand, he observes that the city's layout was shaped by its natural topography, while the citadel was separated from the residential zone and surrounded by an "open territory" (svobodnaya territoriya). These insights serve as a vital theoretical framework for analyzing Samarkand's historical squares and central open spaces.

A comprehensive analysis of the evolutionary development, formation patterns, and urban characteristics of city squares in the historical zones of Samarkand reveals that the city stands as one of the oldest urban centers in Central Asia. Its public squares-comprising the Registan, major intersections, bazaars, and administrative plazas-form a complex spatial system shaped through centuries of evolutionary growth. This system has undergone continuous transformation from the ancient period of Afrasiyab, through the Timurid era, the Russian Imperial period, and the Soviet era, up to the modern day. During the Timurid period (14th–15th centuries), the complete formation of Samarkand's city squares took place through centralized, monumental spaces, with squares developing as independent urban

elements. The Registan Square was established around a three-sided closed composition with a central open space, featuring the construction of the Ulugbek Madrasa, the Ulugbek Khanaqah, the Kukaldosh mosque, and later the Sherdor and Tilyakori madrasas. Functionally, it served political purposes (announcements of royal decrees), social gatherings, trade, and public ceremonies.

As noted in Nielsen's diagram of Bukhara, the designation of "Registan" as a city gate name underscores its critical role within the urban layout—demonstrating that the term refers not to a single structure, but to an urban space tied to the city's central public area and transit hub. This insight offers a valuable comparative reference when analyzing Samarkand's Registan Square, highlighting the Timurid era as a pivotal stage in Samarkand's urban history when the Registan emerged as the city's primary compositional core.

Samarkand squares overview

No	Square name	Period 1 (Formation)	Period 2 (Development)	Period 3 (Contemporary)	Function	Type
1	Registan	1417–1660	1930–1970	1991–2025	Political, Social	Central
2	Bibi-Khanym	1399–1404	17th–19th century	1991–2025	Religious	Semi- enclosed
3	Siab Chorsu	15th century	1785	Present	Commercial, Transport	Radial
4	Gure -Amir	1403–1404	19th century	Present	Pilgrimage	Semi-open
5	Shahi Zinda	11th–15th century	19th century	Present	Pilgrimage	Linear
6	Afrasiyab	BCE (BC)	7th–8th century	Present	Archaeologi cal	Historical
7	Ulugbek observatory	1420s	20th century	Present	Scientific	Peripheral

During the Russian Imperial and Soviet periods, the squares of Samarkand were adapted to a new urban system, leading to a drastic change in their function. In this era, the squares began to serve predominantly administrative, commercial, and ideological roles. While historical spaces such as the Registan and Bibi-Khanym were preserved, they were enriched with new public and civic functions. Concurrently, new urban squares were developed across the city based on a grid (orthogonal) planning system.¹⁵ [1]

Discussion. In the contemporary era, Samarkand's city squares have been reshaped primarily as tourism hubs and public spaces. During this stage, preserving historical heritage while enhancing its functional diversity became a core priority. All major squares were integrated into a unified system, creating an extensive network of pedestrian and tourist routes. This spatial integration directly fosters Samarkand's ongoing development as a global cultural destination [1,4,5].

¹⁵ Axmedov, M. Q. (1995). History of Central Asian Architecture [O'rta Osiyo me'morchiligi tarixi]. Tashkent: O'zbekiston publisher.

An analysis of these three distinct eras reveals a clear trajectory: the Timurid period established a centralized religious-political structure; the Russian Imperial and Soviet eras drove administrative and functional transformations; and the contemporary period focuses on tourism and public realm development. While the functions of these urban squares have continually evolved, their core role as central urban anchors remains fully preserved.

The evolution of central squares in Samarkand is based on a three-stage model of urban development. During the Timurid period, these squares took shape as centralized religious and political spaces, whereas in the Russian–Soviet period, they were functionally and administratively reorganized. In the contemporary phase, these public spaces have been reinterpreted as hubs for tourism and civic life. Despite these functional shifts, structural analysis reveals that the concept of a central open space has been continuously preserved across all eras, with changes occurring primarily in visual character and core utility. This spatial continuity confirms Samarkand as a quintessential urban model among historical cities.[3,4]

Under the Timurids, Samarkand's public squares developed within a centralized urban system, positioned primarily at the city center or along primary spatial axes. During this era, these squares functioned as multifunctional public realms that intertwined religious, political, and social activities [3,4]. While the Registan Square served as the central compositional core, monuments like the Bibi-Khanym mosque and Shahi Zinda established a defined religious-pilgrimage axis. Meanwhile, Chorsu and the Siabbazar handled commercial and transit functions, reinforcing the economic foundation of urban life. Concurrently, complexes such as Gure Amir and the Ulugbek observatory acted as spiritual and scientific centers, demonstrating that Timurid era squares operated within a highly organized, multifunctional urban network.

During the 19th century-the Russian Imperial period-new administrative squares were established. Following Samarkand's incorporation into the Russian Empire in 1868, a new section of the city, known as the "New City" (Yangi Shahar), was constructed.

Key changes during this phase included the implementation of grid (orthogonal) planning, the establishment of central administrative squares, and the emergence of military and governance centers. The squares of this era were characterized by symmetrical-compositional layouts, expansive open spaces, and a primary orientation toward state administration functions.

During the 20th century-the Soviet period-squares were transformed into monumental and ideological spaces. A new type of urban square took shape in the center of Samarkand, undergoing reconstruction and expansion between 1920 and 1950, followed by the creation of monumental architectural ensembles from 1950 to 1980 [9]. These spaces featured large-scale open plazas where monuments and memorials held central prominence, defined by strict geometric compositions and a dominant socio-political ideology. Throughout this era, urban squares developed in accordance with the "state center" model.

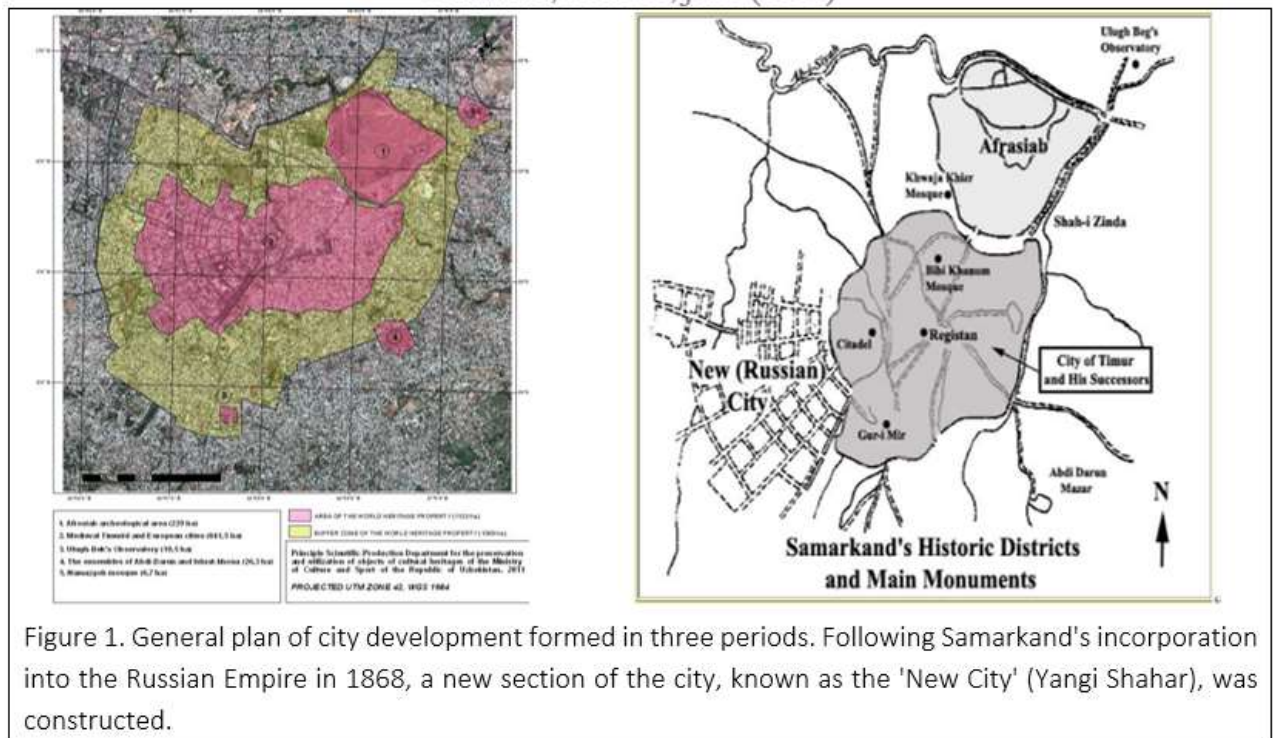


Figure 1. General plan of city development formed in three periods. Following Samarkand's incorporation into the Russian Empire in 1868, a new section of the city, known as the 'New City' (Yangi Shahar), was constructed.

Conclusion. Following independence, Samarkand's urban squares underwent historical reconstruction, transforming into vibrant cultural and tourism hubs while evolving into multifunctional public spaces. Within this spatial structure. The Registan serves as a premier venue for international festivals and tourism. The Afrasiyab territory functions as a key archaeological and scientific research zone. Modern public squares are dedicated to urban recreation and civic cultural events. The evolution of Samarkand's city squares is governed by several fundamental urban patterns. Law of Centrality: Squares have consistently occupied central geographic locations or critical transport nodes. Functional Transformation: Public spaces shifted dynamically across eras to meet changing socio-political demands. Compositional Progression: Spatial form evolved sequentially through distinct typologies- from open landscapes, to semi-enclosed and fully perimeter-bound layouts, and ultimately to monumental open plazas.[4]

Samarkand's historical squares represent a multilayered evolutionary system that developed continuously from ancient ceremonial spaces into modern civic realms. While each historical epoch redefined the function, composition, and urban role of these spaces, their core essence as central open realms remained intact-establishing Samarkand as a classic model for the evolution of urban squares in Central Asia.

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