

## CITY TYPES IN THE FORMER INCA EMPIRE: CEREMONIAL CENTERS, CAPITALS, MINING TOWNS AND PORTS

## TIPURI DE ORAȘE ÎN FOSTUL IMPERIU INCAȘ: CENTRE DE CEREMONIE, CAPITALE, ORAȘE MINIERE ȘI PORTURI

Hajnalka GÁTAI<sup>1</sup>

**Abstract:** The Andean region of South-America has been the cradle of big cultures and empires, up to the Inka empire as the last and biggest one, a synthesis of all the previous states of the region for more thousand years. A comparative essay of the pre-Inka imperial centres like Wari, Tiahunaco and Chan Chan, furthermore, Inka urbanization as the legendary lost city of Machu Picchu and the capital Cusco, with the new cities of Spanish foundation like Lima or the same Cusco, transformed into a Spanish colonial centre, can give a chronological view about the development of the urbanization in this region. A chapter apart presents special urbanizations like mining towns and ports. The study intends to depict the structure, the districts, the architectural style and the technical innovations of all these cities as well as the actual situation and the problems Lima must solve, a city that grew into a metropolis of the 21<sup>st</sup> century. In the end, some short reflections to remember the rural zone's story and actual difficulties in the Andean countries are given.

**Key-words:** urbanisation, Inca Empire, Spanish colonies, city types, development of cities

**Cuvinte cheie:** urbanizare, Imperiul Incaș, colonii spaniole, tipuri de orașe, dezvoltare urbană

### 1. INTRODUCTION

The Pacific coast of South-America, the mountain ranges of the Andes, and the major part of western Amazon used to belong to an empire that, in its official language, was referred to as *Tawantinsuyu*, “the land of the four regions”. The country that existed 500-800 years ago covered 4000 sq km, stretching in north-south direction. During the Spanish conquest, the territory of the Inca Empire formed part of the viceroyalty of Lima. After declaring independence from Spain, a number of different countries were established in the region. This vast area is now shared by 3 “classic” Andean nations: Peru, Bolivia, and Ecuador. Southern Colombia, north Chile and northwest Argentina cover the area of the former Inca Empire.

The region is characterized by geographic homogeneity (topographic, as well as climatic) from north to south, whereas in the east-west direction, it is very diverse. Considering this setup, the area can be divided into 3 great regions. *Costa*,

---

<sup>1</sup>University of Pécs, Faculty of Sciences, Earth Sciences Doctoral Programme

or the *Pacific coast* is a few hundred kilometres wide. Because of the Humboldt-Current it is extremely deserted and dry up to the north of Peru. *Sierra* is a range of high mountains in the Andes that splits into 2 ridges, showing volcanic activity, *Cordillera Negra* and *Cordillera Blanca*. In the south, the mountain range widens into the *Altiplano* plateau, a highland 3000 meters above sea level. Both the Altiplano and the mountains are dry, since they receive only a minimal amount of rain from east and no rain from the west at all. The dominant climate is *tierra fría*, cool continental. *Selva* is the tropical, subtropical area of Peru, located on the western margin of the *Amazon-basin*, hills and flat areas covered by rainforest.

The region's history and cultural-linguistic features are characterized by the same diversity. Throughout the centuries, great empires succeeded each other, they were the so-called cultural horizons: *Chavín*: 1000-100 BC, *Tiahuanaco-Wari*: 200-1000 AC, and *Inca*: 1200-1432 AC. During the intervening periods, smaller local nations and cultures emerged, such as *Paracas*, *Nasca*, *Moche*, and *Chimú*. Today, besides Spanish, the official language in most South-American countries, many people speak *quechua*, the official language of the Inca and *aymara* in the central region (Peru, Bolivia, and Ecuador). These two, along with their dialects, belong to the same language family; in Peru quechua, in Bolivia both quechua and aymara have been recognized as the second and the third official languages over the past decades. The ratio of quechua and aymara population is very high in the aforementioned countries. However, several other ethnicities exist, having their own language and culture, especially in the Amazon region. Imported slaves and the descendants of European immigrants also add up to this colourful setup, not to mention the infinite number of variants that the mixing of these ethnicities can produce.

Considering cultures before the Spanish conquest, both cities exercising their functions as centres as well as village communities were characteristic. Both types of settlements were found in early cultures prior to the Inca Empire, still it was during the Inca period that these settlements have become accomplished because the Inca Empire incorporated the legacy of formerly existing cultures. Inca city planning and architecture was influenced by Wari, Tiahuanaco, and Chimú heritage (such a city is *Macchu Picchu* that had been forgotten by the time of the colonial era). The Spanish colonizers reconstructed the occupied Inca cities in their own fashion, and also founded new ones modelled after those of the motherland (such examples are *Cusco* and *Lima*). During the colonial era, important mining towns (*Potosí*), industrial and trade centres (*Iquitos*), and seaports (*Guayaquil*) were also established. Systematically built centres, founded in the modern era like the formerly socialist cities of Central Eastern Europe are not typical. In the colonial era, the rural zone did not suffer major architectural and structural changes like most of the urban settlements.

Based on Hungarian and Spanish electronic as well as printed sources, the present study discusses the settlement types in chronological order, presenting the characteristics of first the urban (exemplified by the cities mentioned above), and then the rural sphere.

## 2. ANTEDECENTS: WARI, TIAHUANACO AND CHIMÚ

Inca city-planning and architecture could have dated back to traditions, far remote both in time and space, such as the capitals of Wari and Tiahuanaco, having the same names, in Central Peru near the present day *Ayacucho*, as well as in Bolivia on the *Altiplano* near *La Paz*, or Chan-Chan, the center of Chimú state along the coast of North-Peru, near *Trujillo*, respectively.

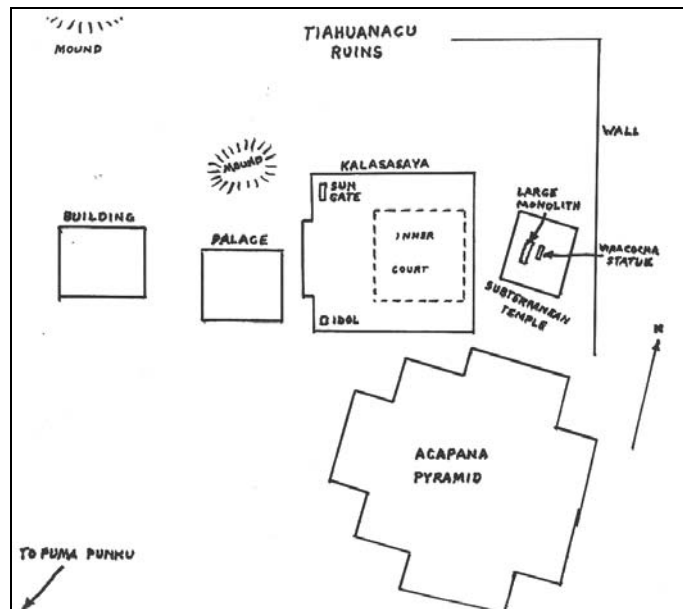
*Wari* was in its prime between 600 and 1200 AC. The city was built at an altitude of 2740 m above sea level, on the area of 750 ha and had a population of 50-70,000 inhabitants, according to the archeologists' estimations. The city's layout is extraordinary: its ceremonial centre, referred to as *Capillapata* by the locals and archeologists, is trapezoid shaped. It was surrounded by enormous walls as high as even 10 m, from which the main transport routes started. The geometrically structured sectors were connected by a major road network and a drainage system that transported water from mountain currents. Buildings had square, rectangular or round layout. As for their functions, buildings served different purposes depending on the sectors they were located in. They were either ritual, agricultural, and administrative centres, or houses and storage rooms. Ritual structures and burial chambers of nobles were constructed of sculpted, sometimes gigantic stone blocks, whereas the houses of commoners were built of rustic stones, in a simple fashion. Wari architecture was able to construct earthquake-proof walls. From bottom to top the walls narrowed. Great blocks were put on the outer wall and small stones were used to fill the inner gap, providing flexibility and also enabling it to move. Today parts of the walls are visible at the archeological monument. Some of them functioned as epimural roads, connecting parts of cities, stretching along the walls.

The beginning and demise of *Tiahuanaco* is, to this day, shrouded in mystery. The civilization that bears the same name is Wari's contemporary, though some scholars date it earlier. It covers 5 sq km, at approximately 4000 m above sea level. It had a population of an estimated 30-40.000 inhabitants, 115.000 together with the outskirts (Cedric, 2009). Sculpted stone blocks – sometimes gigantic stones weighing between 10 and 40 metric tons - were held together by ternary architectural cramps. In terms of precise stone-cutting, Tiahuanaco stonemasonry has accomplished a higher standard than the Incas'. Monoliths made of red sandstone, temples, and palaces can be found here, similar to the large statues of the Easter islands, and the static pharaoh statues in Egypt. Such an example is Gateway of the Sun (*Inti Punku, Puerta del Sol*), carved from a single 2,5 m × 3,5 m granite blocks, richly embroidered with reliefs, that was probably used for astronomic purposes (Photo 1). As for temples, the city has a step pyramid (*Acapana*), covered originally with andesite, that is aligned perfectly with the cardinal directions. Other temples were the temple *Kalasaya* ("Standing Stones"), the semi sunken *Templete Semisubterráneo*, and the temples *Putuni* and *Kheri Kala* (Fig. 1). The Puma Gate (*Puma Punku*) must have opened onto the city's port. According to certain theories, the level of Lake Titicaca used to be higher and its

surface area larger (Cedric, 2009). The ruin city was recognized as a World Heritage Site by UNESCO in 2000.



**Photo 1. Gateway of the Sun (Inti Punku, Puerta del Sol), Tiahuanacu, Bolivia**  
(Source: Crystalinks, 2010)



**Fig. 1. Tiahuanaco's ceremonial center**  
(Source: Wendell C. Bennett's drawing, in Cedric L., 2009)

*Chan-Chan* is the world largest mud-brick settlement that covers an area of 20 sq km and a dense urban center of 6 sq km. It was the capital of Chimú and it is estimated that around 50-60,000 inhabitants lived in the city. The excavated citadel, the so-called *Tschudi (Nik-An)* Complex indicates that the city was divided into sectors, and that the walls of residences were ornamented with carvings. It also had several reservoirs, and a carefully laid out road network. However, adobe brick, of which the city was constructed, is not durable. Although clay is the ideal building material under dry climate, the occasional heavy rainfall and the salty air from the sea have eroded the ruins over the centuries.

Moreover, preservation of exhibitions and excavated areas requires really expensive technical procedures. Therefore, only a fragment of *Chan-Chan* has been excavated even up to now, archeologists know of 11 complexes altogether. Nevertheless, it is obvious that the sophisticated drainage system transported the sometimes periodical mountain rivers of the Andes to the city and the surrounding lands. The ritual center standing on the northern part of the city was the step pyramid, known today as *Huaca Obispo*. The palaces contain U-shaped rooms (*audiencias*), store rooms, and wells. The frieze-like reliefs of precise working depict stylized seabirds, fishes, and sea waves (Photo 2). *Chan-Chan* was justly admitted to the UNESCO World Heritage Site in 1986.



**Photo 2: Tschudi-palace's reliefs, Chan-Chan, Peru**  
(Photo by Gáti Hajnalka, 2001)

### 3. INCA CITIES

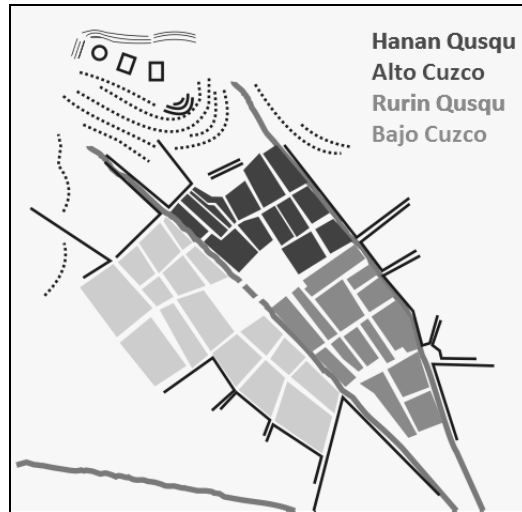
The Inca, the ruling dynasty were presumably descendants of the Aymara nobility who settled in the Cusco-basin around the 12-13<sup>th</sup> centuries and seized

control of the local barbarian tribe, the Quechua. Concerning their origin and the foundation of cities, many legends survive: for example, *The Ayar brothers*, *Manco Capac*, and *Mama Ocllo*. These stories were used partly to justify the provenance of a posterior theocratic country's ruling class. Inca established their well-organized empire in Cusco and from there, their armies set to conquer. Starting with *Manco Capac* to *Huascar*, altogether 12 succeeding rulers are recorded in the chronicles. The ill-fated *Atahualpa* is not regarded a real Inca by the codices. In Peru and Bolivia he is not even considered as a ruler, though he is recognized as such, in Ecuador. Society comprised various noble classes (*panacas*, *orejones*), priests, privileged groups like clerks, soldiers, messengers (*chasqui*), and the commoners. Their economy was based on terraced farming and irrigation (potato, root crops, and coca), livestock raising (lamas), and pottery (textiles, ceramic, gold work, etc.). The official language was Quechua, the religion was polytheist. Their pantheon comprised the Sun, the Moon, the Evening Star, the elements, local deities. They added *Viracocha* divinity to the pantheon, a divinity of Tiahuanaco. The Inca was considered as the son of the Sun. They excelled in mathematics, astronomy – the legacy of Paracas and Nasca cultures - and medicine (brain surgery, mummification). In the field of arts, other accomplishments include drama, music, and gold work (adopted from the Chimú) (Wittman, 1987).

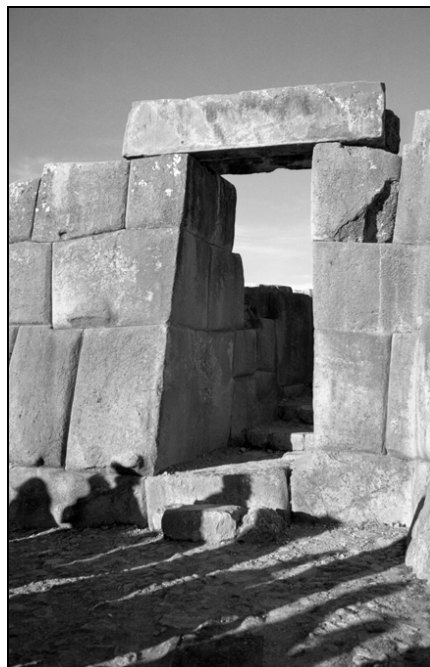
The four main routes set from *Cusco*, they were the axis of a carefully laid out road system. During the colonial era, Inca roads were used for mail service, and today trails are visited by many tourists. The roads divided the city into an upper and a lower part and into 4 further districts with 3 sectors (*Collana*, *Payan*, *Cayao*), respectively. The reason for the Inca city-planning was to form a coherent unit with nature, and also to mirror the social hierarchy. Therefore, the upper part of the city was occupied by the king and the upper classes, whereas the lower part was inhabited by commoners. According to Bartolomé de las Casas, the famous priest and chronicler (Porrás Barrenechea, 2008), the *Pachacutec Inca* mandated that the descendants of the first five Inca should get the lower, and those of the last five the upper part. Garcilaso de la Vega also accounts that the lower classes moved into the outskirts of Cusco, settling in quarters that corresponded to their native territories (*suyu*). This way the layout of the city reflected the setup of the empire (Fig. 2). The leaders of conquered peoples also had their own residences in the city center where they were required to spend about 4 months yearly. The most important structures of the town, several characteristics of which are similar to those of Wari, were located in the central plaza: the temple of the Sun and the Moon were adjacent to the residences of the priests, the virgins of the sun, and that of the king. The city was planned in the shape of a crouching puma. Its head was represented by three megalithic walls built in zigzags, the *Sacsayhuamán*. Some consider it a stronghold guarding over Cusco from the heavens, while others claim it to be a ceremonial centre (Photo 3).

Found in 1543, it lies at an altitude of 3400 m above sea level. At the time of the Inca rule, it had a population of 125.000 people that together with the outskirts

of the city could reach 225-300.000. The structures of Cusco had one level, built of diorite and andesite stone blocks.

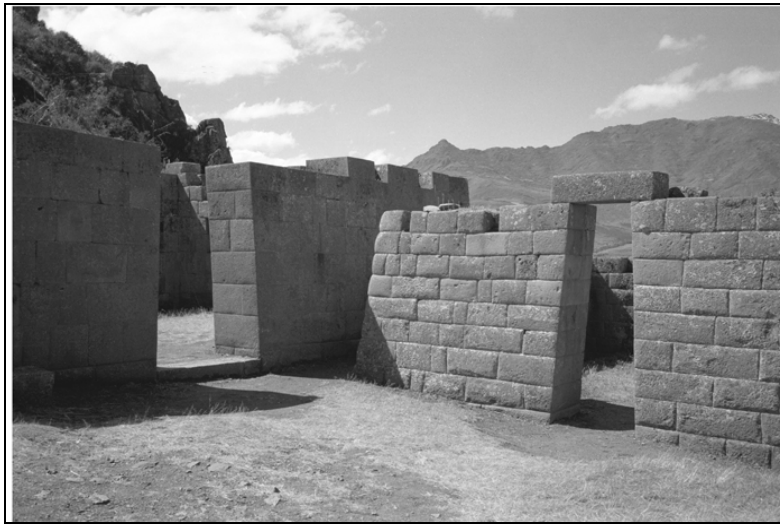


**Fig. 2. Inca-city Cusco's map with the four main routes; above, Upper Cusco called Hanan Cusco (dark colour), right below, medium colour Lower Cusco called Hurin Cusco** (*Source: Wikipedia, 2010*)



**Photo 3. Megalithic walls; Sacsayhuamán, Cusco, Peru**  
(*Photo by Gátai Hajnalka, 2001*)

Stones were fit together without mortar. If the use of mortar was necessary, they used a mixture of clay and *ichu*, and Andean herb that was used to cover roofs. The Temple of the Sun (*Korichanca*) must be mentioned here as the most magnificent example of Inca architecture (Photo 4) that even now is a tourist attraction. The layout of the temple is both rectangular and semicircular arch. The trapezoidal walls are built in imperial style, meaning that the stones used were rectangular shaped blocks of equal size. The temple comprises a central court and niches (*aposentos*).

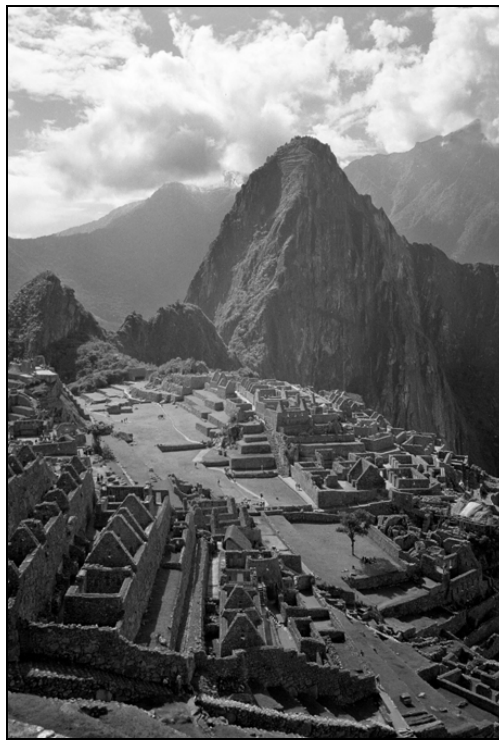


**Photo 4. Temples built in imperial style in Peru, ancient city of Pisac**  
(Photo by Gátaí Hajnalka, 2001)

The ruins of *Macchu Picchu* provide information on Inca city planning and typology. The settlement is located near Cusco 2700 m above sea level. It is situated on the eastern slopes of the Andes, on a narrow spike, its area is located on more than 40 ha but its population may have amounted to 1000-1500. By the arrival of the Spaniards, the city has been depopulated and forgotten. Due to its fate, it is still extant and in a remarkable state of preservation. It was discovered in 1911 by the American archaeologist Hiram Bingham. Due to its destiny, it is the best preserved Inca city. On the basis of its layout, the precise engineering work excels; this was typical of every similar settlement of the empire (Photo 5). The palace of the Inca was located in the central plaza, the temple of the Sun abutted on the Sacred District (“sacred plaza”), the “Sun-tier” (*Intihuatana*), and several baths and fountains. Further on, there were houses, workshops, barracks, and storehouses.

The residence of the Chosen Women was situated in another corner of the square. These women were called the Virgins of the Sun (*Acclawasi*). They were the Inca’s mistresses, the female servants – and that of the temple as well. Depending on their function, houses were constructed either of polished blocks of

stone or rustic blocks, and had stilted gable roof made of ichu. Deep precipices provide natural defences from 3 sides and *Huayna Picchu* guards the city towering above it behind. The hillsides outside the city walls have been terraced and the harvest provided the population. Water was transported from higher standing regions through a narrow aqueduct to the city's granite baths, fountains, and to the lands beside the Temple of the Sun. On the southern side a wall was erected, and the gateway to the city was located on the highest peak. Fissures in the city and in its surroundings most probably served as burial sites (Bray – Swanson – Farrington). The city was recognized as part of the UNESCO World Heritage Site in 1983.



**Photo 5. Machu Picchu with Huayna Picchu in the background**  
(Photo by Gátaí Hajnalka, 2001)

In the valley of *Urubamba* (“the sacred valley of the Inca”) the same layout can be observed in *Ollyantaytambo* (*tambo* was a small town located in the country that served administrative and military purposes) and in other settlements, especially in central regions. By approaching the peripheries, this typology can be perceived less and less (e.g. in *Ingapirka* Ecuador, county Azuay) (Photo 6). Where natural building materials called for different construction, the *tambos* were built in *chimú* fashion, using adobe brick fortified with ichu and alpakka wool (f.e. *Pachacamac* in Peru, near Lima).



**Photo 6. Ingapirca, Ecuador** (Photo by Gáti Hajnalka, 2001)

#### 4. SPANISH CITIES

The Spanish, arriving in Tawantinsuyu, were quick to reorganize and reconstruct the conquered areas. They left their mark upon the still standing Inca cities, but founded a city of their own in 1535, three years after their landing. Later, *Lima* became the capital of the province and that of Peru in 1821. Today this metropolis, together with its conurbations, has a population of more than 8 million.

The city was built on the two banks of the *Rimac* river; it originally had 22 streets and scarcely hundred houses. It was not until 75 years later that the bridge (*Puente de Piedra*) connecting the settlements was built. At the beginning of the 17<sup>th</sup> century, the city had a population of 16,000 people that increased to about 100,000 by the mid-19<sup>th</sup> century due to the flood of immigrants. The city has been expanding vigorously ever since, with 1 million of inhabitants in the mid-20<sup>th</sup> century, due to the intensive immigration. Today it is divided into 43 districts.

Spanish colonial cities are characterized by a chessboard layout that centres around the *plaza*, the main square. The plaza is referred to as *Plaza Mayor*, the main square, whereas in Latin-America, it is called *Plaza de Armas*, the square of weapons. The following style became general in the 16-17<sup>th</sup> century Spain. Spanish rulers decreed this perspicuous town-planning based upon geometric style, by following the traditions of town centre grouped around medieval, religious and administrative buildings as well as of renaissance and market-town models. Such examples include *Puerto Real* in Cadiz, Andalusia, *Santa Fé* in Granada, or *Jaén* in Mancha Real. Lima resembles mostly to *Sevilla*. The cathedral is located on the eastern side of the plaza next to the Archbishop's Palace and the Municipal Palace (*cabildo, municipio*), though the latter can stand on the opposite side as in the case

of Lima. Other public-civic buildings like law courts, the government palace (such as the Government Palace of Lima), and churches (the Jesuit *Compañía de Jesús* in Cusco) were situated on the main plaza as well. With its gigantic extent – it covers 20,000 sq m - the Plaza Mayor symbolizes one of the most significant metropolises of 16-17<sup>th</sup> century America, the capital of the largest Spanish viceroyalty (Trazegnies Granda). The plaza – and the city itself – has northwest-southeast aspect. This way the sun shines on the houses' façade in daytime and the unpleasant southern winds are held up by the buildings. The “City of the Kings” (as it was referred to) was the blend of Spanish provincial styles, at times combined with local, pre-Inca, and Inca features. (We must bear in mind that from the beginning, the population was multiethnic). Churches and palaces were mainly constructed in baroque style. Ecclesiastical architecture is sometimes marked by extravagant ornamentation (colonial or *churrigueresco* baroque, for example the church of *La Merced*). Palaces and houses in the city center on the other hand, could have rural Spanish or French features (*Palacio Torre Tagle*, *Casa Goyenche*). Also a recurring motif is the intricate bay window projecting outward from the façade. The continent's oldest bullfighting ring (*Acho*) was built in Lima in the 18<sup>th</sup> century, along with several parks. Lima was also called “city of gardens” in the colonial era. The Historic Center of Lima was declared a World Heritage Site by UNESCO in 1991 (Photo 7 and 8).



**Photo 7. Characteristic colonial palace called Casa del Oidor in Lima**

(Source: Wikipedia, 2010)

When it came to occupied cities, the Spanish acted on the same principle. They closed streets or opened new ones if it was necessary. Buildings were

destroyed only to be replaced by new, Spanish structures. Such an example is the Temple of the Sun in Cusco, or the rebuilt church of *Santo Domingo* following its partial demolition.



**Photo 8. San Francisco baroque church, Lima**  
(Source: Wikipedia, 2010)

Sometimes they only altered the function of certain buildings. Modifications served ideological, as well as strategic purposes. Their goal was not only to reconstruct cities in Spanish style, but also to fragment the indigenous population, and to impede practicing their religion. Dwelling places did not require major changes, since Inca and Spanish style resembled in their main aspects: one entrance from the street, inner spheres divided by courts, etc. However, cityscape was significantly altered in Cusco by dividing the central plaza (today they are the *Plaza de Armas* and the *Plaza Regocijo*). Indigenous districts have survived on the peripheries, and sustained only minor changes (*Santa Ana*, *Santiago*, *Belén*, *San Cristóbal*, *San Blas*, *San Pedro*). Harvesting stones of conquered or abandoned settlements to build churches, cities or palaces was customary. The Spanish used the stone blocks of Tiahuanaco to build La Paz in Bolivia, and those of Chan-Chan to construct Trujillo. Along with Macchu Picchu, the Historic Center of Cusco was recognized as a World Heritage Site in 1983.

After interventions of the early period, no major constructions, investments, or changes were made in highland (formerly Inca) cities. The nobility of the

colonial era, then later, the upper middle class, preferred seaside settlements to Cusco. Cusco fell into decline, even though it was considered the most populous city on the continent until the end of the 18<sup>th</sup> century. The Bolivian *Potosí*, on the other hand, became popular and opulent on account of its seemingly inexhaustible silver mines.

Lima, on the other hand, continued progressing dynamically. Latin-America's first railroad was built between the capital and the port of *Callao*. Gas-light and telegraph were also installed. Meanwhile the social gap between districts has begun to widen, luxurious districts and slums developed. Following the early 20<sup>th</sup> century population boom, the clearance of slums, in almost complete shortage of public works and public security, was initiated at the beginning of the third millennium. Electricity has been installed in the past few decades and tap water is drinkable in more and more areas. Large-scale constructions are carried out to assist the development of new (and large) districts as *Villa El Salvador* or *San Juan de Lurigancho*. There are several problems that need to be solved: reorganization of the city's infrastructure, the chaotic state of public transport (Lima, which counts more than 8 million inhabitants, has no underground at all), and general environmental issues, including air pollution and waste disposal (Municipalidad De Lima, 2005). The harbor of Callao has developed to be an independent city by today.

## 5. MINING TOWNS AND PORTS IN THE 16-18<sup>TH</sup> CENTURY

Following the Spanish conquest and colonization, the newly organised viceroalties, gradually became the new centers of the industrial revolution and the economic boom from subdued areas which were considered with European eyes as territories suffering laggings behind. Thus, they created such mining towns like the Bolivian *Potosí*, as well as industrial and commercial centers like the queen of Amazonia, the Iquitos of Peru or the port-town of Guayaquil in Ecuador.

Legend has it that the Silver Ore of *Potosí*, the *Sumaj Orcko* or *Cerro Rico* ("Rich Mountain") revealed its treasure to Inca *Huayna Capac*. When his vassals arrived to extract the silver, the mountain said: "Do not take silver from this hill, because it does not belong to you, it is destined for other masters". Another legend holds that a poor Native, named Diego Huallpa found ore in 1545 when the fire he lit melt silver out of the stone. Within 25 years, the city that is located in the middle of the Altiplano, 4,067 m above sea level, had a population of 50,000 inhabitants and earned the title "Villa Imperial" ("Imperial City") from Charles V. (Bolivianet, 2008). The city's layout is similar to others, founded by the Spanish (chessboard plan, rectangular plaza, baroque palaces etc.), except *Casa Real de la Moneda* (Royal mint house). Despite its harsh climate and secluded location, precious metal mining and the flourishing industry - money for the Philippines was coined here - transformed *Potosí*. By 1630, it expanded into a metropolis with a population of 160,000 which at that time equalled the size of London or Paris. Around 1650 the silver started to dry up and the city fell into decline. A hundred years later, extraction boosted the city's economy until the outbreak of the War of

Independence in the 19<sup>th</sup> century. The city has sustained 200 years of hardship, including outbreaks of war and the economic recession. Today Potosí covers 120,000 sq km and has approximately 165,000 inhabitants. The historic centre of the third city in the world respecting its height above sea level was recognized as a World Heritage Site by UNESCO in 1987 (Photo 9).



**Photo 9. Oldtown of Potosí with the Silver Ore in the background**  
(Photo by Gáti Hajnalka, 2001)

The founding of *Iquitos* city dates back to 1757. Until the arrival of the Spanish, this region that is surrounded by the Amazon and its headwaters, was inhabited by Amazonian tribes (*iquitos*, *napeanos*, *yameos*). From the mid-17<sup>th</sup> century, aborigines were relocated by Jesuits into groups (*reducciones*). In order to homogenize the aborigines, the location of these camps was frequently changed. In 1860, the “city” had a population of only 300 persons. Once its strategic importance was discovered (it lies between *Nanay* and *Amazonas*), a port was built. Twenty years later, at the time of the rubber boom, local and European immigrants flooded the city. The abandoned little village started to flourish: several churches and public buildings were constructed, electricity was installed and the local railway line was laid down. Expansion continued with the discovery of oil deposits.

Today *Iquitos* is the “capital” of Peruvian Amazon, with an increasing population that already exceeds 400,000 persons. An International Airport, several universities, and a port can be found on the area of 5000 sq km that city covers. Land connection through the Andes to the coast, and the capital does not exist, though a railway line is intended to connect these areas (Photo 10).



**Photo 10. Main square of Iquitos** (Source: *Expatify*, 2010)

Founded in 1534, Ecuador’s most populous city and biggest port, *Guayaquil* was named after a local chief. It is located at the mouth of the *Guayas*, where the rivers *Guayas* and *Babayoho* cross. With its population exceeding 3 million, it is one of the largest cities along the Pacific coast in South America. Being larger and more populous than the capital, *Quito*, *Guayaquil* covers 334,5 sq km, 8.1% (approximately 28 sq km) of which is the surface of rivers. Since 1547, it served as a Spanish port by which point/time shipbuilding had begun. *Guayaquil* was the first city to declare independence from Spain in 1820. Today, the economic capital of Ecuador is referred to as the “Pearl of the Pacific”. Out of the 1000 most important Ecuadorian companies, 39% have their quarters in *Guayaquil*. The historical center is not built in pure colonial style, but reflects the continuous progress both in its style and its layout. Over the recent decades, public transport, utilities, and the cityscape have been improved, demonstrating *Guayaquil*’s economic strength.

## 6. LIFE IN THE RURAL ZONES

Villages played an important role in the Inca economy, since cultivation took place here.

The village community (*ayllu*) formed the basis of the Inca social system. Being an agricultural society, the cohesive force of clans of families was

cooperative work on the land that they shared. The houses were in the property of the residents. They were given units of one-third of the lands surrounding the villages to cultivate. Farmlands were irrigated and – depending on the area – fertilized with guano or warp. The remaining two-thirds belonged to the Sun (priests) and to the Inca and were cultivated in a given order by the community. The carefully laid out road system enabled the transport of crops, silver, and gold even from the furthest corners of the empire to Cusco. Roads were complemented with rope bridges, spanning chasms and canyons, and *tambos* (administrative buildings or stations along the road) that provided rest and relay for the messengers.

Village communities changed during the colonial era. The Spanish virtually distributed the land and the indigenous people among themselves. *Repartineto* was granted to them by King Ferdinand in 1513 based on medieval Castilian customs. Elimination of common lands (*resguardo*) undermined the socio-economic base of Inca society during the colonial and republican era. Real estates – *encomiendas*, then *haciendas* were established. Population decline was the result of Spanish exploitation (many of them had to work in mine areas in the time of the industrial booming), others were devastated by unknown diseases (such as the flu) in the course of time, and the rest gradually impoverished. In hope that the city would resolve their problem, they moved to urban areas and the villages fell into decline.

Urbanization on the coast took place in the second half of the 20<sup>th</sup> century, though urbanization of rural areas fell behind during this time. To this day predominantly indigenous settlements, lived by indians in almost 100%, exist in Peru, Bolivia, and Ecuador (mainly in the Andes and the Amazonas) that have little contact with the outside world. Public utilities are not installed, education is not available, and telecommunication is not organized. On the other hand, major centers are surrounded by conurbations. Statistics show that every third Peruvian resides in Lima, and every fourth or fifth Bolivian and Ecuadorian lives in La Paz and Guayaquil, respectively.

## 7. CONCLUSIONS

The one-time Inca empire and its precursors were established under extremely diverse geographic and climatic conditions. Sophisticated cities like Wari, Tiawanaco, Chan Chan, or later, Cusco served as the country's religious and administrative centres. The remnants show how advanced Inca engineering and architecture was, building cities with populations of hundreds and thousands. Machu Picchu is a classic and clearly prevailing example of Inca city architecture. The prevailing tendency of urbanization in the colonial era was to reconstruct and reorganize these cities, and also to found new ones, like Lima. The Spanish style of city planning, the colonial baroque became prevalent. Generally speaking, the location of large centres shifted from the mountains to the coast in the course of time. The desolation of the rural zone that had a significant socio-economic role during the Inca rule occurred simultaneously with urbanization, even following the

establishment of independent states. Nowadays, the majority of Andean population lives in cities – mostly in the capital and its conurbations – and in larger mining and industrial centres, or seaports. Therefore, difficulties arising from the size of metropolises present a serious problem to be solved.

## REFERENCES

### *Printed sources:*

- ANDERLE Á. (1981), *Vihar a Sierrában – indián függetlenségi mozgalmak a XVI-XVIII. Században*, Kossuth, Budapest, pp. 290;  
 BRAY W. M., SWANSON E. H., FARRINGTON, I. S., *Az újvilág, A múlt születése*, Helikon, Budapest, pp. 154;  
 GARCILASO DE LA VEGA INCA (1964), *Inkák és konkisztaórok (Comentarios reales – La conquista del Perú – Historia de la Florida)*, Gondolat, Budapest, pp. 371;  
 MORELL V. (2007), *Harcos birodalmak az Andokban*, National Geographic, May, pp. 52-75;  
 WITTMAN T. (1987), *Latin-Amerika története*, Gondolat, Budapest, pp. 484.

### *Electronic sources:*

- PORRAS BARRENECHEA, R. (2002-2008, UNMSM): *El Cusco de los Inkas* (online) [http://sisbib.unmsm.edu.pe/Bibvirtual/Libros/linguistica/legado\\_quechua/el\\_cuzco.html](http://sisbib.unmsm.edu.pe/Bibvirtual/Libros/linguistica/legado_quechua/el_cuzco.html) [last download: 2010. 02. 23.];  
 TRAZEGNIES GRANDA, L. DE (Biblioteca Virtual de Literatura, s.a.): *Fundadores de ciudades* (online) [www.trazegnies.arrakis.es/Sevillalima/pizarro6.html](http://www.trazegnies.arrakis.es/Sevillalima/pizarro6.html) [last download: 2010. 02. 23.];  
 CEDRIC L. (2009): *Tiahuanacu the mysterious city* (online) [www.atlantisquest.com/prehistcity.html](http://www.atlantisquest.com/prehistcity.html) [last download: 2010. 02. 23.];  
 MUNICIPALIDAD DE LIMA (2005): *Plan maestro de transporte urbano para el área metropolitana de Lima y Callao en la República del Perú (Fase 1) – 9. Problemas y temas actuales del transporte urbano.* (online), <http://www.gtu.munlima.gob.pe/documentos/Lima-Callao/capitulo09.pdf> [last download: 2010. 02. 23.];  
 PORTALINCA (2008): *El Estado Inka* (offline) [www.portalinca.com](http://www.portalinca.com) [last download: 2008. 06. 02.];  
 INCA NATURA TRAVEL (2010): *Chan Chan* (online) <http://www.inkanatura.com/coastchiclayotrujillochanchan.asp> [last download: 2010. 02. 23.];  
 CRYSTALINKS (2010): *Tiwanaku* (online) [www.crystalinks.com/tiahuanaco.html](http://www.crystalinks.com/tiahuanaco.html) [last download: 2010. 02. 23.];  
 WIKIPEDIA (2010): *Cuzco* (online) <http://es.wikipedia.org/wiki/Cuzco> [last download: 2010. 02. 23.];  
 IDEM: *Cuzco prehispánico* (online) [http://es.wikipedia.org/wiki/Cuzco\\_prehispanico](http://es.wikipedia.org/wiki/Cuzco_prehispanico) [last download: 2010. 02. 23.];  
 IDEM: *Centro histórico de Lima* (online) [http://es.wikipedia.org/wiki/Centro\\_hist%C3%B3rico\\_de\\_Lima](http://es.wikipedia.org/wiki/Centro_hist%C3%B3rico_de_Lima) [last download: 2010. 02. 23.];  
 IDEM: *Huari* (online) [http://es.wikipedia.org/wiki/Cultura\\_Huari](http://es.wikipedia.org/wiki/Cultura_Huari) [last download: 2010. 02. 23.];  
 IDEM: *Lima* (online) <http://es.wikipedia.org/wiki/Lima> [last download: 2010. 02. 23.];  
 IDEM: *Machu Picchu* (online) [http://hu.wikipedia.org/wiki/Machu\\_Picchu](http://hu.wikipedia.org/wiki/Machu_Picchu) [last download: 2010.02. 23.];

IDEM: *Iquitos* (online), <http://es.wikipedia.org/wiki/Iquitos> [last download: 2010. 02. 28.];

IDEM: *Potosí* (online), <http://es.wikipedia.org/wiki/Potos%C3%AD> [last download: 2010. 02. 28.];

IDEM: *Guayaquil* (online), <http://es.wikipedia.org/wiki/Guayaquil> [last download: 2010. 02. 28.]

BOLIVIANET (2008): *Historia de Potosí* (online), <http://www.bolivia.com/Turismo/ciudades/potosi/historia.htm> [last download: 2010. 02. 28.]

EXPATIFY (2010): *Monday Escape: Iquitos, Peru* (online), <http://www.expatify.com/peru/monday-escape-iquitos-peru.html> [last download: 2010. 03. 24.]