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Plan, Form and Function of a "Fortified" Site in the Iranian Sistan of Post-Achaemenid and possibly Parthian Period

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Abstract

As it is well known, the tradition of studies on the post-Achaemenid, Seleucid, Parthian and Sasanian periods in general, and on the Iranian Plateau in particular, has always maintained that in that period the urbanization processes of the territory were given a great boost. This was true for both the large quantity of information given by the Alexandrian and post-Alexandrian sources on the subject, and the archaeological evidence which, albeit in a sometimes-contradictory way, would show the characteristics of a major and large urban occupation of the territory with respect to the previous times. Proper cities (very rare and most of them out of the Iranian plateau!), urban layouts, settlements, fortifications, castles, regional walls etc. have always been tenaciously sought and identified (sometimes difficultly) on the ground! However, remains of urban occupation in clear and reliable archaeological contexts have very rarely been completely recognized in the Iranian plateau. One of the cases that we want to bring to the attention here is the one of Qalʿa-ye Sam, already identified in the middle of the last century, and approached by the activities of the Italian Archaeological Mission in Sistan (Iran) between 1959 and 1961 under the direction of Umberto Scerrato. The Italian archaeologist led some surveys and excavation tests on the site, which some foreign scholars called "Qalʿa", an Arabic-Persian term meaning "fortification". In this case, Qalʿa-ye Sam (the fortress, or the castle of Sam, whose name derives from the homonymous prince, ancestor of Rostam of the Sistanic cycle of the Šāhnāme in the Ferdousi saga) is the toponymic solution, often used locally, as it happens many times in other cases in the popular ancient toponomastics of Iran[1]. In the general picture of the urbanization processes during the Parthian time in the Iranian Plateau and Central Asia, the author tries to outline a series of possible plans, forms and functional comparisons in the archaeological evidence, first with an overview of the most important settlements and cities of Hellenistic and Parthian times, known also thanks to the sources, and then by outlining other less known remains which have been documented only recently through the archeological data and topographical investigations.

Keywords: Archaeology, Post-Achaemenid time, Sistan, Qal'a-ye Sam.

Article Type: Research Article

Introduction

Approximately 33 km south of Zabul, and about 20 km west of Dahāne-ye Gholāmān (Genito ed. 2021), in 1960 Umberto Scerrato identified a sizeable "fortified" settlement, named Qalʿe-ye Sam, which he visited on the first survey in Sistan. The state of the ruins, the absence of the

[1]A better known case is certainly that of Persepolis, in the Iranian region of Fārs, which, in modern Persian, is indicated with the name of Takht-e Jamšid, that is "Jamšid's throne" from the name of the homonymous mythical ruler belonging to the dynasty of the Kayanids of the Ferdousi saga as well.

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typical and generally widespread Islamic pottery, and the presence of minute fragments of a painted pottery with vaguely "prehistoric" flavor, clearly indicated that the site was pre-Islamic. Strangely, although the site had been reported by Tate in 1903–1905 (1910–1912), it had been noticed later neither by Stein nor Herzfeld. The site shows an irregular polygonal plan with five sides: the west side is approx. 274 m; the south one, which is perpendicular to the first, is approx. 420 m; the east one is slightly oblique towards west, and it is approx. 243 m; another east side, which is even more oblique towards east, is approx. 140 m; finally, the north side is approx. 198 m (Figure. 1a, 1b). The exploration of Qalʿe-ye Sam, together with the one planned at Tepe Shahristan (Figure. 2)[1] , allowed to try to fix a chronology for the archaeological remains of historical Sistan, especially as regards the period spanning from the post-Achaemenid-Seleucid era to the Saka-Parthian one. To ascertain the archaeological consistency and the potentiality of the deposit, in 1964 two stratigraphic trial-trenches named X and Y and an accurate survey were carried out[2] .

Qalʿe-ye Sam is a quadrangular shaped site with rounded corners, founded on a low elevation from the alluvial ground, depending on the path of an ancient artificial canal still in use. The walls rest on a not completely flat plane, which oscillates between 480 and 490 m a.s.l.; the highest part is concentrated south of the site. The whole set of the architectural structure is slightly raised on the external level, but overall, it appears as a mighty raw platform on which the walls surrounding the inner space stand out, in turn, an area of over ten hectares (Figure. 3). The other sides were protected by a large moat.

The few excavation data provided by Umberto Scerrato in various but sparse publications (Scerrato 1970) show that the structural ensemble has the characteristics of a ruined site with high walls and a mighty entrance portal protected by two towers, located on the east side, which has something probably monumental (Figure. 4). The walls, strengthened by semicircular towers arranged at a distance of an archery (30-35 m), had two main constructional phases: in the first one, two leaning curtains in *pisè* with semicircular towers displaying a shoe-profile were erected and connected to the defensive wall by a short straight section; in the second one, the walls were covered outside with a thick shell of *pisè* in the lower part, and one of raw bricks in the upper part. With these works the towers turned out to be perfectly semicircular (Figure. 5). A road crossed the inhabited area with an east-west direction. By observing the traces of the outcropping structures, highlighted by the quarrymen of fertile earth, the saline efflorescence, and the excavations, it can be noticed that the buildings follow at least two different orientations according to the constructional phases to which they belong (Figure. 6).



A B

Figure. 1: *A: General plan of Qal'a-ye Sam, (After: Missione Archeologica Italiana, Dep. Cs. 1930, by Tullio Tamagnini)*
B : Qal'a-ye Sam, (After: Google Earth 2021)

[1] Recently, the site has drawn the attention of Iranian archaeologists, especially as far as topographic and geophysical investigation is concering (Mohammadkhani, Mehrafarin 2021).

[2] A first summary survey carried out in 1961 was published together with some good views by Giorgio Gullini (1964, Figures. 231-235), who dates the citadel to the "first Parthian period".



Figure. 2 : *Tepe Sharestan, (After : Google Earth 2021)*

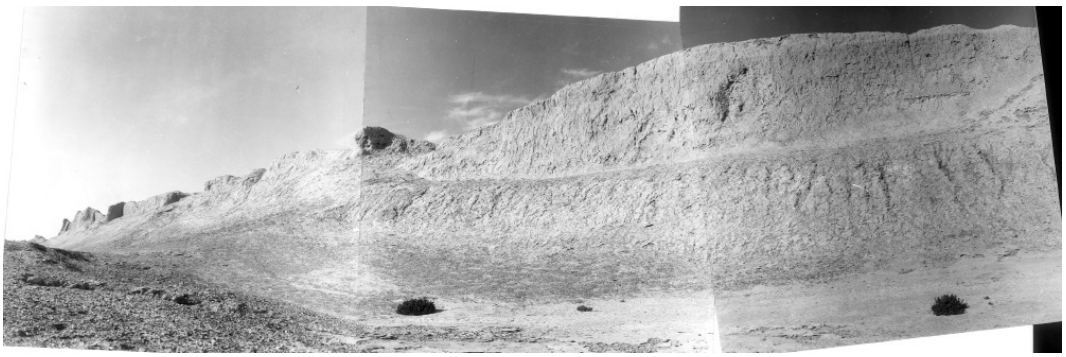


Figure. 3 : *Qal'a-ye Sam massive walls from outside,*
(After: Missione Archeologica Italiana, Dep. Cs. Neg. FB259_3-5,by Umberto Scerrato)



Figure. 4 *: Qal'a-ye Sam, mighty entrance portal,*
(After: Missione Archeologica Italiana, Dep. Cs. Neg. FB265_1-3, by Umberto Scerrato)



Figure. 5*: Qal'a-ye Sam, the towers,*
(After: Missione Archeologica Italiana, Dep. Cs. Neg. FB249-3-4, by Umberto Scerrato)



Figure. 6 : *Qal'a-ye Sam, a road crossed the inhabited area with an east-west trend,*
(After: Missione Archeologica Italiana, Dep. Cs. Neg. by Umberto Scerrato)

According to Scerrato, the excavation ascertained three life periods divided into many sub-phases. The construction of the most recent phase l, which seems to refer to the late Parthian Sasanian period, shows walls 1.10 m thick, oriented north south. The structures of the phase 2, with walls about 35-40 cm thick, probably datable to the early Parthian period, have a markedly north/north-west south/south-east trend. A third, older period has hardly been glimpsed.

The finds of pottery fragments were particularly relevant. The forms referable with certainty to the phase 2 are interesting: they are linked on the one hand to those of the Hellenistic period of western Asia, and on the other to those which were subsequently found at Aï Khanum in Bactria (on the border between Afghanistan and Tadžikistan along the Panj River). Among the peculiar pottery of Qalʿe-ye Sam, Scerrato emphasizes particularly the presence of painted pottery, whose decoration with geometric and "naturalistic" motifs such as water leaves etc., is done in wine-red, in dark or diluted brown and in ocher colours, and it is rarely two-tone. Scerrato proposed to name this class of pottery *Dipinta Storica Sistana*, to distinguish it from the pre and protohistoric ones, with which it is often and undoubtedly familiar. This pottery especially abounds in phase 2 and it is very similar to that of the Kuh-e Khwagha layer VI. Scerrato also pointed out some fragments of lined pottery engraved with some Greek letters and, above all, an *ostrakon* with an inscription in italic Greek, probably containing a list of objects, to which G. Pugliese Carratelli suggests assigning a date not earlier than the middle of the 3rd century BCE (1966, 34-53, Figure. 6-10; Sherwin-White, Kuhrt 1993, 80) (Figure. 7).



Figure. 7: *Qal'a-ye Sam, ostrakon with an inscription in Greek italics containing in all probability a list of objects,*
(After: MAI, Dep. Cs. Neg.QS226-FB248-4, by Umberto Scerrato)

The chronology of the site proposed above by Umberto Scerrato based on the results of the excavation tests and the pottery collected, goes back to the Parthian period. A decisive element in Scerrato's chronology was the presence of such painted ceramic and a well-polished red-colored fine-paste ceramic, although scarce. The documented forms, highlighted very briefly by Scerrato – some of which have been published (Maresca 2016) – are traditionally the most documented, and they're specifically of the Parthian period. More recently, some Iranian archaeologists have dealt with the pottery production of the Parthian period in Sistan as well, and relative publications are looked forward (Rustaei 2021).

Rather than concentrating on the meager material culture – among which the documentation of ceramic[1] is not the only one – it is appropriate to provide here some general reflections on the plan of Qalʿa-ye Sam and the possible terms of comparison, which are similar in type and time. This can help to understand the function of these macroscopic architectural structures, none of which (strictly speaking) constitute "cities", nor show they a marked military and/or defensive character. To do this, it takes examining in depth some typological and morphological characteristics of the urban layouts, documented by the archaeological evidence both in the Iranian territory and in the distant Central Asia of the post-Achaemenid period. First, I will make an overview of the plan of the most important settlements and cities in Hellenistic and Parthian times (which the sources made known) (de Planhol 1992); then I will outline other unexcavated remains, which are less known and have been documented only recently throughout archaeological and topographical investigation in Afghanistan and in southern Turkmenistan, the original heartland of the political Parthian power.



Figures. 8 : *Qal'a-ye Sam, a carnelian-colored glass ring, (After: Missione Archeologica Italiana, Dep. Cs. Neg. 4289-5, by Umberto Scerrato)*



Figure. 9: *a conical seal, (After: Missione Archeologica Italiana, Dep. Cs. Neg. QS213-FB187-1, QS213-Neg4291-3, by Umberto Scerrato)*



Figure. 10 : *a fragmentary comb, (After: Missione Archeologica Italiana, Dep. Cs. Neg. QS214-FB247-3, by Umberto Scerrato)*

[1] Amongst other items, here are some objects worth mentioning: a carnelian-colored glass ring, with the setting decorated with a bust seen from the front. The bust wears a hat divided in the centre by a double band of pearls, a large round rim with two "deltas" on the sides and a sort of pendants with globular endings, a stylized drapery on the chest (Figure. 8); a conical seal with suspension hole, bearing a series of signs, probably letters, with a series of dots in dark clay (Figure. 9); a fragmentary comb with a diamond-shaped section, with teeth only below and the thickest point of its attachment marked by two horizontal grooves, repeated on the two faces but not on the same plane (Figure. 10); a fragmentary standing female figurine, headless wearing, with a long dress that goes down to the feet, covering them, with a bell shape, tight at the waist, decorated on the front by a chevron extending from the chest to the waist, adorned with a horizontal stripe pattern. Her breasts are very pronounced, the arms were probably stretched out horizontally. She wore a necklace around the neck, small fixing holes of which remain. The hair fell over the shoulders and the breasts, gathered in two large braids. Probably, the figurine is a representation of the goddess of fertility, in red clay with slip (Figure. 11).



Figure. 11: *a fragmentary standing figurine, (Ater: Missione Archeologica Italiana, Dep. Cs. Neg. QS227-FB216-1, by Umberto Scerrato)*

Urban Phenomena and Defense Systems of the Settlements in Post-Achaemenid Times

Several scholars have contributed to the research on the Seleucid, Parthian, and Sasanian periods, dealing with the urban evolution in the so-called Hellenized Orient (Schumberger 1969), in the Alexandrine period (Bernard 1995), in the later Medieval period (Belenickij, Bentovič 1973), in the more precise definition of the Parthian architecture (Keall 1986) or in the more detailed description of the archaeology in the Parthian and Sasanian period (Schippmann 2011; Stronach 2011).

Within this general debate on the main aspects of the urban evolution, a main role has been played by the study and analysis of the so-called fortification processes and particularly of the origin, the affirmation, and the real functions that this kind of settlements concretely had.

It is important, preliminarily, to clarify that the distinction between the fortified cities and fortresses can not be based on a purely dimensional criterion, as it usually happens; as it is very well known, there are fortified cities much smaller in size than certain military camps (Gros 1992; Leriche 2002). It is rather the type of internal occupation that characterizes their functions: while a fortified area has an inhabited district, a road network, and specific functions (administrative, commercial) among which the military one can not miss, the fortress is entirely meant for this purpose. Some cities, founded in the Hellenistic period, were born with a dominant military function to control a territory and defend a border, or to create a bridgehead in enemy territory. Once this function ceased, at times the city disappeared as well, because it was inadequate to cope with the reality of economic life or even with everyday life, or because it was surrounded by an environment that was too hostile, due to the presence of a border or a war. On the other hand, it is frequent that after one or two centuries military settlements developed and became (or were transformed) into real cities yet keeping their military function. The fortification techniques of all these settlements responded, basically, to the same principles, except for the city walls, often marked by specific characteristics, which reflected the image that the city had of itself or that it wanted to project outside. However, the information we have is still partial: it comes mainly from northern Bactria and Sogdiana (Semenov 1988; 1989), one of the best investigated archaeological areas. For a general, more recent, and up to date analysis on the Hellenistic period in the Iranian plateau, different scholars have given their own contributions as well (Callieri 2007; Genito 2012).

After the conquest of Alexander the Great, the Seleucids and, after them, the Parthian kings and their vassals, chose their own residences, very few of which have been concretelly identified. Nevertheless, the Greek influence, stronger elsewhere, such as at Aï Khanum in Afghanistan (3rd century BCE) (Leriche 1986) or at Nisa Parthica in south-Turkmenistan (2nd-1st century BCE), has also left traces in the Iranian plateau in the columns with corinthian capitals at Istakhr, north of Persepolis, or ionic at Khurha (Kleiss 1981; 1985; Hakemi 1990), in the districts of Mahallat 73 km southwest of Qom (Markazi region), already interpreted by Herzfeld as a temple of Dionysus from the Seleucid period. Archaeological investigations have shown that elements for a dating prior to the Parthian era and for its interpretation as a temple are missing.

The raw brick architecture at Shahr-i Qumis, north-east Iran, denounces typically “oriental” characteristics in the plans and in the construction techniques of the buildings (Hansmann 1968; Hansmann, Stronach, Bailey 1970; Hansmann, Stronach 1970; Hansmann, Stronach 1974). The structures found there, identified with the second important Arsacid capital, Hekatompylos, do not have a palatial character and the interpretation

of the three "cruciform buildings" unearthed is problematic as well. A cultic function was proposed for it, at least in the first phase of the site, based only on the discovery of a brazier in one of the three buildings. There is no archaeological evidence of what would become the definite capital of the Arsacids, Ctesiphon.

Likewise, today there is no documentation on the building excavated in the 1930s on the *tepe* of Chashma-i Ali in Rayy, near Teheran, dated between the 1st century BCE and the 1st century CE based on the coins found in a well, pointed by the American excavators as a place of worship. An important architectural complex is that of Kuh-i Khwagha, in Sistan (Gullini 1964; Kawami 1987; Ghanimati 2000; 2001). It includes a sacred building located next to a probable palace. In the central sector, on an elevated level compared to the courtyard in front, there is a čahār tāq (typical architectural core of "fire temples" of the Sasanian era), surrounded by a corridor, with a stairway leading to two ramps parallel to the *façade,* opposite and converging in the centre: the presence of an altar in the čahār tāq confirms the templar function. Probably linked to the Sistanic family of the Suren, Kuh-i Khwagha is rich of evidence of mural painting and stucco decoration, which seems to date back to the late-Parthian period, although still active in the Sasanian age, and which has a sector interpreted by some as a palace in addition to the fire temple.

The 3rd century CE, with the Sasanian dynasty, marks profound changes in techniques and forms of the architecture, but it also shows a reference to the Achaemenid era. Starting from the end of the 1st millennium BCE, the use of fired brick had become more massive and diversified: at the end of the Parthian era, it could have been used as the only material for the entire construction at Qalʿa-ye Yazdgird (Kurdistan) (Keall 1982), where the structures of a fortified palace from the late-Parthian period stand out for their rich stucco decoration; it was also used at Qal'a-ye Zohak (eastern Azerbaijan) (Kleiss 1973), where a palace complex has been identified enclosed by a fortified wall with a rectangular plan, dated to the 1st century CE.

If Alexander the Great's policy tended to favor continuity with the Achaemenids, the creation of Greek colonies in Asia, which multiplied under the Seleucids, ends up profoundly influencing the civil architecture of Iran and Central Asia. In addition to the spread of the typical buildings of the social life of the Greek poleis in these eastern regions, a real Seleucid colonial architecture is established, linked to the new social and political situation. Aï Khanum (3rd–mid 2nd century BCE) develops in a vast triangular area and the citadel was in the highest part (south-east) of the acropolis; the lower city, with an approximately rectangular plan and bounded on the south-east side by the main street, finds its most prominent element in the imposing square construction of the "palace", flanked by other important public buildings (treasury, arsenal, gymnasium), religious and commemorative. The honorary building, typical of the Mediterranean world, finds precious evidence in the heroon of Kineas, one of the founders of the city, and in the other mausoleum built within the walls in the shape of a small Greek temple. If the literary sources attest to the spread of Greek dramaturgy in Asia during the Iranian dynasty of the Arsacids, the only theatres found in the region are from the Hellenistic period. In addition to the alleged theatre of Susa, those of Seleucia (Invernizzi 1990; 1991; 1994; Messina 2010, 118-122; Messina 2012) and Babylon (Koldwey 1913, 295, 296; Mallwitz, Schmidt, Wetzel 1957, 3, tav.2; Potts 2011), built according to Hellenistic parameters by exploiting the slope of the acropolis, and the one of Aï Khanum, are archaeologically documented. At Aï Khanum there is the most interesting evidence of a theatre (Bernard 1976, 314-322, Figure. 19-21; *idem* 1978, 429-441, Figure. 5), and a typical library typical of the Hellenistic culture is attested. It consists of an area inside the palace treasury, meant for the conservation of literary texts on papyrus or parchment. Habitations have been unearthed in different areas of the city and in the suburban area. The military and administrative authorities, however, resided in the center of the city, in buildings without any defensive structures, unlike the urban settlements of later periods, where the citadel was probably the place of residence of power, well separated from the rest of the population and open to the latter only in case of attacks by external enemies. The arsenal, a large building with warehouses around a central courtyard, was located on the main street, at the base of the citadel; the palace of the rulers, the Greco-Bactrians who had the main centre of eastern Bactria, is located not far from the main north-south street of the city, and it is characterized by an architecture inspired by

Iranian and Babylonian traditions for construction techniques and floor plans. The building presents large courtyards and several blocks of rooms with different functions.

Probably, archaeology has not measured the actual extent of the Hellenistic impact on the evolution of the Central Asian city yet; it is certain, however, that in the following centuries, especially during the Kushans (1st–3rd century CE), and also in those areas that were probably not dominated by this dynasty, urbanism reached umatched levels in the entire history of Central Asia, both for the number and for the size of the urban centres (Litvinskji 1983; 1994; 1996). The city of this period, usually with a rectangular or approximately square plan, consists of three essential components: the ark (the citadel, which often develops from a Hellenistic settlement), the šahristān (the lower city) and the rabad (the suburb). The citadel, surrounded by walls, often occupies one of the corners as in Dalverdžin Tepe in Uzbekistan (4,43 ha. ca) (Figure. 12a), located nearby Ak-Tumshuk, Shamal, and Tolli (Hori, Ishida, Tsumura 1997, 140)[1] , or hardly ever the centre like at Dilberdžin, in Afghanistan (17.39 ha ca.) (Figure. 13) not far from Balkh (Kruglikova 1974; 1977; Kruglikova, Pugačenkova 1977)[2] . Žar Tepe (16 ha) (Figure.14) (Sabirov 1958; Ščetenko 1974; Zav'jalov 1994), in Bactria, in southrern Uzbekistan and not far from Sherobad, revealed an accurate plan crossed by a central street about 10 m wide; a palace building stood in its centre, in front of which there as a residential area divided into large blocks (600-800 m² each), and a citadel in an angular position.

The archaeological data on urban planning of the Arsacid period are relatively limited, and generally fragmentary. To date, the most consistent results are probably those achieved in the dynasty's homeland, Parthia, located beyond the current northeastern borders of Iran.

The expansion of the Arsacids marks the end of the Hellenistic "colonial" parenthesis and its architectural traditions and the resumption of the traditional role of the Iranian aristocracy, although according to a new "fashion" inspired by the West. For the early Parthian era, the main archaeological evidence concerns one of the first sites of the Arsacid dynasty, the fortified centre of Nisa (2nd century BCE) in southern Turkmenistan. However, the buildings unearthed there so far suggest a religious, representative, or even celebratory and funerary function, rather than a residential one. A palatial citadel with a trapezoidal plan of 650 × 500 m (Old Nisa) (13.14 ha ca.) (2nd century BCE) (Masson 1949; Pugačenova 1949, 201-259; Pilipko 1996; 2001; Invernizzi 1996a; 1996b; 1998; Invernizzi Koshelenko 1990; Lippolis 2003a; 2003b) and the real city (New Nisa) (16 ha ca.) (Figure. 15) are present[3] . Both were defended by a wall of unfired bricks which, judging by the citadel (the only excavated one), was close to the Hellenistic model: curtains without a gallery with a sloping façade, erected on a plinth in pisé mixed with stones 8,5 m thick, and circular towers at intervals of 15 m (twice the distance of the city walls). According to Soviet scholars, the peculiar plan of some buildings in Old Nisa (the so-called Square Hall, Round Temple, and Tower Temple), as well as the one of the buildings near the walls of New Nisa, seemed a valid basis for an interpretation in a cultic key. Its plan is divided in the above mentioned three elements, that will be typical of Central Asian town planning: the citadel (4 ha) in an elevated position, the lower city, and the suburban area; each of these sectors was defended by a wall. The site has not been sufficiently investigated to clarify its topography, however an internal subdivision into neighborhoods inhabited by different social groups is supposed. In the north-east part, the cemetery of the Arsacid aristocracy was found too. The only building containing references to palatine structures is the so-called Square Hall, in which elongated rooms, whose warehouse function is confirmed by the numerous seals found among other things, are

[1]The site was important also for craft neighborhoods (workshops to produce ceramics and wine) like Termez (Figure. 12b) and Zar Tepe, equipped with quadrangular fortifications, while Kampyr Tepe had adopted a curved boundary wall (Figure. 12c). Key Kobad Shah (D'iakonov, M.M. 1953; Mandel'štam, Pevzner 1958) in Tadzhikistan is also considered as one of the towns of Hellenistic foundation.

[2]Dilberdžin transformed the ancient Greek wall into the inner wall of the new gallery fortifications.

[3]Farther west, about 1 km from Old Nisa, there stood the real city, conventionally called New Nisa: a settlement built on the plain and protected by high raw walls. The latter is still very little known today as its most ancient phases (contemporary to those of Old Nisa, or even more ancient) lie buried under consistent levels of the Islamic era. However, it is rightful to think that New Nisa housed noble residences and public buildings, while a good part of the population (devoted to agriculture and livestock) lived in the plain that stretched between the two hills.



A



B



C

Figure. 12 *A : Dalverdžin Tepe, Uzbekistan, (After: Google Earth 2021)*
B: Thermez, Uzbekistan, (After: Google Earth 2021)
C: Kampyr Tepe, Uzbekistan, (After: Google Earth 2021)

arranged parallel to the perimetral sides of a square courtyard, according to an architectural scheme similar to previous Central Asian constructions. Valuable artifacts such as the rhytà used for ceremonial libations and an archive of ostraca about the existence of vineyards dedicated to deceased Arsacid kings, were found in the Square Hall, and interpreted as evidence of "dynastic cults", a term which has often been misused.

There is no agreement on the interpretation of the complex excavated at Mansur Depe (2nd century BCE–3rd century CE) (Figure. 16) (Gubaev, Koželenko 1970; Koželenko, Lelekov 1972; Koshelenko, Lapshin, Novikov 1989), near Nisa, which in the so-called North-Western Temple presents a square room with four wooden columns, open to the south on a portico and isolated from the outside by a corridor, similar to the temple of Bard-i Nishanda and to the later temples of Penjikent in Sogdiana.



Figure. 13 : *Dilberdžin, Afghanistan, (After: Google Earth 2021)*



Figure. 14 : *Žar Tepe, Uzbekistan, (After: Google Earth 2021)*



Figure. 15 : *New Nisa (up), Old Nisa (below), Turkmenistan (After:Google Erath 2021)*



Figure. 16 : *Mansour Tepe, Turkmenistan, (After: Google Earth 2021)*

In the same region, due to the regularity of the system, there is a settlement near Gök Depe (4.7 ha) (Figure. 17). It presents walls with an almost square plan (400 m on each side), oriented according to the cardinal points, with access to the centre of the south side; an internal area, divided into four sectors by two major streets crossed at right angles; a complex of buildings with probable administrative function on the south-west corner; a suburban area enclosed by a further quadrangular wall.



Figure. 17 : *Gok Tepe, Turkmenistan, (After: Google Earth 2021)*

The regularity of the road layout and the distribution of the various functional complexes is particularly noteworthy in Toprak Kala (2nd–3rd century CE) (more than 16 ha), in Chorasmia, if considering its eccentricity with respect to the areas touched by Hellenism (Nerasik, Lapirov-Skoblo, Trudnovskaja, Vajnberg 1981). A central artery divides the city longitudinally into two parts of equal size, each of which consists of five rectangular blocks, defined by a network of secondary streets; on the north-west corner there is the most imposing and articulated palace complex of pre-Islamic Central Asia. The city has a regular rectangular layout, equipped with a citadel in the corner and a main barbican gate. The numerous quadrangular towers, strongly projecting, are leaning against a

wall with two superimposed galleries, of which only the upper one was equipped with slits (Figure. 18).



Figure. 18 : *Toprak Kala, Uzbekistan,(After: Google Earth 2021)*

In Margiana, in Erk Kala (Usmanova 1963), an 11-m-high tower, with sloping walls and a small shooting platform on the top, leant against the walls. The external façade had an inclination from 65° to 70° and was decorated with two rows of false triangular slits; on its south side it is linked to Gyaur Kala (ancient Alexandria and then Antiochia in Margiana), with a quarter of the millers and a quarter of metallurgists (Figure. 19) (360 ha ca.) (Herrmann, Masson, Kurbansakhatov 1992; Herrmann, Kurbansakhatov 1993; Herrmann, Kurbansakhatov 1999; Herrmann, Kurbansakhatov 2000; Williams, Kurbansakhatov 2002; Williams, Kurbansakhatov 2003).



Figure. 19: *Gyaur Kala, Erk Kala, Turkmenistan, (After: Google Earh 2021)*

In Bactria, after the expulsion of the Greeks by nomadic tribes, a multiplication of agglomerations of variable size can be observed; they could be villages, small towns, shelters for the surrounding population, or "capitals" of local potentates. Despite its symbolic character, the great dynastic sanctuary of Surkh Kotal (10 ha ca.) (Schlumberger 1963) is representative of the defensive concepts of the time, with its irregularly designed walls and quadrangular hollow towers, wider than deep (Figure. 20).



Figure. 20: *Surkh Khotal, Afghanistan, (After: Google Earth 2021)*

A large city in the shape of a parallelogram (of at least 100 ha) is Qala-ye Zal, in Kunduz province, Afghanistan, to the south of the Oxus, wi-th a citadel in the north-west corner; the site has not been excavated yet, but its massive walls with square towers seem to encompass both the city and the suburbs (Figure. 21).



Figure. 21 : *Qal'a-ye Zal, Afghanistan, (After: Google Earth 2021)*

In Iran, Greek urbanization mainly affected Susiana and Media. The exact location of Alexandria of Carmania, likely to be in southwestern Iran, has not been established yet; Seleucia on the Eulaios may corresponds to ancient Susa; not even Seleucia on Edifonte, in Susiana, has been identified yet; Laodicea of Media, founded by Antiochus I, is covered by the modern Nihavand.

In Alexandria of Arachosia (Kandahar, Afghanistan) (Vogelsang 1981), the Greeks settled within the walls of the pre-existing city; the same is believed to have occurred in Alexandria in the Caucasus (Begram)[1] (Tarn 1966, 460-462) north-west of Kabul. Last Alexandria (later Antiochia of Scythia)[2] was founded to protect the northeastern border from the nomad invasions.

The New Archaeological Evidence

The fragmentary nature of the archaeological data available from the Arsacid era (3rd century BCE–3rd century CE) made the contribution of that dynasty to the history of the urbanization in Iran difficult to evaluate. Except for the Mesopotamian area which, together with the cities of Hatra, Assur and Seleucia on the Tigris, constituted the fulcrum of the political power, the areas in which urban settlements of the Parthian era have been identified and (more rarely) investigated are the region of origin of the dynasty, Parthia, the one south-east of the Caspian Sea, Kurdistan (Qal'aye Yazdgird), Kangavar Valley and Sistan (Qal'a-ye Sam).

In the eastern regions of the Hellenized Asia, after the fall of the Greco-Bactrian kingdom (c. 150 BCE) a new vigorous urban development, fueled by the growing importance of craftsmanship and international trade, was recorded with the Kushans (1st century BCE/CE–3rd century CE).

In order to broaden our perspective, we are going to try to document any possible other comparisons with Qalʿa-ye Sam in some very historically interesting regional areas: western Afghanistan, which is very close to the Iranian Sistan, and southern Turkmenistan, which was the original heartland of the Parthian dynasty. Concerning Afghanistan, it is appropriate referring to the work variously presented by the Helmand-Sistan Project (1971–1979), as result of a cooperation between the Smithsonian Institution and the Afghan Directorate of Archaeology. The American scientific coordinator is W.B. Trousdale. The results remain largely unpublished, but the efforts have been recently inherited by Trousdale and M. Allen. Some identified and roughly mapped sites that can be mentioned are Qala-i Silak and Lat Tepe (Figure. 22), both located in the middle course of the Hilmand River. The first, not far from Malakhat village, is almost quadrangular in shape and of middle size (2,30 ha); the second is almost quadrangular, and smaller (1,33 ha). Their plan characteristics find a decise parallel with settlements in their irregular and poligonal shape surrounded by massive walls, with a citadel and low area inside, as described above.

As far as southern Turkmenistan is concerned, the documentation at disposal is certainly wider and better known, even if very little published as well. In any case, being part of the joint Italian, Turkmen, Soviet and Russian project entitled *The Archaeological Map of the Murghab Delta,* directed by Prof. M. Tosi, A. Gubaev, and G. Koshelenko (Gubaev, Koshelenko, Tosi 1998) in southern Turkmenistan from 1989 to 2001, I have inhereited much of the data collected in the field work.[3] In the frame of that joint project, the Soviet and Russian teams have dealt with the historical part of the archaeological map (Bader, Gaibov, Koshelenko 1992; 1993/94; 1994; Gaibov 2018a; 2018b; 2019).

In this article, of the almost three hundred identified and mapped sites from Parthian, Parthian/Sasanian, and Sasanian times, ten sites were selected and brought to the attention; some of them are located south of site no 603 Gyaur Kala / site no 602 Erk Kala, while others are in the north. As it can be noticed, the sites here considered were never excavated: they were detected only based on topographical investigation and surface collection of materials. Therefore, their chronological dating to the Parthian time has been generally attributed only according to the material collected

[1]Begram/Kapisa was descripted by the Chinese traveler Xuan Zang (603–664 CE), a Buddhist pilgrim who visited the area much later, but before the rise of Islam everything changed. He saw the city well built by the Macedonians (3 km long) and mentioned that the country produced all kinds of fruit, wheat, and other cereals. Xuan Zang also mentions the high, snow-covered mountain.

[2]Antiochia, in Scythia, was an ancient city on the Jaxartes (now the Syr Darya river). The precise location is unknown, but Khanka (Chach) in Uzbekistan and the Ferghana Valley have been suggested as possible locations, as well as Khojend (northern Tadžikistan). The Jaxartes river marked the ancient border between Sogdiana and Scythia. In Seleucid times, Antiochia in Scythia and Alexandria Eschate (also on the Jaxartes) constituted the last frontier of the Hellenistic world (Pliny, Natural History, Book VI, ch. 18). It appears at the eastern end of the Tabula Peutingeriana map.

[3]For this, I thank Dr. Barbara Cerasetti and Prof. Maurizio Cattani very much, for delivering me the topographic data of the Parthian and Sasanian times, elaborated by me, with the purpose of making the planned comparisons with Sistan.



Figure. 22: *Silak and Lat Tepe, Afghanistan, (After: Google Earh 2021)*

on the surface and to architectural preliminary considerations. The sites proposed here present different plans, forms and functions, and some of their characteristics are similar to those of Qalʿa-ye Sam. However, the aim of this comparison process is not to formulate improbable hypotheses of chronological or typological correspondences between such very distant areas, but rather only to broaden the territorial perspective and to suggest comparisons that could be very fruitful when it comes to the effective archaeological verification of the sites considered.

The first site taken into account (rigorously in order of size) is no 938 (no name) (61.8 ha ca.) according to the numbers of the database organized; it is located in the south part of the inner delta, more or less quadrangular in shape. In the catalogue's description the site is defined as a town (Figure. 23). The second site, no 527, named Kirk Tepe (8.05 ha) is located north-west of site no 603 Gyaur Kala / site no 602 Erk Kala, at ca. 16 km of distance. Its form is very similar to that of Gyaur Kala/Erk Kala, but rather smaller (8.5 ha ca.) and the citadel is located in the middle of the north side, as in Gyaur Kala/Erk Kala. In the catalogue's description the site is defined as square tepe (Figure. 24). The third site is no 559, named Big Dew Qala (7.7 ha), located again north-west of Gyaur/Kala-Erk Kala, at 8 km of distance; its shape, quite similar to Kirk Tepe, is more rectangular and oriented from east to west, with the citadel on the west side; in the centre, there is also another big irregular elevation. In the catalogue's description, the site is defined Kala (Figure. 25). The fourth site is no 297, named Kelteminara depe (7,7 ha ca.), located south-west of the inner delta. The shape is similar to that of Kirk tepe, with the citadel on the north-east corner, and slightly protruding out of the main rectangle. In the catalogue's description, the site is defined as tepe (Figure. 26). The fifth site is no 528, named Chilburj (5.27 ha), at 2.2 km south-west of Kirk Tepe. The shape is quadrangular and similar to that of Kirk Tepe, but with the citadel in the centre. In the catalogue's description, the site is defined as tepe 1 (Figure. 27). The following site is no 537, named Durnali 4 (4.39 ha), whose region has been investigated by Russian colleagues (Bader, Gaibov, Koshelenko 1994); the site is located at 26.8 km to the north-west of GyaurKala/Erk Kala, and it is quadrangular in shape (Figure. 28). In the catalogue's description, the site is defined as Kala. Next site is no 305, named Džin Tepe (2.91 ha), located at 15.6 km north-west of Kirk Tepe. The form is quadrangular and presents the inner citadel along the north side. In the catalogue's description, the site is defined as Kala (Figure. 29). The following site is no 577, named Kara Jurme (3.05 ha). It is constituted by an unusual plan with two contiguous parts: the north one, which is rectangular in shape, is approximately 104 m × 136 m; the south one is circular in shape, with a diameter of about 125 m. In the catalogue's description, the site is defined as ark (Figure. 30). Next site is no 879 (2.79 ha). The shape is rectangular and in the catalogue's description it is defined as tepe. Last site is no 906, named Kujrukli-Depe (2.74 ha). The plan is almost quadrangular and in the catalogue's description it is defined as tepe (Figure. 31).



Figure. 23: *Site 938 © Archaeological Map of the Murghab delta, Università di Bologna, ISMEO, Università "L'Orientale", Napoli*



Figure. 26: *Site no 297, named Kelteminara depe, © Archaeological Map of the Murghab delta, Università di Bologna, ISMEO, Università "L'Orientale", Napoli*



Figure. 24 : *Site no 527, named Kirk Tepe, © Archaeological Map of the Murghab delta, Università di Bologna, ISMEO, Università "L'Orientale", Napoli*



Figure. 27: *Site no 528, named Chilburj, © Archaeological Map of the Murghab delta, Università di Bologna, ISMEO, Università "L'Orientale", Napoli*



Figure. 25: *Site no 559, named Big Dew Qala,© Archaeological Map of the Murghab delta, Università di Bologna, ISMEO, Università "L'Orientale", Napoli*



Figure. 28: *Site no 537, named Durnali 4, © Archaeological Map of the Murghab delta, Università di Bologna, ISMEO, Università "L'Orientale", Napoli*



Figure. 29: *Site no 305, named Džin Tepe © Archaeological Map of the Murghab delta, Università di Bologna, ISMEO, Università "L'Orientale", Napoli*



Figure. 30 : *Site no 577, named Kara Jurme, © Archaeological Map of the Murghab delta, Università di Bologna, ISMEO, Università "L'Orientale", Napoli*



Figure. 31: *Site no 906, named Kujrukli-Depe, © Archaeological Map of the Murghab delta, Università di Bologna, ISMEO, Università "L'Orientale", Napoli*

Conclusions

It turns out that all the sites mentioned, starting from the historical ones of the two Nisa (Figure. 15), have rather irregular perimeter features; however, some fixed points can be ascribed to certain canonized plan typologies. The topographical relationship between the sites and their upper part, or citadel, are harmonised depending both on territorial and geomorphological surrounding contexts. It is then precisely Gyaur Kala, with its citadel Erk Kala (it is still not clear how much previous or contemporary), that stands as a settlement model even for similar territorial entities, though smaller. The citadel becomes a model as well, despite its variable location: in fact, it could be along one of the short sides of the main quadrangular plan, either in the centre or in the corners, and it could protrude from the wall perimeter or not. Instead, the location of the citadel at the centre of the site is much rarer. There is also another type of settlement deriving from Nisa's models and, as in the case of Qal'a-ye Sam, its irregular five-sided polygonal perimeter is the most important example. Perhaps, the irregularity of these fortified settlements also hides the functional diversity of each part composing the architectural ensemble, and it heralds, or it is the consequence of the presence of the upper part, the citadel.

To sum up, it seems like there is not a real "urban" model during the Parthian time and in the respective territories; the urban areas, fortified sites, settlements and cities, probably answer to a certain territorial, rather than functional logic. The territory does influence the typology and the functionality around which the sites develop. The plains or the foothills, and even the mountains, contribute to determine the choices of building a castle, a fortified site or a simple "urban layout". Of course, there are aspects of a specific political situation which can not be omitted; nevertheless, they are often quite unreliable, since the historical sources are too ideologically oriented.

In conclusion, the descriptions proposed, as well as the efforts to make comparisons, are only a preliminary contribution to a more general historical question: the whys and hows according to which people decided or were obliged to occupy the territory, and the tendencies determined (or not) by a dynasty to create urban or settlement layouts based on pre-established models. However, these models have not always been concretely realized or

accomplished (Genito 2020a; 2020b), as abundantly proved by the history and the urban evolution in Central Asia and in the Iranian Plateau.

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