

## Petra: Brown University Excavations of the Great Temple.

### Questions about Functional Analysis

#### Introduction

In 1997, the Brown University excavations introduced the fascinating discovery of a theater-like structure located inside the Great Temple at Petra (Joukowsky 1998a: 596). FIG. 1 shows the *theatron* remains. Clear stratigraphic and artifactual evidence shows that this structure was constructed in the second phase of temple building, which we date to ca. AD 44. One of the main objectives is to reconstruct and interpret the changes within the temple architecture before and after the theater in the temple emerged, during its use, and its operation as a center of activity. A second major objective is to reconstruct how this structure might have been used during the Nabataean and Nabataean-Roman periods.

Interpreting this large public edifice is at the heart of the archaeological process. The Great Temple stands alone above a large colonnaded Lower Temenos among thousands of architectural fragments, including elephant-headed capitals (Joukowsky 1998b). The Temple itself is embellished with floral Nabataean capitals, and is also decorated with masks. If our structure is, in fact, a Great Temple, the theater is certainly its dominant architectural

element. On one hand, this structure is built as a temple, and on the other, it has a theater-like structure in place of the cella. It cannot have served as a sacred space, a religious building that was decommissioned and desacralized. It would not have been transformed into a civic structure; I have to assume that a shift in function would go against Nabataean religious tradition. Therefore, it must have served either as a religious or as a secular structure. And if it is a religious structure, why could it not have served as an instrument of religio-political propaganda? The kings of Nabataea certainly utilized religion to further their political ambitions.

We might briefly consider the problems of temple use from several points of view: First, the contexts of this well-preserved structure, unique to Petra and the Nabataean world should be investigated. Second, the Great Temple architecture should be examined. Thirdly, the inscriptions and artifacts indicate that this structure may have had official use during the Nabataean-Roman period, or after AD 106. What do they offer the archaeological record? Lastly, theater-temples and civic structures are considered as structural classes for we know of several models from the classical period. In the search for comparative buildings we have found that the architectural plan of our structure is unique not only to Jordan but to the entire ancient Near East.

#### The City of Petra

The power and glory of the Nabataeans found a tangible expression in Petra. The city is dependent upon its setting, not only because it offers safety and protection but it is set at the crossroads of the desert highway. Set in the mountainous Nubian sandstone valleys and cliffs, at 30°19'N by 35°20'E, Petra's elevation is 900 m a.s.l.; the city is approximately 1.5 km north-south by 400 m-1 km in east-west width. It is the chiseling out of hundreds of tombs and architectural and decorative embellishments set in the walls of Petra's canyons that lends it a monumental unity and a sense of romantic detachment from the rest of



1. The Great Temple theatron looking southwest. Photo by A. A. W. Joukowsky.

the world. We cannot be sure that an over-all layout was designed before construction began in the last quarter of the first century BC when the city suddenly made its presence known as a center of the Nabataean kingdom. Borrowing architectural stereotypes from the classical world, the rulers of Petra surely must have taken an active role in city planning, for they constructed their own royal palaces, tombs and public buildings, including the Colonnaded Street, market places, temples, a theater, a nymphaeum, hydraulic supply systems and baths. The building of Petra also enjoyed a political rationale; it gave voice to Nabataean authority, richness and power.

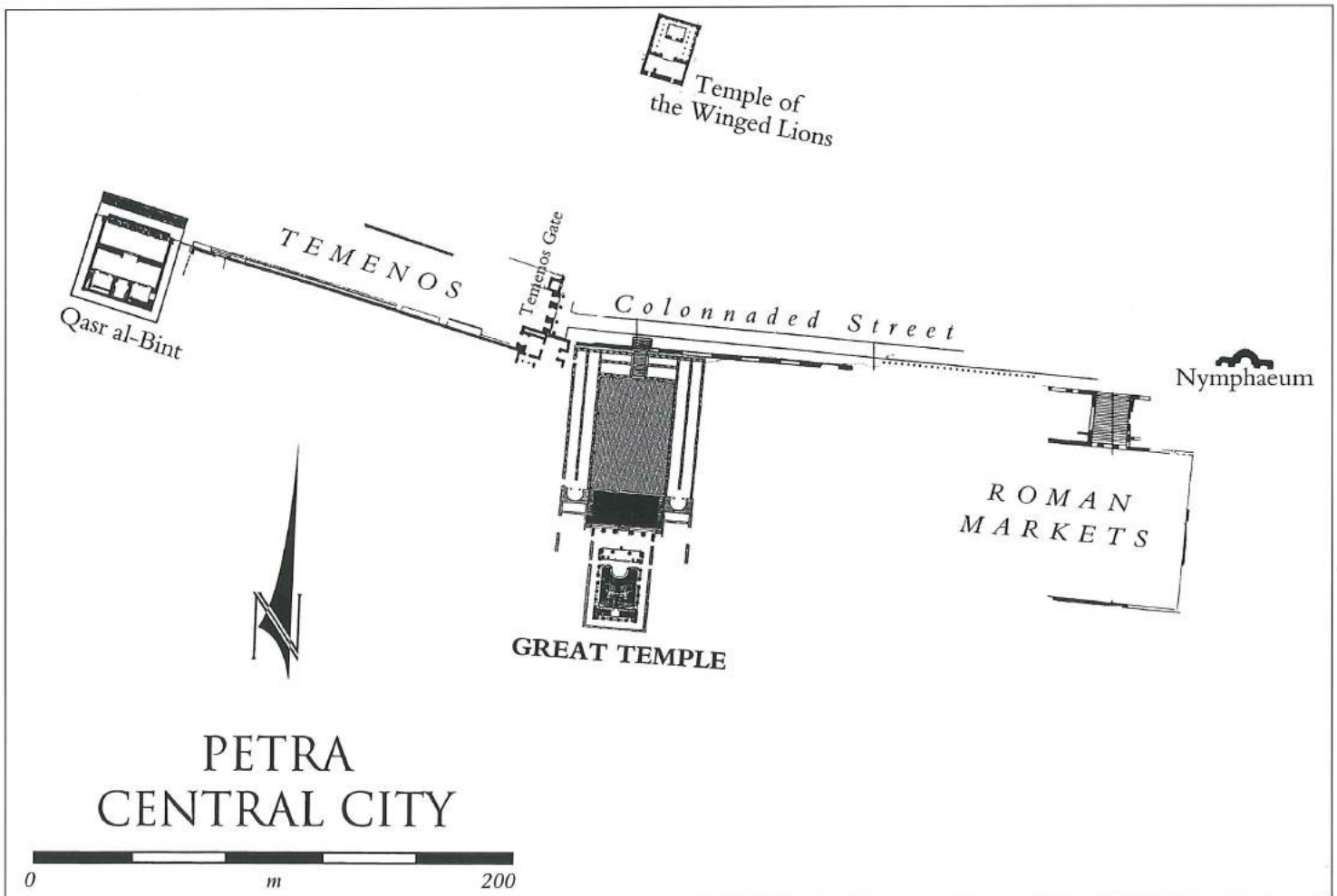
The orientation of the city is determined by the course of Wādī Mūsā, and the axes of buildings are built perpendicular to it. Carefully established in the central city are the axial relationships between the Colonnaded Street and the wadi, and the buildings lining each side of the street, including the Temenos Gate and other free-standing structures. This east-west street provides a visual unity to the site and dominates the flow of traffic into the central city (FIG. 2). Petra does have an innovative grid pattern with bridges spanning the Wādī Mūsā, serv-

ing as the connective tissue between the north and south sides of the city.

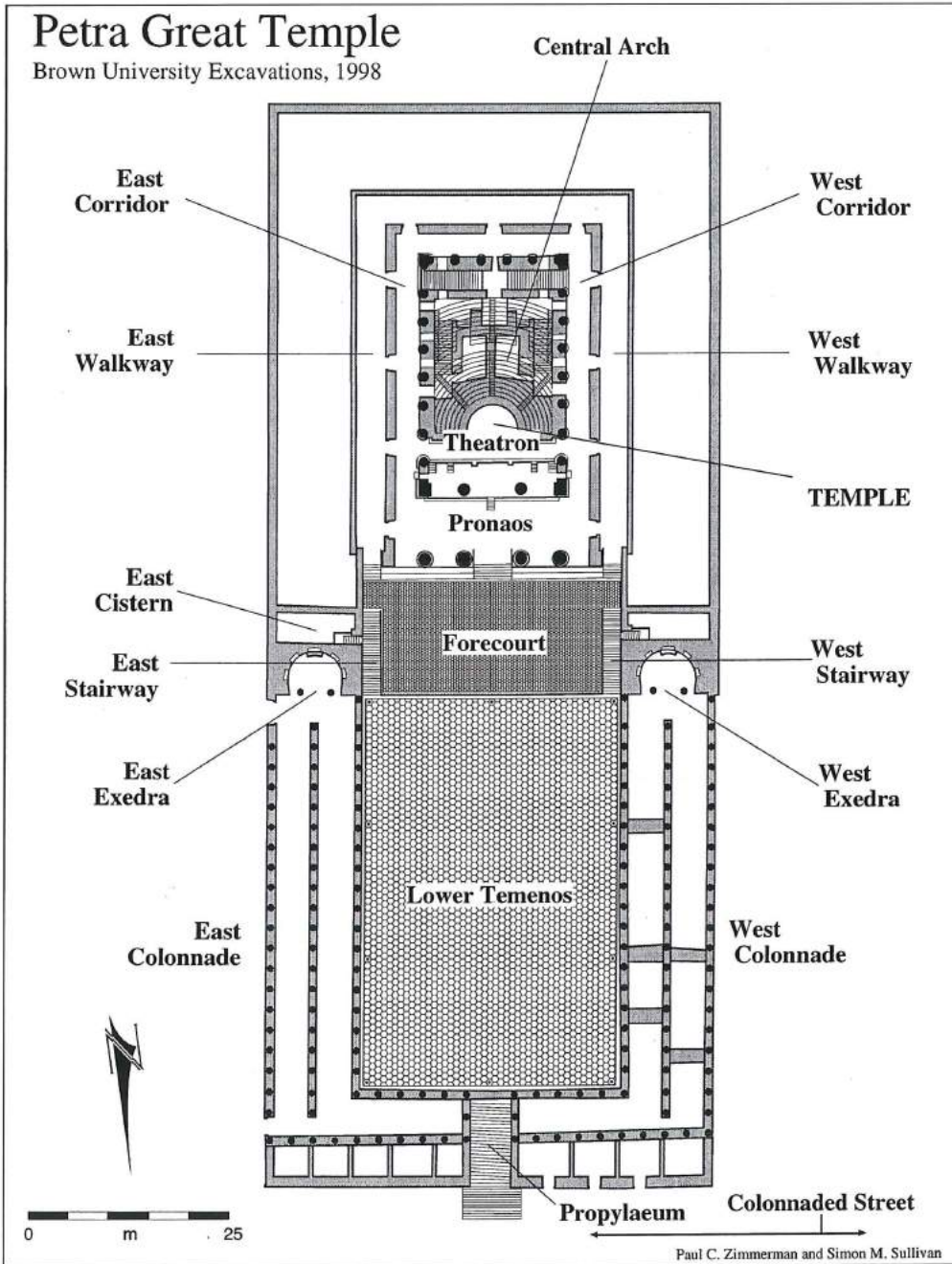
There is a measure of formal planning for the nuclear areas reserved for temples and other public buildings to work with the street system. There also had to be practical considerations for the topography, water systems, and for the drainage. The single free-standing buildings like the Temple of the Winged Lions and the Qaṣr al-Bint are symmetrical and balanced in plan and comprise independent entities set into large scale well-organized precincts with vast dimensions.

**The Great Temple**

The Great Temple (FIG. 3) represents one of the major archaeological and architectural components of central Petra. Located to the south of the Colonnaded Street and southeast of the Temenos Gate, the 7560 m<sup>2</sup> precinct is comprised of a Propylaeum (monumental entryway), a Lower Temenos with monumental east and west Stairways which in turn lead to the Upper Temenos — the enclosure for the Temple proper. Following that pattern, the site topography can be divided into three sectors: the Pro-



2. Petra Central City map. Drawing by Simon M. Sullivan.



3. 1998 plan of the Great Temple components. Drawings by Paul C. Zimmerman and Simon M. Sullivan.

pylaeum and the Lower Temenos which lie eight meters higher than the Colonnaded Street, and the Upper Temenos with the Temple, which stand another six meters above the Lower Temenos.

Oriented north-south, the 28x42.5 m Great Temple stands within its Temenos on the north edge of the al-Kātūta slope at 895 m a.s.l. Its northern border parallels the Colonnaded Street, its south, the ridge of al-Kātūta, and walls extend along its east perimeter delimiting it from the so-called 'Lower Market' and on the northwest

from the "baths." Its two great terraces overlook the Colonnaded Street and the Wādī Mūsā to the north, Qaṣr al-Bint to the west and the Lower Market to the east. Thus the Great Temple sits on an elevated terrace above the vast Lower Temenos where on state or ceremonial occasions the Nabataean rulers showed themselves to the people — the precinct's location adjacent to the Temenos Gate and the most sacred Qaṣr al-Bint is hardly accidental.<sup>1</sup>

In the heart of the city, the Great Temple must have

<sup>1</sup> The Great Temple may not have been experienced visually from the Colonnaded Street. It is entirely possible that the barrier from the

street was intended to be visual as well as physical.

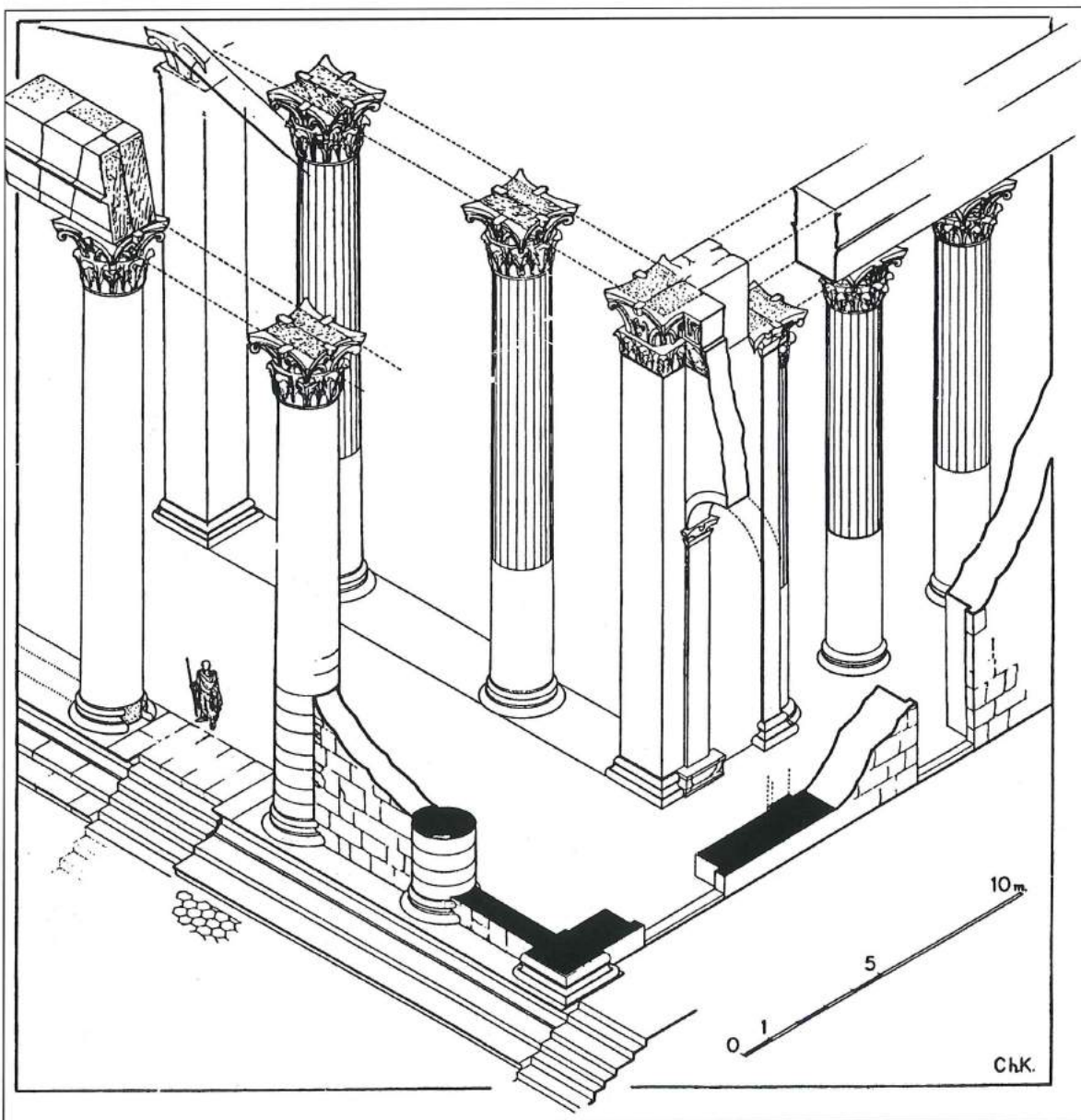
been impressive. The visitor entering the complex from the Propylaeum and crossing the great open expanse of the Lower Temenos became involved in a great architectural experience. The drama of classical Nabataean planning is evident — there are exciting vistas of the exedrae, the great double staircases, the seemingly limitless rows of columns and the remarkable façade of the Great Temple itself. The fabulous architectural decoration of the elephant-headed capitals set against the monumental architecture of the Lower Temenos and the height and breadth of the Temple structure with its deeply sculpted, elaborate, floral capitals demonstrated power and wealth. The overall construct of the precinct must have been directed by royal patronage, and clearly it is a response to the needs of the Nabataean court and its administration. A Great Temple or a bouleuterion-odeion should be ac-

cessible to the citizens of Petra and provide a gathering place where the decisions of the day could be announced. The wealth and importance of Petra as the Nabataean capital had to be made clear to both her subjects and those powers with whom she interacted.

#### Site Deposition Analysis

Based on site deposition, our excavations have determined the general sequence of four phases (0-III) of the Great Temple construction: Phase 0 is reserved for the preparation of the site by its Nabataean builders with a vast canalization system.

Phase I or Nabataean I represents a major construction of the Temple precinct. The major goal was to construct a building of importance in central Petra and to orient it toward the main thoroughfare of the city. FIG. 4 is a re-



4. Reconstruction of Great Temple Phase I. Drawing by Ch. Kannelopoulos.

construction of the phase. The dramatic rocky backdrop of al-Kātūta provided a perfect setting for an imposing structure set on a high terrace platform. Phase I included the erection of the four porch and the two pronaos columns, plus the eight interior, bichrome, plastered columns on the building's flanks and six columns at the rear. Decorated with deeply-carved fine sculpted limestone capitals, these column shafts were embellished with flat, red or yellow plaster until 3.76 m from their attic bases and with white ridged plaster above until the beginning of the capital. From the style of the floral decoration of the limestone capitals, the iconography appears to be similar to that of al-Khazna. Also decorated with multi-colored plaster, corridors were constructed to flank the structure. This structure was constructed sometime in the last quarter of the first century BC or during the reigns of either King Malichus I (62-30 BC) or Obodas II (30-9 BC), or perhaps both.

Phase II is what we refer to as Nabataean II. There was a completely new, monumental rebuilding program — an architectural metamorphosis was launched in this phase. The architects wanted to make a strong statement, and epitomize the architecture of a great city. It is obvious that the rulers of Petra took pride in the embellishment of their precinct while providing for its functional demands with a sense of spatial logic. The precinct had to emanate a sense of power befitting Nabataean wealth. So, what did these Phase II architects have in mind? To begin with, there had to be the building of an elegant, columnar Propylaeum for access to the precinct, and a series of new steps had to be laid to be built up to the level of the Lower Temenos. At the same time, the Lower Temenos was conceptualized as a symmetrical, formal presence that purposefully emphasized the Great Temple. There was, however, a challenging and exasperating problem confronting the planning of the area — the Canalization System had to be reconfigured and rebuilt. This set in motion a completely new series of changes that radically transformed the design of the Lower Temenos — for how were people going to access the Upper Temenos from the Lower Temenos? This may have provided the impetus for a scheme involving the precise planning for the complete remodeling of the Lower Temenos, approaching all aspects of the Lower Temenos design simultaneously — from the laying out of stairways and exedrae to enhancing the area with triple colonnades. In short, the area was converted to create a vast architectural foreground for the Great Temple.<sup>2</sup> A massive east-west retaining wall had to be built on the same line as the twin lateral stairways and the exedrae, which delimited the Lower Temenos on its south. This Lower Temenos court-plaza was then embellished with a sweeping, white, limestone hexagonal

pavement, which tied all the elements together. These architectural components were all planned to be interconnected features that would boldly define the area's spacial importance.

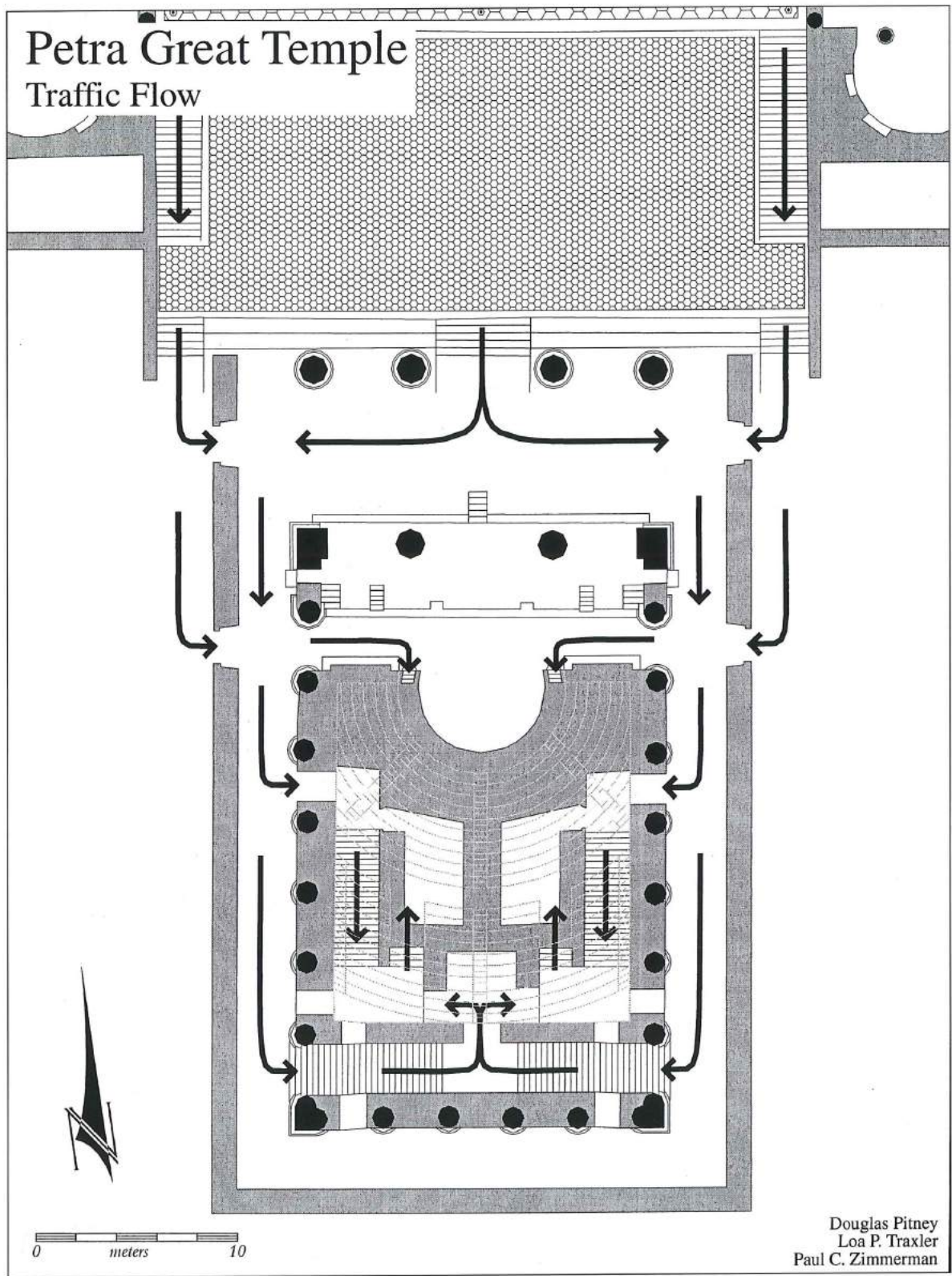
The Phase II Temple continued to crown the composition of space, and the edifice we know today as the Great Temple emerged. Its transformation must have reflected the changed circumstances of Petra royalty. The exterior was enlarged with exterior walkways on its flanks. Also at this time, there was the major reconfiguration of the Temple interior where there was the elegant construction of intercolumnar walls with arched doorways, windows and staircases. The building of these casemate walls, which are still preserved to a 5 m height, all but destroyed the plaster decoration of the Phase I stuccoed columns (these intercolumnar casemate walls fell short of covering the capitals).

The Phase I central room, was reconstructed as an open-air *theatron*. The heart of the Great Temple was now the theater, and the architects blended the proportions of the cavea seating to conform the Phase I architecture. The projected preserved diameter of the orchestra was approximately 6.5 m (the orchestra area was too restricted and small for any large function, but may have been used for speeches, dramatic presentations, or simple religious rituals and ceremonies. Unfortunately we found the upper portions of the theatron were either in poor condition or were completely missing, but we project there may have been 20 original courses of seats, with a diazoma between the tenth and the eleventh rows. Thus, a conservative estimate of the seating capacity would be a minimum of 565 and a maximum of 620 persons. These calculations must remain tentative, however, until we can confirm the extent of the cavea to the south.

Given the plan for this building, the flow pattern was extraordinarily well-planned and efficient (FIG. 5). Access was from the Lower Temenos, up the east or west stairways, to the east or west walkways and from the walkways into the east or west corridors. Multiple sets of new stairs were installed in the Temple rear — twin east and west, plus twin north and south stairways. These led to the lateral corridors and the East and West (north-south) stairways with adjacent east and west vaulted chambers. These four stairways directed traffic to the inner corridors, which led to the Temple exits — the walkways.

Alternatively, access might also have been through the front entrance. The participant was obliged either to turn to the right or left into the corridors, and the major route would be from the corridors through the arched doorways to one set of rear stairways. Once these had been mounted, access to the cavea was via the paved platforms, which

<sup>2</sup> These lateral staircases had to have accompanying luxurious exedrae and other appurtenances to complete the finished look of the ensemble.



5. Temple Traffic Flow. Drawing by Douglas Pitney, Loa P. Traxler, and Paul C. Zimmerman.

accessed an additional twin small flights of steps that probably led to arched passages that exited into the cavea at the middle diazoma.

This renovation we have placed sometime near the end of the reign of Aretas IV (ca. AD 40) or to the rule of

Malichus II (AD 40-70) and possibly to the reign of Rabbel II (AD 70-106). It is therefore suggested that these modifications took place sometime in the first or early second centuries AD. But questions persist: What was the transition between the earlier Nabataean structure and

what we know as the Great Temple? Why was the transition from one type of installation to another so swift, in less than 100 or so years?

The next phase, Phase III, we identify as the Nabataean-Roman period. Serving as a buffer state against the desert tribes, Nabataea retained its independence but paid taxes to Rome. Completely subsumed by the Romans under the Emperor Trajan in AD 106, Petra and Nabataea then became part of the Roman province known as Arabia Petraea. Under Roman rule, Roman classical monuments abounded, many with Nabataean overtones; thus, it is appropriate to identify this time (post-106) as the Nabataean-Roman phase. As we know, Petra continued to flourish during the Roman period, with a Monumental Arch spanning the Siq and tomb structures either carved out of the living rock or built free-standing. There is no reason why the Great Temple should not have continued to serve as a principal monument of the city.

When Petra entered into the “Roman” world in the second century AD, we assume that the Great Temple was recycled by Nabataean-Roman architects, and the precinct continued to serve the Romans as one of the principal monuments of the city. And if there were post-106 changes made to the Temple and its precinct, these changes are not altogether clear from the stratigraphy. We posit, however, that at some point during the last half of the second century AD, the lower Stairs of the Propylaeum were modified to conform with the paving of the Colonnaded Street for ease of entry into the precinct.

As excavations continue, it must be borne in mind that this phasing is tentative and may be revised in light of future excavation. Our understanding of the site has been difficult, not because of the lack of dateable materials, but because the mixture within archaeological contexts of artifact stylistics ranges from the first century BC to the early fifth century AD in date, thus, the Great Temple precinct was in use for approximately 500 years. There are few sealed deposits, and much more has yet to be explored before we can confirm the archaeological deposition of these remains. The existence of this monumental edifice is now an established fact. Our discoveries over the past six campaigns will enable scholars and the public at large to study and visit this great structure. I hope to not only reveal more of the architectural layout of the building and its precinct, but also to better understand its function, its phasing and how it was woven into the fabric of its Nabataean, Nabataean-Roman and Byzantine urban environment.

### Inscriptions and the Artifact Record

Highly informative is our artifact record, however, it offers few clues as to the function of this structure. After six excavation seasons, the catalog register includes 382 coins, several inscriptions including two in Nabataean;

and several fragments in Greek. We must be mindful of the fragmented marble Latin Imperial inscription studied by Stephen V. Tracy (1999:372-376), and dated between AD 112 and 114, found in the rear west vaulted chamber on the floor. If we assume it is in some way associated with this building, it surely attests to its importance and one of its last uses. Exquisitely painted stucco fragments abound, including one with a partial human face. 146 sculpted elephant fragments, are included in our architectural fragment data base numbering over 6274 elements, along with fragments of elaborate floral friezes and acanthus-laden limestone capitals. 379 lamp fragments, and complete Nabataean bowls, small cups, juglets, unguentaria, and figurines are among the 149,640 fragments of pottery, glass, bone, and metal have been classified in our site database, but none of them offer us any clues.

### Theater-Temples and Civic Structures

A. Negev (1993: 1187) states:

“Nabataean temples follow two distinct plans. Temples in northern Arabia, southern Edom (see er-Ram), northern Edom (Petra itself and Khirbat et-Tannur), and the Hauran and the Ledja (Seeia, Sahir, and Sur) had an encased outer temple, an inner temple, and an adyton — a plan erroneously ascribed to an Iranian origin, but in fact a Nabataean adaptation to specific cultural needs. Each of these temples had a *theatron*. The temple at Sur had a theater in addition to the *theatron*. An altar in the court completed the building’s components. Temples of this type were constructed in the reigns of Obodas II and Aretas IV.”

The identity of our structure as a temple has proved to be a complex problem. Up to this point in time, no theater-temples like the Great Temple with the *theatron* being the major component of the interior have been found in the Nabataean or Greco-Roman world. In collecting all the known examples, I found a most useful source in Hanson’s 1959 publication, *Roman Theater-Temples*. I also perused The Herodian Temple Platform at Caesarea (Raban and Holum 1996), and looked at *Le sanctuarie syrien* published by E. Will (1985: Pls. A-C). In looking at the plans of these structures, even those at Dura Europos are not the same design as our structure (Rostovtzeff 1938: Pl. XIII). The closest Dura parallel is “H” associated with the Sanctuary of Artemis Nannaia. H. C. Butler’s 1919 studies of the theater temple at Sahr (Sahir) show a small theater situated beside the forecourt of the temple; its orchestra is slightly larger than ours (or 10.25 m in diameter), and the stage is a speaking platform used in connection with temple rites. Butler also studied the temples at Šūr (1919:428-431) and Si’ (Seeia). At Si’ there is a long enclosure-courtyard with the temple of Baalshamin dated to 33-32 BC, in the middle of which is a *theatron* identified by a Nabataean inscription. Even without the

theater component, Nabataean temples including those at Petra, the Qasr al-Bint and the Temple of the Winged Lions offer us little help. N. Glueck's (1965: Plan A) Nabataean Temple at Khirbat at-Tannūr and F. Villeneuve's (1990:11) tripartite Khirbat adh-Dhariḥ temple with its heart-shaped corner columns at bear little resemblance to our structure. The lack of models leaves us without definite answers. And a serious obstacle for the Great Temple's identification as a temple is that as yet we have not confirmed the location of an altar!

Now it is possible that this is a civic structure and perhaps it is where the Nabataean "popular assembly" held their meetings. Thus, perhaps, the Great Temple was built as a bouleuterion? And we should not forget the multiple references to the boule at Petra in the Babatha Archives discovered by Yigael Yadin from the *Cave of the Letters*.<sup>3</sup>

Archaeological parallels afforded by civic structures were more helpful as I had thought they might be. I tried to find civic structures that might have the same plan as our theatron. In Athens the New Bouleuterion in the Agora bore some resemblance (P. Travlos 1980: Figs. 30-31) as did the Odeion of Agrippa constructed in ca. 15 BC (*ibid.*, Fig. 470), which is a considerably larger building than ours, but bears some common aspects. Obviously, the tradition of like buildings had been known for some time, e.g., the Bouleuterion at Miletus (Dinsmoor 1975: Fig. 109) built in ca. 170 BC, which, like the Great Temple, is a semi-circular auditorium built into a rectangle with radiating steps. There is also the 700 seat Ecclesiasterion at Priene (*ibid.*, Fig. 108), which in part also resembles our structure and is dated to ca. 200 BC. And closer to Petra, we should look to the similar elements found at Caesarea Maritima (Gleason 1998), particularly with the triclinium of the Lower Palace (*ibid.*, Figs. 4b; 4c) with its associated pool.<sup>4</sup> Additionally the first century BC monumental audience hall at Caesarea Maritima in the Upper Palace (Gleason 1998: Figs. 4b; 4c) shares few similarities with our structure, although it may be found that both structures served for court meetings. With future excavation we hope to be able to firmly establish the function of our building. But, finally, if what we have is a bouleuterion, ecclesiasterion or an odeion and not a temple, then what we have identified as the Lower Temenos would have functioned as an agora or perhaps a forum.

Although the conventions of classical architecture prescribe this building to a temple, it is clear that Nabataean creativity, their lack of preconceived ideas and their un-

usual architectural borrowings from the classical world could have led them to utilize the Great Temple either for ritual or administrative purposes. Although this theater-like structure must have served as the central focus when it was built, it remains enigmatic. In future seasons we will test several hypotheses to explain and understand this building.

- 1) It was a temple or a theater-temple, or
- 2) It served as the civic center for Petra in the Nabataean and Nabataean-Roman periods as,
  - a) a bouleuterion where the boule (city council) met, as an ecclesiasterion or a comitium or curia, a Roman political meeting place;
  - b) an odeion or small concert hall, or
  - c) a law court, council chamber, audience hall, or meeting hall?

Even if we restrict the interpretation of the function of the building, we are still left in the dark with a number of compelling questions. If our structure is a temple, what deity is worshipped here? And where is the altar? And if it served as a civic center, what was its intended use — bouleuterion and/or odeion? How does this precinct relate to the urban fabric of the city itself? It must be considered in relation to the city plan of central Petra. While the function of this structure remains obscure, it surely presents a significant architectural component of Petra. So, was the Great Temple a center of worship where performances of a ritual nature were performed, or was it the location of the highest court? Or did this structure serve other or perhaps even multiple civic functions? We seek scholarly discussion of this issue. Although we have shed new light on urban Petra, the implications of these finds have certainly opened new questions about the site and the city. The reappraisal of the Great Temple architecture (if it is a temple at all), chronologically and stratigraphically, will greatly enhance our understanding of the socio-political and religious culture of Nabataean Petra.

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<sup>3</sup> Dating between AD 93/94 - 132, the 35 papyrus archives were found in a leather purse in 1961 by Yigael Yadin at the cave of Nahal Hever on the west shore of the Dead Sea. These priceless finds are known as documents from "the Cave of the Letters." Published in 1989 by the Israel Exploration Society, The Hebrew University of Jerusalem and the Shrine of the Book, as *The Documents from the Bar Kokhba Period in the Cave of the Letters*, Naphtali Lewis, (ed.).

<sup>4</sup> The association of the pool with Herod's building programs is common. To the east of the Temple precinct lies the so-called 'Lower Market,' which appears to be part of the Temple precinct. It is an enclosed formal garden with a large pool, reminiscent of a Persian *paradeisos* or pleasure park. In the center of the pool is a bridge leading to an island with the remains of pavilion which was embellished with marble and painted plaster. More about this extraordinary feature will be reported on the future.



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