# THE TOWER OF BABYLON STELE FOUND IN BABYLON 

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#### Abstract

In the early 1990s the two fragments of black stone making up the Tower of Babylon stele with pictures of the ziggurat in Babylon and the king Nebuchadnezzar II were found in the large open trench from the German excavations of Amran in 1900. The findspot was about 20 m north of the Esagil temple in Babylon, but the level where it was discovered is not Neo-Babylonian but later, possibly Parthian. The archaeological and historical background of the stele is discussed, and the image of the Ziggurat on the stele is considered. After 28 years in the Schøyen Collection Oslo, the stele is now in the Iraq Museum in Baghdad.


## 1. The stele and its present location

The black stone stele consisting of two fragments, now in the collection of the Iraq Museum Baghdad, was previously registered as MS 2063 in the private collection of Martin Schøyen, Oslo (Fig. 1). The complete size of the stele is preserved, $47 \times 25.5 \times 11 \mathrm{~cm}$, but several areas are now missing from the surfaces. The front of the stele shows a side view of a king, a side view and a plan of the top building on a ziggurat. On the left shoulder is another similar plan. A three-line epigraph besides the ziggurat identifies it as Etemenanki in Babylon. A longer inscription in three columns below the images is, as far as preserved, a variant of known inscriptions of the Neo-Babylonian king Nebuchadnezzar II (r. 604-562 BC) describing how this king built Etemenanki, the ziggurat in Babylon, and Eurmeiminanki, the ziggurat in Borsippa. It is therefore reasonable to see the images on the front of the stele as the king Nebuchadnezzar, the ziggurat in Babylon in front view and a plan of the top sanctuary. The plan on the shoulder may be the top sanctuary on the ziggurat in Borsippa (George 2011: 153-169, Pls. LVIII-LXVII including photos and hand drawings; Novotny Weiershäuser 2024: Nebuchadnezzar II 1).

The fragments are said to have been acquired by the Schøyen Collection in October 1995 and May 1999. The top fragment of the stele was exhibited at the University Library in Oslo 1997, at the Faculty of Law, University of Oslo 1998, and at the Kon-Tiki Museum, Oslo 2003. The stele was given a summary publication on the various versions of the website of the Schøyen Collection. At first the faulty information that it was found in 1917 during the final days of the German excavations was provided on the website. This assertion was probably invented by antiquity dealers. It was further stated on the website at that time that the three(!) parts of the stele were divided among the archaeologists, who took them to various countries. This was impossible as the stele was unknown to all German and other scholars working on the reconstruction of the ziggurat.

In the publication by George (2011), the stele was supposed possibly to have come from Susa in Iran, a not completely impossible hypothesis but without any evidence more than a circumstantial reasoning. The relevant Schøyen collection webpage has since then changed the information concerning the findspot several times. The latest version, which does not contain any information concerning the findspot, can be found at: https://www.schoyencollection.com/, with an additional search for MS 2063.

On the basis of a request from the Iraqi embassy in Oslo, the Norwegian Ministry of Culture instigated the seizure of the stele and of a considerable number of other objects in the Schøyen collection by the Norwegian police in 2021. The Museum of Cultural History at the University of Oslo compiled a "Report with assessment and recommendations concerning objects impounded at Martin Schøyen's residence August 24, 2021," recommending their return to Iraq. However, a Norwegian court decided in September 2022 that Iraq had not proven the origin of the objects, so they were returned to the Schøyen collection. The official documentation is available at https:// www.regjeringen.no/en/id2903280.

After having read a preliminary version of the present article with information about the findspot in Babylon, the collector has decided to return this unique stele to Iraq. In December 2023, the stele


Fig. 1. Stele, 47 cm high, 25.5 cm wide, of black stone with pictures of the king Nebuchadnezzar II, of the front of the Etemenanki ziggurat in Babylon and a plan of the sanctuary on top of the ziggurat. A similar temple plan can also be found on the left edge. There is a short inscription beside the ziggurat and a longer one on the lower half of the front side. Previously MS 2063, Schøyen Collection, Oslo and London, now in Iraq Museum, Baghdad. Photo O. Pedersén 2023. Open Access.
was presented as a gift to the Iraqi authorities and will hopefully soon after conservation be on display in the Iraq Museum in Baghdad illustrating the original look of the ziggurat of Babylon.

Some scholars have even expressed doubts about the authenticity of the stele for various reasons. The early impossible information about the findspot on the webpage has caused mistrust. The stele has been considered almost too good to be true. Only one competent scholar had previously made a thorough study of the original and others working just from photos had come up with various questions. The publication here of the find circumstances in Babylon and the results of an inspection of the stele should help to remedy any doubts. For previous discussions about the authenticity mostly based on faulty speculations about the findspot, see the discussions of Novotny - Weiershäuser 2024: Nebuchadnezzar II 1, and George forthcoming with further references.


Fig. 2. Tell Amran in Babylon. The red marking in the trench is the approximate findspot of the two fragments of the stele depicting the ziggurat. To the south is the modern Amran sanctuary. The Esagil temple of Marduk is marked by the large pit with the surrounding green dots showing still visible upper parts of later pits from excavation. The blue marking is a Parthian house where many broken precious objects were excavated. North of the tell are the remains of the $90 \times 90 \mathrm{~m}$ Etemenanki ziggurat with the preserved $60 \times 60 \mathrm{~m}$ mud brick core and in the surrounding water the 15 m wide baked brick mantle. Background and additions by O. Pedersén 2024. Open Access.

## 2. The archaeological and historical background: Esagil - the Marduk Temple

The mound of Amran, the second highest tell in Babylon, is situated in the middle of the city of Babylon. The shrine of Amran ibn Ali, who died in the battle of al-Nahrawan AD 658 (38 AH), is situated on its top, whence its name is derived. This beautiful Ottoman building was razed to the ground due to structural problems, only preserving the underground graves, and then completely rebuilt with modern construction materials in 2018. Deep under the tell lie the remains of Esagil, the Marduk temple, the main sanctuary for the Babylonians. North of the Esagil, the famous temple tower Etemenanki, the ziggurat, was situated (Fig. 2). In the following presentation the elevation is measured using the local height of the German excavations as an equivalence to $\pm 0.0$ m at 25.5 MASL (Metres Above Sea Level).

The remains of the Marduk temple with a floor some 20 m under the present surface were partly excavated during the German expedition by Walter Andrae in 1900, with a large $20 \times 20 \mathrm{~m}$ excavation pit, followed by 29 or 30 smaller soundings by Friedrich Wetzel and Karl Müller in 1910-1911. In

Fig. 2, green dots represent the smaller soundings and the large pit is between them to the northern side. This allowed a provisional floor plan of the temple with the external façades and some of the rooms to be traced. According to cuneiform texts, especially the series Tintir $=$ Babylon Tablet 4, the temple was surrounded by a series of other temples (George 1992: 58-59). This may have been inside a precinct of which a northern section could have been excavated south of the east-west street (Pedersén 2021: 142, 166, Figs. 4.19, 5.7, 6.2).

The top of Tell Amran is +20.0 to $+23.0 \mathrm{~m}(45.5$ to 48.5 MASL$)$. The Marduk temple as excavated had heavy walls of unbaked mud bricks with preserved height up to +10.3 m ( 35.8 MASL ). The deepest attested floor levels are +2.3 m to $+2.4 \mathrm{~m}(27.8$ to 27.9 MASL) mostly destroyed and not dated. A pair of floors of baked bricks with Esarhaddon (r. 680-669 BC) and Assurbanipal ( $668-631 \mathrm{BC}$ ) stamps are attested at +2.8 m and $+2.9 \mathrm{~m}(28.3$ to 28.4 MASL$)$. Another pair of floors of baked bricks with Nebuchadnezzar stamps were preserved at +4.3 m and 4.4 m ( 29.8 and 29.9 MASL). A higher not dated floor level is attested at +5.6 m to 5.8 m ( 31.1 to 31.3 MASL ). Possible even higher floor levels have so far not been archaeologically attested (Wetzel 1938, pl. 4a; Wetzel 1957: 30; Pedersén 2021: 143).

The Marduk temple, possibly in Babylon, may be first attested in writing during the Early Dynastic period around 2400 BC (Sollberger 1985: 10). The temple in Babylon is well attested in cuneiform texts during the Old Babylonian period from 1835 BC mostly in year formulas (SigristDamerow 2001; Pedersén 2021: 150). The Neo-Assyrian king Sennacherib destroyed the temple in 689 BC (Grayson - Novotny 2012: Sennacherib 24; 168 lines 36b-44a; 223 lines 43b-54a). It was rebuilt some 20 years later by his son Esarhaddon and completed by Assurbanipal (Leichty 2011: Esarhaddon 118-126; Frame 1995: Assurbanipal B.6.32.2, 3, 6, 7).

The Neo-Babylonian king Nebuchadnezzar II rebuilt the temple some 60 years later during the first years of his reign (Novotny - Weiershäuser 2024: Nebuchadnezzar II 2 lines i 40-iii 35; 19 lines i 8-33; 31 lines i 46-52) and raised the floor about 1.5 m as seen above. Many of the contemporary buildings, including private houses and temples of unbaked mudbrick, but also buildings of baked bricks like the palaces and the Ishtar Gate were rebuilt several times on higher levels during Nebuchadnezzar's reign. This often implied cutting the walls to the new floor level and rebuilding the walls and doors from this new level using the still standing remains of the walls as foundations. The corrections of the walls from such new levels up can be seen by any visitor in many places in Babylon (many examples in Pedersén 2021). Due to far too few excavations of the Marduk temple having been carried out, this has not been possible to prove here, but it is probable when compared with the other buildings, even if the only available section of a wall doesn't offer any evidence to support it at that spot (Wetzel 1938, Pl. 4b). Neriglissar (r. 559-556 BC) some 40 years later rebuilt or repaired part of the northern outer area (Weiershäuser - Novotny 2020: Neriglissar 1).

A quite fragmentary text mentions Alexander III the Great (r. 330-323 BC) in connection with the rebuilding of Esagil (Finkel forthcoming: BCHP 4). In 322 BC, Philip Arrhidaeus (r. 323-316 BC), the brother and successor of Alexander III the Great, removed debris of Esagil over the river to the west bank (Sachs - Hunger 1988, Diary -321). There are several references to removal (or sometimes lack of removal) of debris from Esagil in 320-317 BC during Philip and Alexander IV (r. 316-307 BC) in the diaries.

The last documented reconstruction occurred during the reign of the Hellenistic king Antiochus I (r. 281-261 BC), who was crown prince from 294 BC. When still crown prince, the chronicle reports that he used his elephants to remove the debris of the temple (Finkel forthcoming: BCHP 6). After becoming king, the diary adds that in 274 BC a large number of unbaked mudbricks (libittu) for the reconstruction of Esagil were moulded above and below Babylon (Sachs - Hunger 1988: Diary $-273 B$ ). Six years later in 268 BC or just before, the last preserved royal inscription on a clay cylinder reports that Antiochus moulded unbaked mudbricks (libittu) in the land of Hatti for the foundation of Esagil and Ezida (Stevens - Novotny http://oracc.org/ribo/Q004179/). The Marduk temple was in use at least into the early Parthian period and received maintenance in 93 BC according to the Rahimesu archive (van der Spek 1998; Pedersén 2021: 150-151). However, the construction material for Esagil is unbaked mudbrick, not baked bricks as were essentially used for the construction of the ziggurat.

## 3. The archaeological and historical background: Etemenanki - the Ziggurat

Some 100 m north of the Marduk temple was the precinct around the ziggurat and on the double distance away was the ziggurat itself (Fig. 2, upper part, waterfilled area with core). The remains of the ziggurat were excavated by R. Koldewey and F. Wetzel in 1913, and the core of the ziggurat and later buildings on top of the ziggurat ruin again by H.-J. Schmid in 1962 (Wetzel 1938; Schmid 1995). The lower part of the ziggurat was $180 \times 180 \mathrm{ammatu}$ or about $90 \times 90 \mathrm{~m}$ according to both cuneiform texts and archaeological evidence (more exactly 91.5 m ). It consisted of an about $60 \times 60 \mathrm{~m}$ mud brick (libittu) core and an about 15 m mantle of baked brick (agurru) surrounding the core. The ziggurat was 180 ammatu or some 90 m high according to the evidence from the Esagil text and the stele. A basic, mostly philological study of the ziggurat is George (2005-2006) with important new information from the stele added in George (2011).

Most of the building had been almost completely taken away for a never accomplished rebuilding probably in the Hellenistic period leaving only the lower meters of the lowest platform. In 1886, it was even further emptied of baked bricks in the mantle by local people, partly working for the Ottoman authorities, searching for good construction material for reuse in modern buildings in the area, including the problematic Hindiyah barrage on the Euphrates. Only the 60 x 60 m core of unbaked mud bricks still stands a few meters high up to about +2.0 to $+2.5 \mathrm{~m}(27.5-28.0 \mathrm{MASL})$. The surrounding 15 m wide mantle of baked bricks with the foundation at $-4.0 \mathrm{~m}(21.5 \mathrm{MASL})$ were much more completely taken away leaving a mostly waterfilled empty space above baked brick remains with its top at -2.0 m (23.5 MASL) around the core (Fig. 2).

The ziggurat in Babylon was probably built not later than the Old Babylonian period, but written evidence starts in somewhat later literary works, like the Erra Epic, Enuma Elish, and Tintir. In Tintir, the ziggurat in Babylon has the name Etemenanki (George 1992: 58-59). The first royal inscription referring to the ziggurat in Babylon is when Sennacherib in 689 BC reports that he tore down mudbricks and baked bricks from the city walls, the temples and the ziggurat and threw them in the river in order to destroy the city (Grayson - Novotny 2014: Sennacherib 223 lines 50b-54a).

The first reference in a royal inscription to Etemenanki as the name of the ziggurat in Babylon is in the account about the rebuilding of the ziggurat by Esarhaddon (Leichty 2011: Esarhaddon 105 lines vi 27b-32; 116 lines rev. 20: 121-126). Some 50 years later, Nabopolassar (r. 625-605 BC) claims that the ziggurat was near collapse, so he prepared unbaked mudbricks and baked bricks and started the rebuilding (Novotny - Weiershäuser 2024: Nabopolassar 6; 13). His son, Nebuchadnezzar II, said he completed the building as far as the top with baked bricks organized as corvee work by people from all parts of his empire (Novotny - Weiershäuser 2024: Nebuchadnezzar II 23 lines i 38-43; 27 lines ii 1-iv $9 ; 31$ lines i 53-54; 32 line i 35). The façade of the top building was of blue glazed bricks (Novotny - Weiershäuser 2024: Nebuchadnezzar II 2, 23, 36). Many of Nebuchadnezzar's references to Etemenanki also cite the mostly parallel construction work at Eurmeiminanki, the much betterpreserved ziggurat in Borsippa. The detailed study of that building can be used for comparison of the construction of Etemenanki (Allinger-Csollich 1991; Pedersén 2021: 160-162; cf. also below).

With the exception of a single attestation in a broken context of the precinct of Etemenanki during the reign of Nabonidus (r. 555-539 BC) (Weiershäuser - Novotny 2020: Nabonidus 44 lines Obv. 2731 ), there is no clear mention of Etemenanki in the preserved cuneiform historical sources after Nebuchadnezzar.

When using wider definitions, it could be possible that Esagil in cuneiform later texts included not only that immediate temple area but also the large area to the north thereof, which included the ziggurat. In this way, the history of the building may continue as already described above for the Esagil. We could have a reference to some rebuilding of Esagil (but then including Etemenanki) by Alexander III, the Great, also Philip Arrhidaeus in 322 BC and Alexander IV removing debris, and finally Antiochus I removing debris by means of elephants and then in 268 BC preparing mudbricks (all including Etemenanki).

However, there are some problems with such an interpretation which allows the same events that above referred to Esagil, also to include Etemenanki. The removal of debris from Esagil to the west shore of the river during the reign of Philip in 322 BC has been mentioned. The excavations show the opposite, the debris from Etemenanki was deposited in the northeast of the inner city, in the area with
the modern name Homera, where the theatre was built on top of the fill. Also, the preparation of unbaked mudbricks (libittu) during the reign of Antiochus I fits the Esagil and Ezida, but not for the ziggurats beside the temples, where the upper and outer parts were constructed of baked bricks (agurru).

We will not discuss foreign and later sources that have been used as possible evidence for the ziggurat in Babylon. Among such sources are (sometimes much) later classical sources, like Ctesias (ca $440-425$ BC) FGrHist 688 F 13.26 and Aelian (ca 170-230 AD) Various History 13.3 mentioning Xerxes's visit to the tomb of Belitanas / Belos in Babylon, as well as Strabo ( 64 BC 24 AD) Geography, Book XVI 15 referring to a tomb as a square pyramid, some 10,000 men spent two months clearing the ruin of the square pyramid, and the levelling of the Marduk temple by Alexander in preparation for a rebuilding. All this is outside the scope of this article and will not be discussed here. There are several more or less open questions and details about the ziggurat that will continue to be discussed elsewhere.

## 4. The archaeological and historical background: The Parthian hoard and the large trench

In the area between Esagil and Etemenanki, some 60 to 90 m north of the Marduk temple, a large Parthian house (Fig. 2, blue dot) was unearthed with lowest floor levels at +8.0 m ( 33.5 MASL), and higher floors at +10.0 as well as +12.0 m ( 35.5 and 37.5 MASL). The remains of the house are now covered with earth. In Room E in the northwest side of the house, more than 220 fragmentary precious objects were excavated on its lowest floor level +8.0 m ( 33.5 MASL) in 1900. All or many of them came from the Marduk temple, as inscriptions show. They date from the 16th century BC in the Early Kassite period to the Hellenistic period. The objects were all more or less broken and gave the excavators the impression that they were in the process of being reshaped into new objects. Some of them have since received conservation treatment and are now among the most important exhibition objects from Babylon (Wetzel Schmidt - Mallwitz 1957: 31-32, 36-43, Pls. 15; Marzahn - Schauerte 2008: 126, 127, 130, 132, 185, 201, 202, 273, 316-318, 320).

A large trench was cut during the excavation in 1900 through poorly studied and little understood later Parthian, Sasanian and Islamic levels. During the excavation, rails were placed in the trench for the railway transporting the fill from the excavation of the great pit in a northerly direction. The bottom of the trench was at +10.0 sloping up to $+13.0 \mathrm{~m}(35.5$ to 38.5 MASL) from the area with the Parthian house with a slope up to the large pit at the Marduk temple (Koldewey 1911: 37, Pl. 7). Due to more than a hundred years of exposure, this trench has like the large pit now been partly refilled with earth falling down from its sides thereby raising its ground level (Fig. 2).

In this part of Amran, including in the trench and in the Parthian house, the German expedition registered five complete or fragmentary kudurru steles. The best preserved are by Marduk-nādin-ahhē̄ now in the Walters Art Museum and Marduk-apla-iddina II in the Vorderasiatisches Museum (Koldewey 1911: 48; Paulus 2014: MNA 5, MAI 3a). More kudurrus and other steles may have been unearthed in Amran during the early British excavations, but except for a few, the proper findspots are often missing (Reade 1987).

## 5. The find of the stele

The important discovery of the stele occurred on the Amran hill in the early 1990s, when two local fishermen, at that time living in the village Jumjuma on the southern border of ancient Babylon, found two stone fragments with reliefs and cuneiform inscriptions in the large trench leading northwards from the large pit, possibly fallen from the side of the trench (Fig. 2). The two stone fragments made up almost a complete stele as described above. On the stele could be seen a side view of a ziggurat with two architectural plans and a picture of a king in a larger scale standing beside the ziggurat. Below and to the left there were cuneiform inscriptions. Both illustrations and inscriptions were on the fragments when they were found and cleaned. The fragments are said to have been transported out of the country by persons belonging to Saddam's security people claiming at the border that these stones were just modern imitations. Rather soon, the fragments
came to the international antiquity market and the inscriptions showed that the king was Nebuchadnezzar II standing before the ziggurat Etemenanki in Babylon.

The approximate findspot of the stone fragments about 20 m north of the Esagil has the UTM zone 38 N coordinates 445705 E 3599790 N (Fig. 2, red dot). When they were discovered there at the bottom of the trench in the early 1990s, the elevation of the bottom of the trench may have been about +14 m (39.5 MASL) or somewhat higher. The information about the find has been kept as a secret in the village for a long time because the proper actions were not taken by notifying the antiquities authorities after finding the fragments. Slowly changed circumstances have got people to be somewhat more open about what was found and where the findspot was.

During my work in Babylon with the State Board of Antiquity and Heritage in Iraq and the World Monuments Fund from 2015 onwards, I was told this background story by persons from the Jumjuma village. I then asked for more information about the exact place and time the stones were found. In 2019, I was just told that the find had been made on the Amran hill, then in 2022 more information was available about where on the Amran hill and when the stones had been found. The people concerned have agreed to allow the information to be published here, but declined to have their names mentioned. The information given above is what I consider the most detailed and probable. This information was partly known to me when I published my book Babylon: The Great City in 2021, but I was at that time asked not to include too much of the information.

The villagers'story is plausible but lacks corroboration by photograph or witness statements. This is not surprising given that the village handed over the stele to the regime but kept their find secret from the archaeological authorities for some thirty years and remain so sensitive that still no names are allowed to be published. The villagers would not have any advantage in fabricating the story, which on the contrary could create problems for them.

With a findspot on an upper level of Amran hill, just outside the main building of the Esagil temple within the larger perimeter of the temple compound in the direction of the ziggurat, we also have the question about the original location for the installation of the stele. It may have been either the temple or the ziggurat. Even if it originally had been in connection with the ziggurat, e.g. in a foundation deposit, it may have been moved to the temple when the ziggurat was destroyed. The last location of the stele was probably the temple.

In the discussion above about the archaeological and historical backgrounds, the stele could have been placed in any of the rooms of the magnificent mudbrick (libittu) Esagil temple either already from the Nebuchadnezzar version of the temple or in later versions. The later texts and archaeological evidence referred to above still refer to Esagil as built of mudbrick. The stele and other Nebuchadnezzar inscriptions agree according to text wordings that baked bricks (agurru) were used for Etemenanki except for the lower parts of the base. This is even more evident for the still much better preserved Eurmeiminanki in Borsippa. More work and preferably more texts are needed here.

The two fragments of a stele with exceptional decoration showing a ziggurat from the side found some 20 m north of the Esagil in a possible Parthian level can be compared with the above-mentioned finds during the German excavation of more than 220 precious objects in the Parthian house some 50 m further north in the same direction and also the other stone kudurrus and steles. Both the hundreds of precious objects and larger stone objects as well as the Tower of Babylon stele can be seen as remains of important objects originally located in the Esagil, which were later displaced, possibly in the Parthian period, even if the findspot of the stele has a less secured archaeological level. The Tower of Babylon stele like the kudurrus may have been part of a collection of steles in the Marduk temple which were later displaced in the Parthian period.

Stone is a foreign element in Babylonia where the indigenous building materials are essentially clay based, especially unbaked mudbrick and baked brick. Even if stone is far less available than in Assyria, the German excavations uncovered a total of 637 inscribed stones in Babylon, at least 412 of them have Neo-Babylonian royal inscriptions. Most of them, at least 366, date to the 43 -year reign of Nebuchadnezzar II. Various writing styles, from strict formal to more erratic, were used depending on the type of object and the period of his reign. The most common inscriptions are on stone pavements for the Processional Way and palace courtyards. There are at least 321 paving stones with Nebuchadnezzar inscriptions (Novotny - Weiershäuser 2024: Nebuchadnezzar II 5-10).

No inscribed stone tablets were found during the German excavations; the only such tablet in three copies was found earlier and relates to the construction of the only stone wall found in Babylon: the north wall of the North Palace, which was built late in the reign of Nebuchadnezzar (Novotny Weiershäuser 2024: Nebuchadnezzar II 2). The German expedition unearthed about 40 mostly fragmentary steles with inscriptions or images especially in the Kasr palace area, in Merkes, and in Amran. The Tower of Babylon stele fits in the last context.

## 6. Inspection of the stele with the Etemenanki ziggurat

In September and October 2023 after completing the preliminary manuscript of this article, the author was able to study the stele in the original on two occasions, once in the company of Jamie Novotny, and another time with Rocío Da Riva. Some comments especially related to the picture of the ziggurat are given here, more details about the inscription and the picture of the king will be presented elsewhere by Jamie Novotny (Novotny - Weiershäuser 2024: Nebuchadnezzar II 1) and Andrew George (George forthcoming); the latter and Martin Schøyen are thanked for access to the stele.

The black stele has been sculptured out of a dark sedimentary rock. A geological assessment by Nadhir Al-Ansari from photos and description, but without handling of the original, suggested dark siltstone. The core of the stele consists essentially of three layers of homogeneous black, finegrained stone. Sometimes the border between black layers is filled with thin white material. Most of the back third main layer has completely fallen away. It is only preserved on the top at the middle and left parts where hardly any separation in layers is visible. The surfaces are sometimes badly worn. This makes it almost impossible to correctly assess several details only from photos. The highest middle part of the staircase to the ziggurat, the king's left arm, the upper part of the king's face, and many other details have lost the upper surface and are only preserved as areas higher or lower than the surrounding. In several parts flakes have disappeared and more can be expected to separate off in the future. An almost vertical thin white line between the ziggurat and the king continues in the inscribed area; this can be followed as an original perpendicular layer through most layers of the core of the stele. The upper right corner looks like it may have been removed in another way, perhaps with a sawing tool. There may have been some symbols of gods there, like the traditional moon, sun, and star. Alternatively, the ziggurat may be seen as divine. Enough is preserved to show the original size of the stele, $47 \times 25.5 \times 11 \mathrm{~cm}$.

The front surface has been sculpted by means of cutting to various surface levels. The top half with the pictures is some millimetres lower than the lower half with the main inscription. The figure of the king is almost as much extruding from the top surface as the main inscription. The ziggurat has mostly a slight extrusion, but the lowest platform protrudes further than the rest of the tower. The remaining parts with the plan and the epigraph seem, as far as preserved, to be flat and belong to the top part's flat background as can be seen on a 3D-photogrammetry.

The main inscription has received a lot of damage over time to a great extent due to the type of rock used for the stele. Parts of the inscription on the lower section of the stele have been rubbed off or sanded down resulting in a slightly lower surface with only the deepest parts of the cuneiform wedges, the heads, preserved. This may either be due to intentional erasure in ancient times or it may have come about as a result of later reuse of the stone. That the surface is lower, is not easy to see directly when looking at the stele and especially not on a normal photo, but on enlarged 3Dphotogrammetry when looking from the side, it is clearly visible. The inscriptions like other parts of the stele have thus far not been professionally cleaned, the cuneiform signs therefore contain, possibly ancient, Iraqi soil, making assessments sometimes difficult. On the other hand, the whitish soil in the signs, as also in some parts of the figures above, increase the visibility by means of contrast to the black stone. Without still pending professional cleaning, it is hardly possible to assess the quality of the original writing. For the Nebuchadnezzar inscriptions on the stele, not discussed in detail here, see Novotny - Weiershäuser 2024, Nebuchadnezzar II 1; George 2011; and George forthcoming.

The stele has about $20 \%$ of its base preserved and when placed on the base, the borderline between the pictorial illustration above and the inscription below is perfectly horizontal to the right and the left


Fig. 3. Provisional drawing of the Etemenanki ziggurat as shown on the stele with the two fragments placed together as on Fig. 1. The plan of the sanctuary on the top of the ziggurat has two entrances, a central courtyard, and to the left the main cella. The façade of the ziggurat shows the lower terrace with staircases, five terraces of lower height, and on the top the sanctuary. Insecure reconstructions are grey. The raised terrain in the front has been indicated. Drawing O. Pedersén 2023. Open Access.
but a few millimetres higher under the ziggurat giving the impression that the terrain was higher on the entrance side of the ziggurat. It has been attempted to show this raised elevation on the drawing even if the borderlines of the higher area are rather broken (Figs. 1, 3).

The figure of king Nebuchadnezzar II (Fig. 1) depicted to the right of the ziggurat is the only known representation of him from Mesopotamia; the only other images of him are worn rock reliefs in the Lebanon mountains (Da Riva 2012; 2013). On the stele he is shown in large scale standing to the right of the ziggurat on the border line between illustration and inscription; this line is partly broken as are the king's shoes. The surface of the royal picture has a lot of damage and parts have fallen off. The king's partly broken staff is straight (Fig. 1), essentially agreeing with George 2011: Pl. LXIII. The photo and drawing in George 2011: Pls. LX, LXIV, showing a
bent staff instead, are not correct, probably the result of misplaced fragments on the photo and the use of that photo for making the drawing.

The plan on the top of the stele depicting the upper sanctuary is scaled $2: 1$ (more exact $1.8: 1$ ) compared with the façade of the stele depicted below (Fig. 3). The plan on the stele (Figs. 1, 3 top) has two entrances. The better preserved entrance is on the down side, which, as it agrees with the façade drawing below showing the staircases, should be the south side. The less preserved upper or north entrance may have been like the south façade (as here reconstructed Fig. 3) or similar to the more massive construction on the entrance façade on the plan on the shoulder of the stele (George 2011: Pl. LXIV bottom). In this way the top building on the ziggurat had two entrances, whereas the main building of Esagil had four, one of each side. The similar, but not identical, plan on the left shoulder of the stele would be a bit surprising, if it was just a duplicate of the same plan with minor changes. The alternative suggestion by George 2011: 158-159, that it may be the top of the ziggurat in Borsippa also mentioned in the inscription on the stele, could be a better alternative.

The façade picture of the ziggurat (Figs. 1, 3) seems to be evenly incised, but worn and with several flakes fallen away making it difficult to understand details at least without inspection of the original. The façade of the ziggurat with the exception of the top sanctuary is depicted as with a slight slope. The top sanctuary is shown with vertical buttresses and recesses. All the terraces below have sloping buttresses but what look like more or less vertical recesses. The recesses between the buttresses look like they started just incised on the upper parts and then the lower parts were carved deeper and deeper in relief until reaching a floor or a staircase; the earth was not treated as such a surface and therefore there is no relief carving at the bottom. The uppermost part of all terraces has a flat façade and this may possibly indicate a parapet; such a railing 3 bricks wide is archaeologically attested for the lowest parts of the staircases (Schmid 1995: Pls. 9-16, Beilage).

The best preserved parts of the ziggurat's façade are the lower right and upper left of the first terrace from below; a terrace that in the middle has the break between the two fragments and therefore completely missing more than other terraces. The number of recesses on the lowest terrace depicted on the stele agrees with the excavation result (Schmid 1995: Beilage). In the middle of the first terrace, almost all of the immediate surface has disappeared making the interpretation of the staircases a bit problematic, especially when compared with the excavation results. There were three staircases on the depicted south façade leading up to the top of the first terrace. Only the right staircase along the façade is rather well preserved on the middle and lower sections as an incised line with carved buttresses above but flat surface with incised lines below. The central and left staircases have lost the surfaces and are only recognizable as slight subsurface elevations in the façade.

The top of the sixth terrace, on which the sanctuary is standing, is a bit problematic to interpret due to surface destruction. It is depicted as a line between the left and right edges of the platform with the door of the sanctuary standing on this surface; the surface is still partly visible. Immediately left and right of the door are what may look as the remains of a slightly higher level, either traces of some altars or similar installations or possibly just destruction. This higher level is not the floor and is not shown on the drawing (Figs. 1, 3).

The picture of the ziggurat is 12.5 cm wide and about 12.5 cm to 12.8 cm high. In front of the façade, the terrain is raised about 0.3 cm compared with the right and left sides of the ziggurat, which are standing on the terrain line. The heights of the terraces are from below, lower first terrace 3.7 cm , the other five terraces about $1.3,1.2,1.2,1.2,1.1 \mathrm{~cm}$, and on the top, there is the 2.8 cm picture of the building. The width of the same terraces on the stele are $12.4,11.0,9.7,8.4$, $7.0,5.5 \mathrm{~cm}$, with the top building 3.9 cm . The terraces have slightly slanted exterior walls (Fig. 3).

The archaeological excavations have established the width of the lower first terrace as about 91.5 m (Wetzel 1938: pl. 16; Schmid 1995: Beilage), corresponding in inscriptions to 180 ammatu. Assuming that the scale is uniform and correct, the above-mentioned measurements of the ziggurat-picture on the stele give the total height of the ziggurat as 91.5 m (left and right 93.7 m ). The terrain, as shown on the stele, is raised about 2 m in the front of the ziggurat; this seems to agree with the excavation showing that the middle staircase had its base 2 m higher than the west and east staircases (Wetzel 1938: 33; Schmid 1995: 56; Pedersén 2021: 156). Seen from below, the approximate heights of the terraces are: the first terrace 27.1-29.3 m, the other terraces $9.5,8.8,8.8,8.8$, and 8.1 m , and with a 20.4 m high building


Fig. 4. Etemenanki ziggurat, preliminary 3D-reconstruction with terraces and staircases placed according to the stele, cuneiform texts, and excavation results. Staircases to the upper parts are assumed inside the tower. Baked bricks with a top of blue-glazed bricks. The sloping buttresses and the raised terrain in the front have not been indicated. Pedersén 2021, Fig. 4.18. Open Access.
on the top. The width of the terraces from below would be $91.5,80.5,71.0,61.5,51.2$, and the top platform 40.3 m , and thereupon the 28.5 m wide top building would be standing.

To summarize with other words, this would be a ca. 73 m high tower consisting of 6 terraces, and on the top, there would be an about 20 m high temple standing. Around every terrace, there are about 5 m to the edge of the one below, possibly a 4 m area with a 1 m or 3 brick wide parapet as indicated above; the sixth terrace even has around the temple 6 m space, or 5 m with a 1 m wide parapet. The measurements of the door to the top sanctuary as cut on the stele would correspond to a door about 1.4 m wide and 8.9 m high! All this must not represent the real construction measurements of the ziggurat, but gives an idea how the projection of the picture of the stele on the site in Babylon would have looked like.

It may be possible to compare these measurements with the remains of the much better-preserved ziggurat in Borsippa, a mostly parallel construction according to the inscriptions of Nebuchadnezzar referred to above. If my division of the terraces in the Borsippa ziggurat can be accepted (Pedersén 2021: Fig. 4.17), the three lowest terraces attested in Borsippa from above are just $7 \%, 9 \%$, and $13 \%$ lower than what the picture on the stele has for Babylon, and the fourth less preserved terrace in Borsippa also fits in the same range as the third. To some extent, this deviation may be explained as compression of the structures compared with what was built. More studies are needed in order to see how far such measurements may be real, but it gives a general idea of not impossible measurements at least in the lower and middle parts of the Babylon ziggurat. If this also implies that the upper part of the ziggurat picture could represent any built reality is another question, but should not be dismissed too easily (Pedersén 2021: 160-162, Fig. 4.17; cf. Allinger-Csollich 1991 for Borsippa).

The size and distances given in royal inscriptions for buildings and limited areas inside Babylon agree rather well with what it is possible to establish archaeologically (Pedersén 2021: 279-282).

The question whether the same could be said also for drawings of plans and façades would repay serious study.

## 7. Conclusion

The main purpose of this short article is to reveal the find circumstances of the Tower of Babylon stele. The findspot next to the Esagil temple makes an original placement there probable. An initial location in the Etemenanki, as long as it was in use, with a later transfer to Esagil could also be a possibility. The findspot is secondary, in a possibly Parthian context, to be compared with the nearby Parthian hoard containing precious objects from the temple (Fig. 2).

The publication of the find circumstances aims also to encourage scholars to use the stele's exceptional pictorial information of the Babylon ziggurat combined with the impressive remains of the Borsippa ziggurat when studying ziggurats and especially the ziggurat in Babylon. The alternative so far has often been to use a Hellenistic period school text from Uruk now in the Louvre Paris (Thureau-Dangin 1922: no. 32; latest edition in George 1992: 109-119, 414-434, pls. 24-25). However, this text has been proven to contain faulty information due to one missing level of the ziggurat, and there is no good reason to assume that all elsewhere would be correct, when it disagrees with the stele especially about the height of the second level of the ziggurat (cf. George 2011). There are of course many other questions that can must be raised about the ziggurat, when so little is preserved and the discussion will certainly continue, but a first attempt to bring the available evidence together making use of available evidence can show some possibilities (Fig. 4).

This exceptional stele with images of the ziggurat in Babylon and of king Nebuchadnezzar II will hopefully soon after restoration find a proper place in the exhibition in the Iraq Museum.

Weblinks are all accessed 30 June 2023.
A 3D-photogrammetry of the stele made in October 2023 by Olof Pedersén is available with Open Access at https://skfb.ly/oOLPP
For long term deposit and download in 3D format with Open Access see Zenodo https://doi.org/10. 5281/zenodo. 10374395

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في أواثلّ التسعينيات ، تم العثور على قطتين من الحجر الأسود تشكلان لوح لبرج بابل مع صور الزنورة في بابل والملك نبوخذ نصر الثاني وتم ذلك في خندق مفتوح كبير من الحفريات الألمانية التي تدت في عمران عام 1900. وكان مكان الاكتثاف يبعد حوالي 20م شمال معبد اساجيل في
 اللوح، مع الأخذ بنظر الاعتبار صورة الزقورة على الصسلة. بعد 28 عامًا من وجودها في مجموعة شويذف في أوسلو، أصبحت الصسلة الآن في المتحف العراقي في بغداد.

