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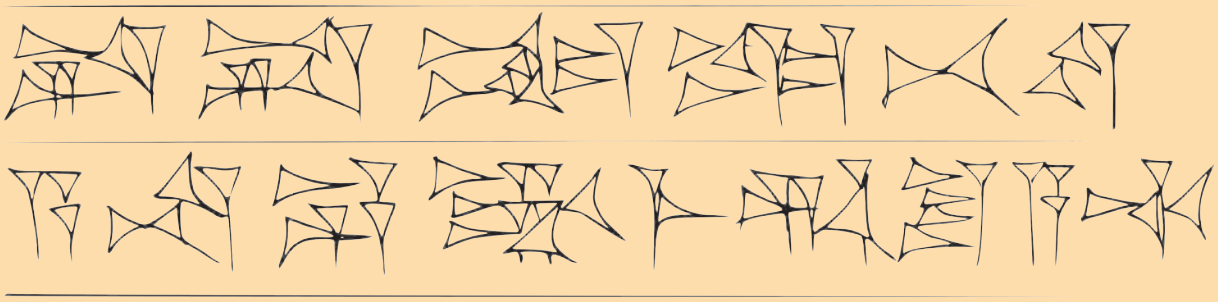
14

Johanna Tudeau

Building in Assyria

A Philological Perspective



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Gigantes blasonados por los siglos. Blanco beso dormido durante eternidades en cumbres cimeras y en precipicios hollados por torrentes enloquecidos. Hermandad de nieve y granito; vestigio postrero de milenarios duelos entre los Dioses. Allí yacían, ostentando la serenidad grandiosa de su estirpe.

A.C.R.

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ABBREVIATIONS

Unless coined by the author and listed below, abbreviations follow the *Reallexikon der Assyriologie und Vorderasiatischen Archäologie*.

Fuchs 1994
Fuchs, A.
1994: Die Inschriften Sargons II aus Khorsabad, Göttingen.

Iqqur īpuš
Labat, R.
1965: *Un calendrier babylonien des travaux, des signes et des mois* (*séries iqqur īpuš*), Paris

Šumma ālu
Freedman, S.
1999: *If a City is Set on a Height. The Akkadian Omen Series Shumma Alu Ina Mele Shakin* (= Occasional Papers of the Samuel Noah Kramer Fund 17 and 19–20), Pennsylvania.

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PREFACE

This book is a reworked version of my doctoral thesis (Cambridge University, 2012). Its aim is to offer a sketch of Assyrian building practices and ideologies based on philological evidence.

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British Museum
Metropolitan Museum of Art

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Friends and family

To all, *ḫissatkunu ḫassāku.*

Bern, 10th of September 2019 J.T.C.

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INTRODUCTION

1 The setting

Mesopotamia is home to the world's earliest urban centres. For the first time, settlements experience exponential growth and buildings are designed according to monumental principles. Many clues to the origins and development of building styles and techniques are to be found in the landscape of Mesopotamia and its surroundings.

A predilection for permanent structures is what defines the first settlements of the Neolithic period (e.g. Göbekli Tepe, Jarmo, Jericho). This securely built environment not only promoted social cohesion but also increased possibilities of spatial differentiation and interaction, which was necessary for the emergence of complex societies, and provided a matrix for urbanisation as early as the late sixth millennium BCE (Uruk, Tell Birāk). This lead to the formation of city-states (e.g. Lagaš) and what is arguably the first "empire" (Akkad) in the third millennium BCE. Some centuries later, towards the early first millennium BCE, the Mesopotamian architectural scene experiences a major boost with the emergence of the Neo-Assyrian empire and its highly sophisticated building programmes. The Assyrians set a new architectural standard and imposed themselves as the builders of one of the most impressive architectural landscapes of the ancient world. The architecture of Assyria is the topic of this book.

The Assyrians originate from the land of Aššur centred on the Upper Tigris River in northern Mesopotamia. "Assyrian" (*Aššurû*) is the original self-denomination of this people. The earliest attestations of the term *Aššurû* trace back to the Old Assyrian period.[1] According to the texts (mainly royal inscriptions recording monumental building activities), the Assyrians make their first appearance on the Mesopotamian architectural scene in the twenty-first century BCE with the reign of Ušpia who is credited with the foundation of the first temple of Aššur in the city of Aššur.[2] The earliest documentation relating to Assyrian building activities comes from the reign of a certain Ititi (probably ruler of the city-state Aššur in the Old Akkadian period[3]). Some fifteen hundred years of Assyrian architecture followed. The last Assyrian building records belong to the reign of the Assyrian ruler who fell with the Assyrian empire in 612 BCE, namely Sîn-šarru-iškun, a son of Ashurbanipal.

The present book is a reworking of the author's doctoral thesis *Assyrian Building Practices and Ideologies according to the Assyrian Royal Inscriptions and State Archives* (Cambridge University, 2012). It investigates the topic of building based on two main sources, the Assyrian "royal inscriptions" (Old-Assyrian to Neo-Assyrian periods) and the so-called Assyrian "state archives" (Neo-Assyrian period), focusing on the Neo-Assyrian period due to the nature of the sources.

2 The questions

The aim of this study is to sketch a reconstruction of the Assyrians' perception of building, insofar as it can be summoned from their written legacy. Three dimensions are to be taken into account, which situate building as:

1. ideological and creative act
2. technical and administrative activity
3. artistic object

Our sources reveal that the Assyrians implicitly acknowledged these three fundamental dimensions of 'building'. Each dimension corresponds to a different take on the reality of building: building was treated at once as a symbolic act, a practical activity and an artistic endeavour. The Akkadian term *nikiltu* widely used by Neo-Assyrian kings in their building accounts may help to illustrate this semantic division. A bit of *nikiltu* is necessary to render the meaning of *nikiltu* and translations will vary according to the context: it can mean "ingenuity", "skill", "artistry" or even "cunning". When a king decides to build, Ea/Enki typically bestows *nikiltu* upon him. It is this *nikiltu* which will enable him to technically succeed in creating extraordinary buildings. The architectural achievement is itself commonly described as *šipir nikilti* ("work of art"). *nikiltu* therefore not only provides the creative impetus necessary to the building act but also facilitates the actual building process and will define the final product.

The three dimensions described here should be taken only as reading guidelines. They provide an analytical framework but are not watertight categories. Questions will be tackled thematically, according to their order in the building process, which is reflected in the arrangement of chapters (see 'The

1 Cf. CAD: *aššurû.*
2 Cf. Aššur-aḫu-iddina, RINAP 4, 57, iii 17.
3 Cf. Grayson in RIMA 1: 7.

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methodology' below). The leading principle is terminological, focusing on Akkadian terms that relate to the materiality of architectural space in so far as it was described by our sources and to the extent that the texts can be matched by archaeological evidence or at least satisfactorily supplement it. Studying terms relating to such broad questions as the usage of space (e.g. names of rooms) would require, in addition to the philological analysis, a full archaeological investigation that takes into account behavioural patterns, which falls outside the scope of this work.

The final aim of this book is to decide whether it can be surmised that the Assyrians had, through a mosaic of terms, linguistically conceptualised, in Akkadian, a *sense* of "architectural space" according to the broadest definition. Of course, the Akkadian employed by the Assyrians (be it Standard Babylonian or Assyrian dialect) is only one aspect of a much broader and complex linguistic phenomenon which starts off as "Old Akkadian" in third millennium BCE Babylonia and has eventually turned into "Neo-Babylonian" by the first millennium BCE. However, the purpose of this book is not to provide a historical overview of the semantic evolution of given Akkadian terms but rather to offer a "snapshot" on the usage of given terms by a given population at a given time in a given context.

3 The sources

Analytical reflections on 'building' as a topic in itself are in the Akkadian and Sumerian sources typically rare and most of the time incidental. In order to gain a sense of the broader picture one is therefore faced with the task of having to carve out information from a great disparity of sources, all genres, languages, periods and provenances confounded. As observed by Hilgert, handling such a profusion of data requires much caution as one may easily be misled into "*kulturgeschichtliche Chimäre*".[4] It is thus of prime importance for philologists interested in architecture to work from the most comprehensive data available, and to open insofar as possible the discussion to specialists from other fields, especially archaeologists and architects, so that they may take it further. This has been attempted here based on a well-defined group of sources (see especially ▸ **chapter 8**).

The material under investigation consists of Akkadian texts primarily, with occasional references to Sumerian texts. The two main sources under investigation are the Assyrian royal inscriptions (Old Assyrian to Neo-Assyrian periods), and the so-called Assyrian "state archives" (Neo-Assyrian period, more specifically Sargonid era). Due to the nature of the sources, the bulk of the discussion will be centred on the Neo-Assyrian period (first half of the first millennium BCE). The Assyrian inscriptions are typically written in Standard Babylonian, sometimes displaying assyrianisms, whereas the Assyrian state archives can be written in the Neo-Assyrian or Neo-Babylonian dialects, using either the Neo-Assyrian or the Neo-Babylonian scripts, depending on the identity of the sender and recipient.

The last section of the chapter on planning (▸ **1.7**) is devoted to the omen series *Šumma ālu* and *Iqqur īpuš* by virtue of this literary genre's relevance to building.

Archaeology is the royal road for the study of buildings and architecture, providing invaluable information of a very tangible nature. The philological perspective is, as a result, easily overlooked. And yet, texts provide a unique vocal counterpart to the silent ruins. The ideal investigation will take into account both archaeological and philological materials. This book aims to offer leads in that direction, all the while endorsing the philological approach.

The Assyrian royal inscriptions and state archives were chosen as principal working material because they situate building in different contexts. Each corpus is composed of hundreds of texts, most of which have been published in recent editions (see following sections for detail of editions used). Because the royal inscriptions were developed over centuries as a fixed tradition, we may assume a degree of continuity is inherent to their form and content, so that the earliest Assyrian royal inscriptions under Erišum may inform the latest under Sîn-šarru-iškun, and vice-versa. It is therefore important that the entire corpus of Assyrian royal inscriptions from the earliest to the latest periods be taken into account, even though the focus will be on the Neo-Assyrian period. In contrast, the state archives belong specifically to the Neo-Assyrian period; they alone will constitute the main point of comparison with the Assyrian royal inscriptions. Comparing the royal inscriptions which span a millennium with the state archives which only span about three centuries, should help us understand how the longstanding ideological tradition of building may have fed into the historical reality of building activities in a well defined period. We may also find that the historical realities of building activities in the Neo-Assyrian period could have influenced variations in the flow of the royal inscriptions' tradition.

Comparing and contrasting to this material the omen literature, which, although not Assyrian-specific, would have reflected and influenced the beliefs of the time, should further broaden our scope of understanding, providing ways of measuring the significance of disparities and/or regularities in the data (▸ **1.7**). Omen literature receives a special treatment here for three reasons. First, it constitutes a self-contained tradition. This means it can stand as a third measure to our two main sources. Then,

4 Hilgert 2014: 292.

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it has not yet received all the scholarly attention it deserves, especially as regards its wider significance to specific domains of life such as building and architecture, which are of particular concern in the omens. Finally, there is some overlap between our two main sources and the omen series: some omen material related to building is found in both the royal inscriptions and state archives. This study will serve to identify such instances. An important building-related textual corpus which must be mentioned here in relation with ritual practices are the building rituals for which Claus Ambos provides a very comprehensive study.[5] Building rituals have been taken into consideration in this thesis as part of the building process of which they are an essential component. They are not, however, treated as a separate source because, *in substance,* they are more informative of religious beliefs than of building ideology.

Whilst differing in purpose, the Assyrian royal inscriptions and state archives were both produced by and for the state. The perspective they offer on Assyrian society is relatively well rounded. The documents that constitute the royal inscriptions and state archives were designed with the ultimate purpose of serving Assyrian imperialism, directly or indirectly. What they reveal most saliently are the high level mechanisms of the empire (cultural, political, administrative, military).

A preliminary survey of our sources showed that they contain substantial data about building, on different levels (technical, social, ideological). Since they were produced within royal circles their main architectural focus are temples and palaces. Occasionally, and often incidently, houses belonging to commoners are mentioned. This is the case, for example, when lower classes solicited as workforce had to be accommodated.

a. Royal inscriptions

The first royal inscriptions date back to the Early Dynastic period and were written in Sumerian. The term "royal inscriptions" refers to inscriptions written for posterity in the context of official enterprises carried out under the authority of specific rulers. In the Assyrian context, three main types of inscriptions may be distinguished, namely the dedicatory inscription (dedicated by humans to gods) and the property marker (marking the property of rulers), which in the Neo Assyrian period led to the development of the commemorative inscription (commemorating the exploits of rulers)[6].

As literary genre, the royal inscriptions naturally made their way into the literary practices of the Old Akkadian, Babylonian and Assyrian cultures. Old, Middle and Neo-Assyrian inscriptions have been investigated for the purpose of this thesis, from Erišum (ca. 1974–1935 BCE) in the late third millennium to Sîn-šarru-iškun (627–612 BCE) in the first half of the first millennium. The Assyrian royal inscriptions, all produced under Assyrian rulers, cover a wide geographical range in terms of their provenance. Assyrian royal inscriptions have been found as far north as modern day Lice (Turkey) in what would have been the ancient kingdom of Šubria[7], as far south as Uruk[8], as far west as Cyprus[9], and as far east as modern day Najahefabad (Iran) in what would have been ancient Media[10].

The Assyrian royal inscriptions could have the form of foundation documents buried in the substructure of buildings or of propagandist decoration displayed on the visible surfaces of buildings (walls and in-built sculptures), monumental statues, steles and even cliffs. Although Assyrian royal inscriptions could encompass different subjects, most notably military campaigns, their most common primary purpose was to dedicate related buildings to the gods and request divine blessings for these buildings and their builders. They provided accounts of the building activities carried out by specific rulers all the while celebrating and commemorating these rulers. It should be pointed out here that inscriptions would often have been elaborated and installed before the building was actually completed. This means they could at times be more indicative of wishes than realities and might also explain in part why they displayed a tendency for formulaic, general descriptions.[11]

Temples and palaces were a visible and imposing manifestation of power. As such they very efficiently conveyed religious and political ideologies. Building accounts enhanced by descriptions of temples and palaces represent a significant proportion of the royal inscriptions. Descriptions are either narrative or encapsulated in epithets. They can be figurative or abstract, realistic or metaphorical. There is little variation across centuries in the type of figurative language used in the building accounts, although certain motifs might be more or less developed based on the ruler. Patterns may be identified, meaning it is possible to assume a degree of constancy in the significance of the imagery. Imagery is intrinsically associated with terminology, so it can give useful indications as to the nuances represented by different terms. Moreover, for the imagery to be understandable, the associated terminology has to be employed with fixed meanings. The royal inscriptions may therefore be employed to refine our understanding of building terminology.

One issue which must be kept in mind when dealing with the royal inscriptions is, of course, the

5 Ambos 2004.
6 Renger 1980–1983: 65–77.
7 Morandi 1988: Fig. B.
8 See for example Šarru-ukīn, RIMB 2, B.6.22.3.
9 Morandi 1988: Fig. B.
10 Morandi 1988: Fig. B.
11 On this question see Lackenbacher 1990: 179.

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question of bias, whether it be in our approach of the texts or in the texts themselves, that is, as incurred by the modern scholars or sustained by the ancient scribes. On the modern level, bias is easily incurred when inferring conclusions from the existence or non-existence of evidence. For example, a number of royal inscriptions were recovered from rulers who, based on the available evidence at least, appear not to have had the greatest of impacts on the following generations of rulers. In contrast, the memory of kings such as Šarru-ukīn of Akkad was kept alive until the latest periods of Mesopotamian history. Does a large quantity of preserved building inscriptions entitle us from a modern perspective to consider those rulers powerful or should we assume even greater quantities of texts from more important rulers may not have been preserved? Moreover, how important and indicative of power would a building event and its recording have been? Some significant building events may not have been recorded in texts but are visible in the archaeology. On the ancient level, bias could be maintained for political purposes. Texts of a public nature can be tendentious. Rulers could exaggerate their descriptions of palaces and temples for propaganda. It will be possible to assess the plausibility of data from the royal inscriptions by comparing it to data from the state archives, and contrasting it when possible to archaeological evidence.

Editions

Assyrian inscriptions up until the reign of Aššur-nērārī (745 BCE) are covered by the RIMA series (1–3) edited by Albert Kirk Grayson[12]. Sargonid inscriptions found in Babylonia up until Aššur-etel-ilāni and Sîn-šarru-iškun were published in the RIMB 2 volume by Grant Frame.[13] One inscription of Aššur-etel-ilāni from Assyria (Kalḫu) is known, published by Michael Streck.[14] Inscriptions of Sîn-šarru-iškun from Assyria, although not very numerous, have as yet not been edited comprehensively; a bibliography of published texts is available in PNA 3/1: 1143–1145.[15]

The "Royal Inscriptions of the Neo-Assyrian Period (RINAP) Project" has set itself to the task of publishing in print and online on the Open Richly Annotated Cuneiform Corpus (ORACC)[16] every official inscription of the Neo-Assyrian rulers from 744 to 669 BCE. The inscriptions of Tukultī-apil-Ešarra III and Salmānu-ašarēd V (RINAP 1) were edited by Hayim Tadmor and Shigeo Yamada, drawing extensively on Tadmor's earlier edition of Tukultī-apil-Ešarra III's inscriptions.[17] The inscriptions of Aššur-aḫu-iddina (RINAP 4) were edited by Earl Leichty.[18] This edition follows up on Borger edition.[19]

Šarru-ukīn's Dūr-Šarrukīn inscriptions have been edited by Andreas Fuchs and constitute the main source of texts investigated here.[20] Other texts studied are Šarru-ukīn's Eighth Campaign edited by Walter Mayer[21], the Kalḫu prisms edited by Cyril Gadd[22] and the Nimrud Inscription edited by Hugo Winckler.[23] Šarru-ukīn's inscriptions are yet to be published in the RINAP series (RINAP 2).

The inscriptions of Sîn-aḫḫē-erība (RINAP 3/1 and 3/2) have been edited by Albert Kirk Grayson and Jamie Novotny.[24] The commentary to Sîn-aḫḫē-erība's inscriptions by Eckart Frahm is a very valuable complement.[25]

The reference system used for Aššur-bāni-apli's inscriptions is that used in Jamie Novotny and Greta Van Buylaere's edition of Aššur-bani-apli, Aššur-etel-ilāni and Sîn-šarru-iškun's inscriptions (RINAP 5), which at the time of writing has not come out in print yet but is already available online on ORACC.

b. State archives

The label "state archives" is used for convenience to refer to what appears like a corpus of texts produced in the context of everyday life by different branches of the same administration. It is not known whether this corpus is the result of a conscious archival programme but there is no evidence to prove the contrary so, with due diligence, it is legitimate to adopt the "state archives" logic as some common ground must be accepted by scholars for any discussion to be possible.[26]

The "state archives" consist mainly of letters (typically reports, administrative, political and scholarly) composed by Assyrian officials for other officials or for the kings, as well as letters composed by the kings themselves. They also contain administrative texts (e.g. lists), treaties and contracts.

"Archival" texts are typically defined against "library" texts (i.e. literary compositions).[27] Literary compositions ("belles lettres") have nevertheless been published in the State Archives of Assyria series (SAA 3) no doubt because the definition of what constitutes "archival" and "library" materials fluctuates.[28] Literary compositions are either in Neo-As-

12 Grayson 1987; 1991; 1996.
13 Frame 1995.
14 Streck 1916.
15 See also Novotny/Van Buylaere 2009.
16 Go to http://oracc.museum.upenn.ed/rinap [accessed on 25.07.2018].
17 Tadmor/Yamada 2011; Tadmor 2008.
18 Leichty 2011.
19 Borger 1956.
20 Fuchs 1994.
21 Mayer 2013.
22 Gadd 1954.
23 Winckler 1889.
24 Grayson/Novotny 2011 and 2012.
25 Frahm 1997.
26 For a discussion of this question see Fales 2001: 92–96 and Parpola 1986.
27 Tadmor/Yamada 2011; Tadmor 1994.
28 See Parpola 1986.

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syrian dialect or in Standard Babylonian mixed with Late Babylonianisms or Assyrianisms.

The letters (including scholarly reports) constitute the bulk of the state archives and are the main focus of this study (esp. SAA 1, 5, 10, 13, 15, 16, 17, 18, 19)[29]. They are particularly valuable as accounts of everyday life written on a short-term basis, and because they are likely to contain elements of spoken/vernacular language. Letters often document the stages of building works, in concise terms, elaborating on the quantity/quality of time, space, materials and workforce needed. Since they reproduce personal discourses sometimes in direct speech, they also provide insights into individuals' interpretations of space.

Administrative texts (esp. SAA 7 and SAA 11) are another important source of data that receives special attention here. They are informative of the way building activities were organised.

Contracts/treaties[30] and a selection of literary texts[31] were taken into consideration for their potential to document everyday concerns that might be relevant to perceptions of building and space. They were not however specifically exploited as data because this would have implied opening a breach into the very vast topics of law and mythology, which takes us away from the primary purpose of this thesis.

The largest portion of "state archives" was recovered from Nīnawā and amounts so far to about 6.000 documents[32], which corresponds to a bit more than 50% of the approximate 10.000 complete tablets found at Nīnawā;[33] the remaining texts fall in the "library" category. Other important repositories of "state archives" (letters) are Aššur, Guzāna, Kalḫu and Dur-Šarrukīn.[34] Overall, the "state archives" cover the period from the reign of Adad-nērārī III to that of Sîn-šarru-iškun, i.e. ninth to seventh century BCE.[35] This study focuses on the Sargonid period (721–614 BCE) because it is the one best documented. It nevertheless takes into account relevant information from earlier periods (e.g. documents ND 404 and ND 2666 from the eighth century, probably Tukultī-apil-Ešarra III's reign),

The geographical span of the correspondence is very broad. For letters touching upon building matters it extends from Amedi (modern Diyarbarkır, Turkey) in the north to Kissik (possibly modern Tall al-Laḥm, Iraq) in the south, and from Que (modern Adana, Turkey) in the west to Kār-Šarrukīn (possibly modern Malāyer, Iran) in the east.

Editions

Most of the Neo-Assyrian archival material has been published through the State Archives of Assyria series directed by Simo Parpola, published in print (see bibliography for detail of editions) and online on ORACC[36]. A number of texts are yet to be published, most notably Aššur-bāni-apli's correspondence.

The *Governor's Palace Archive* from Kalḫu edited by Nicholas Postgate[37] and Henry Saggs' *Nimrud Letters*[38] are used here as the main sources for everyday building-related information predating Šarru-ukīn. The documents published as *The Governor's Palace Archive* deal with legal and administrative matters. They were found in the palace that belonged to the governor of Kalḫu and date from the eighth century BCE, some may be ascribed to the reign of Šarru-ukīn. The documents published as the *Nimrud Letters* can be dated to the reigns of Tukultī-apil-Ešarra III and Šarru-ukīn, some may be assigned to the reign of Salmānu-ašarēd V. The letters were found in the chancery office of the Northwest Palace of Kalḫu, then the Assyrian capital. They were sent to Kalḫu from all parts of the Assyrian empire, dealing with administrative, political and military matters.[39]

c. Omens

The omen series *Šumma ālu* and *Iqqur īpuš* belong to the corpus of "traditional knowledge" transmitted by Babylonian and Assyrian scholars throughout the centuries. Omens are statements consisting of a protasis and an apodosis. They are organised systematically by their protases ("if" clauses), treating a wide range of mundane topics. The protasis articulates a potential situation; the apodosis gives the portended outcome. Omen series constitute a genre of their own. They do not fit into modern epistemological categories, standing midway between ideological and pragmatic approaches to reality. *Šumma ālu*

29 Also taken into consideration as "correspondence" although yielding virtually no building-related data: SAA 4, 8, 9 i.e. queries to Šamaš, astronomical reports, oracles.

30 SAA 2, 6, 7, 14 — all from state/royal (or very closely connected) contexts.

31 Texts referenced and their provenance: SAA 3, 14 (Love lyrics of Nabû and Tašmētu) < 'unknown'; SAA 3, 40 (Commentary on the Assyrian cultic calendar state ritual) <Nīnawā or Aššur; SAA 3, 12 (Righteous Sufferer's Prayer to Nabû)< Ḫuzirīna, domestic context, private library of scholar (?); SAA 3, 39 (mystical miscellanea) < archive in private house at Aššur, tablet belonging to Kiṣir-Aššur, exoricst of the temple of Aššur; SAA 3, 33 (Sin of Šarru-ukīn) < Nīnawā; SAA 3, 34 (Marduk's Ordeal) < Aššur temple library and archives. Although some texts come from private (and not royal) archives/libraries, they are included in our sources here because they belong to the state-promoted scholarly tradition.

32 SAA 1: xi.

33 See Weidner 1952–1953: 198.

34 Fales 2001: 100.

35 Fales 2001: 95.

36 Go to http://oracc.upenn.museum.edu.saao [accessed on 25.07.2018].

37 Postgate 1973.

38 Saggs 1952.

39 For more on the Kalḫu letters see <http://www.ucl.ac.uk/Sargon/essentials/archives/thenimrudletters/>.

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treats a very wide range of topics, including building-related matters. The main *Šumma ālu* tablets related to building are tablets III–XVII. *Iqqur īpuš* is exclusively devoted to building, as suggested by its title. It elaborates on the auspiciousness of building activities according to months, thereby falling in the hemerological category. The *Šumma ālu* and *Iqqur īpuš* omens are written in Akkadian, making heavy use of logograms.

Fragments of both omen series were recovered across Mesopotamia, in standardised and non-standardised form. Our knowledge of the omen series derives from copies of the standard texts (the series in their most complete, unified form), ancient catalogues, excerpt tablets (texts excerpted from the series), *aḫû*-omens (stand alone non-standard omens), alternate traditions (= "abnormal" excerpts), scholarly reports, commentaries, other omen series and ritual texts.[40] There is some overlap between the two series as regards the hemerological content.[41]

The earliest evidence for *Šumma ālu*-type omens dates from the Old Babylonian period, although the vast majority of *Šumma ālu* texts date to the middle of the seventh century BCE.[42] *Šumma ālu* texts in Neo-Babylonian script indicate that such omens were part of the scholarly tradition all the way up to the fourth century BCE. The chronological range of these omens therefore spans about 1500 years. The largest concentration of *Šumma ālu* copies was found in Assyria.[43] A significant portion of copies was collected in the seventh century by Aššur-bāni-apli's scholars for his library in Nīnawā. Copies were also found at Aššur, Kalḫu, Huzirīna, Babylon, Borsippa, Sippar, Susa.[44]

As for *Iqqur īpuš*, the oldest copies come from late second millennium Emar although the hemerological tradition existed already in the Sumerian culture, as evidenced by Sumerian proverbs devoted to time.[45] The majority of known copies are from Assyria, most notably Aššur-bāni-apli's library in Nīnawā. Copies were also found at Aššur. Other provenances for the first millennium are Kalḫu and Babylon. Middle Assyrian copies were also found at Aššur. The tradition is attested until the Seleucid-Parthian period at Uruk. An Elamite copy was found at Susa.[46]

Editions used for *Šumma ālu* and *Iqqur īpuš* are Freedman 1998, 2006 and Labat 1965 respectively. *Šumma ālu* in its standardised form (i.e. *Šumma ālu ina mēlê šakin*, the official title assigned by ancient scholars) consisted of at least 107 tablets.[47] So far only the first forty tablets have been edited comprehensively by Freedman[48], this includes tablets III–XVII devoted to building-related matters. Labat's edition of *Iqqur īpuš* covers the 105 "paragraphs" of the *série générale* (omens arranged by themes) and the 12 months of the *série mensuelle* (omens arranged by months). Our understanding of the *Šumma ālu and Iqqur īpuš* series (and related sources) progresses at the same pace as the discovery of new fragments and their assemblage, which is an arduous process since these omen series belonged to a very widespread Mesopotamian tradition.

Omen series can be described as "elite" material since they had their place in royal libraries. It is likely, however, that the ideas they contained filtered down to or up from the common people, as reflected for example by the protagonist "LU_2/NA" (man) in *Šumma ālu* (▸ **1.7**), a protagonist who is often encountered in omen series.

4 The methodology

The first step in the analysis of the sources was to compile a raw collection of all the building data available. It was then necessary to group the data into categories of information and further establish connections between different categories. It became clear that questions would be best addressed in the order in which they would occur in the course of a building process, that is, starting with the planning and ending with the actors involved.

In order to present a reconstruction of the Assyrians' perception of architectural space according to the three aforementioned dimensions of 'building' this work provides a comparative account of Assyrian building practices and ideologies according to two different types of sources, one highly ideological and produced for posterity (the royal inscriptions), the other more pragmatic and intended for everyday life (the state archives). The similarities that emerge should reveal something of the deeply rooted beliefs underlying the Assyrians' perception of space, in other words, whatever was transmitted regardless of authorial intentions, i.e. *the universal*. The differences will reflect aspects of what would have been the Assyrians' matter-of-fact approach to space, i.e. *the specific*. Evaluating the nature of the architectural objects themselves will be informative of the artistic effort supplied.

Part II ('Themes and concepts of space in perspective') discusses from a modern point of view those themes and concepts that emerged in Part I. This involves delving into considerations related to the fields of philosophy, sociology, anthropology,

40 See Labat 1975–1976: §9; Freedman 1998: 5–13; Maul 2003–2005: §3 and §4.1.
41 Freedman 1998: 11–12.
42 Freedman 1998: 13.
43 Freedman 1998: 14.
44 Maul 2005: §4.1.
45 Labat 1972–1975: §10.
46 Maul 2005: §3.
47 Freedman 1998: 14.
48 Freedman 1998; 2006.

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architecture. The framework chosen for the discussion is archaeological and is articulated around the notions of form, location, utilitarian function, symbolic function and agency. It is an attempt to reconcile philological and archaeological approaches to space.

Throughout the study, horizontal bars signal the key terms and expressions discussed in each given section.

5 Previous studies

What follows is a non exhaustive but representative survey of studies which have approached the Assyrian royal inscriptions and state archives architecturally or, inversely and more generally, have delved into Mesopotamian architecture from a philological point of view.

The building narratives of the Assyrian royal inscriptions have been studied by Sylvie Lackenbacher in her fundamental work *Le roi bâtisseur: les récits de construction assyriens des origines à Tukultī-apil-Ešarra III*[49] which was followed by the more concise *Le Palais sans rival: le récit de construction en Assyrie*[50]. *Le roi bâtisseur* is a comprehensive study of Assyrian building narratives from Šalim-aḫum (early twentieth century BCE) to Tukultī-apil-Ešarra III (747–727). It does not include the inscriptions of the Sargonid period. The study is divided into five main parts, namely: I) "l'oeuvre", II) "motifs et moyens", III) "travaux", IV) "consécration", V) "formule finale". The building narratives are very much approached as a literary genre. The texts are studied systematically following the various stages of the typical building narrative. Part I discusses the main traits of an Assyrian building narrative and summarises the factual information gained from the texts for the various monuments mentioned. Parts II to V dissect the texts, exposing the literary procedures employed and discussing the main themes, all the while highlighting the related Akkadian terms and expressions. An appendix at the end lists, per chapter, all relevant text passages. *Le Palais sans rival* is more general in its approach. It is a broad un-annotated survey of recurrent themes in Assyrian building narratives, covering the full span of Assyrian history. Both *Le roi bâtisseur* and *Le Palais sans rival* are indispensable companions to the building accounts of the royal inscriptions.

The Assyrian royal inscriptions have otherwise been tackled from many different angles, the authors either focusing on a specific ruler or on a specific building, and always paying special attention to the building narratives. Eckart Frahm's *Einleitung in die Sanherib-Inschriften* offers the most complete discussion of Sîn-aḫḫē-erība's inscriptions available to date, including comments on architectural terms in various places.[51] Two sections are devoted to Sîn-aḫḫē-erība's building narratives: "Bauberichte" (Part three, IIc) provides a general outline of the narratives' most characteristic features, whilst "Das Bauprogramm Sanheribs nach den Bauberichten" (Part three, IV) summarises the written information available for each building mentioned by Sîn-aḫḫē-erība. Steven Lundström's contribution entitled "Die Baugeschichte des Alten Palastes von Assur nach den schriftlichen Quellen" in Pedde/Lundström 2008 proposes a chronological survey of the materials from the Assyrian royal inscriptions which deal with the Old Palace of Ashur.[52] This survey includes very useful discussions of some of the spatial terminology encountered in the texts.

Assyrian hydraulic structures, which fall outside the scope of this work, have been treated at length by Ariel Bagg in *Assyrische Wasserbauten*, based on Assyrian royal inscriptions, letters, legal and administrative documents.[53] The first part of the study discusses the material relating to hydraulic structures chronologically, per ruler. The second part proceeds thematically, distinguishing between hydraulic structures used "actively" and "passively", for military purposes or for agriculture.

Novotny offers a general summary of temple building in Assyria based on the royal inscriptions in his contribution "Temple Building in Assyria. Evidence from the Royal Inscriptions" published in Boda/Novotny 2010.

The theme of building has seldom been addressed concerning the Assyrian state archives. Simo Parpola paved the way with an article entitled "The Construction of Dur-Šarrukin in the Assyrian Royal Correspondence" where he describes the building process based on a selection of representative documents from the state archives.[54] Karen Radner devotes chapter eight of her book *Die Neuassyrischen Privatrechtsurkunden* to a terminological study of the house entitled "Das Haus nach den neuassyrischen Rechtsurkunden".[55] This study is of particular value to the present work since it provides an outlook into private/domestic space, which will complement the treatment of public/monumental space proposed here.

More generally, those scholars who have addressed the question of architecture philologically have made important, often seminal, contributions, a representative selection of which will be mentioned here. A number of scholars have focused on architectural terminology specifically. Baumgartner 1925, Falkenstein 1966 and Salonen 1961, 1972

49 Lachenbacher 1982.
50 Lachenbacher 1990.
51 Frahm 1997.
52 Pedde/Lundström 2008.
53 Bagg 2000.
54 Parpola 1995.
55 Radner 1997.

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offer philological surveys of selected building terms in Sumerian and/or Akkadian. Von Soden 1975 provides an overview of temple terminology. Neumann 1996 and Freydank 1985 have also devoted articles to the discussion of single architectural terms. The social significance of building activities has equally been investigated. Ambos discusses Mesopotamian building rituals in their literary and social contexts.[56] Dietz Otto Edzard studies the design of Babylonian temples through a survey of architectural terms and investigates the function of architectural metaphors.[57] The volume on temple building in the ancient Near East and the Bible [by] Boda/Novotny 2010 echoes Hurowitz 1992 who looks at temple building in the Bible in light of Mesopotamian and North-West Semitic writings[58].

Both philologists and archaeologists have used philological data to improve archaeological reconstructions, and vice versa. For his study on Mesopotamian foundation deposits, Ellis 1968 complements the archaeological evidence with discussions of relevant Akkadian and Sumerian terms. Dunham 1980, 1986 combines archaeological research with philological analyses of relevant Sumerian architectural terms. George 1995 proposes reconstructions for the layout of Esagil based on topographical and metrological texts. Heimpel 2009 offers a terminological investigation of construction work at Garšana. More recently, in the first volume of *Wissengeschichte der Architektur* edited by Jürgen Renn, Wilhelm Osthues and Hermann Schlimme, Sievertsen/Hilgert 2014 tackle the current state of knowledge on Mesopotamian architecture based on archaeological and philological sources respectively.[59] Finally, the broader question of urbanism and distribution of space as inferred from texts has in recent years gained momentum amongst philologists and archaeologists alike. For example, Baker 2014 investigates the urban morphology of Babylonian cities whilst Kertai 2014 discusses the terms *bābānu* and *bētānu* in the context of late Assyrian palaces.

The present book differs from previous works in its scope and focus. Its aim is to offer an overview of how the practice of building and architecture were conceptualised by the authors of the Assyrian royal inscriptions and state archives. For this purpose, the guiding principle will be neither literary nor chronological but terminological, taking Akkadian building-related terminology as anchor, and proceeding thematically according to the various stages of the building process. Given the large quantity of sources involved, a wide-angle approach has been adopted: all periods and areas are considered simultaneously meaning that temporal and spatial variations affecting the content of the sources will be treated case-by-case.

56 Ambos 2004.
57 Edzard 1987.
58 Hurowitz 1992.
59 See Sievertsen and Hilgert in Renn/Osthues/Schlimme 2014.

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1 PLANNING

Planning, in the most general sense, is the first stage of any building enterprise. It is accounted for in the Assyrian sources both on the project and realisation levels. Due to their ideological character, the royal inscriptions are especially informative about Assyrian planning on the project level, explaining in abstract terms what inspired and motivated Assyrian rulers to build. In contrast, daily administrative records from the state archives reflect more mundane preoccupations on the realisation level: building matters are dealt with pragmatically and the data produced is rational.

Architectural planning is central to the building accounts of the Assyrian royal inscriptions, especially in the Sargonid period. It is not however treated like a theme per se. References to architectural planning are relatively rare and quite laconic, often only implicit. They nevertheless gravitate around four notions:

1. plans are inspired acts not routine; the incentive may be practical and/or religious

2. plans must be ratified by divine support and carried out in a 'proper' manner

3. plans are designed and measured according to models and ideals

4. plans require an expert labour force

The first two notions situate planning on the abstract project level, the third and fourth notions situate planning on the more material level of realisation. Whilst the royal inscriptions inform us essentially about the ideology of planning, the state archives give insight into the different stages of planning and how planning requirements were implemented. The state archives provide a wealth of data on building as a royal enterprise. Planning royal building projects seems to have been a very organised process, on the administrative level (realisation) as well as on the creative level (project). Correspondence relating to Šarru-ukīn's building project at Dūr-Šarrukīn is particularly informative. Also to be pointed out are the instances in which the notion of planning is valued as an act per se, imbedded in a moral tradition.

Section 1.7 ("Omen series") at the end of this chapter investigates how planning information obtained from the Assyrian royal inscriptions and state archives ties in with planning principles underlying the omen literature (series *Šumma ālu* and *Iqqur īpuš*).

1.1 The motivations

The act of building was permeated by religious beliefs. As we shall see, purely practical reasons for building were rarely provided. The rationale behind building acts was very much one of piety. Assyrian rulers always built or rebuilt temples and palaces with the gods in mind, to ensure blessings for themselves and their reign. They regularly express their hope that the gods will look upon them favourably. For example, Tukultī-apil-Ešarra I prays that the commitment he put into building the temple of Anu and Adad will have a positive effect **Tp. 1, viii 23 – viii 24**:

> *Anu u Adad kīniš lusaḫrūnimma*
>
> May Anu and Adad faithfully turn towards me!

Temples and palaces are often ordered by the gods. For example, Šarru-ukīn states that he built his palace in Dūr-Šarrukīn upon the supreme command of the gods Ea, Sîn, Ningal, Adad, Šamaš and Ninurta (*ina qibitīšunu ṣirte*) **Fuchs 1994, Zyl. 63**.

Cases in which Assyrian rulers provide as reason for building anything other than the gods' satisfaction are virtually absent from our sources. There is just one instance in which Sîn-aḫḫē-erība's plans appear, at least in part, motivated by a certain pragmatism. He planned the foundation of his Palace without a Rival in Nīnawā so that it would not be weakened by floods at high water, surrounding its lower course with slabs of limestone **RINAP 3/1, 3, 52**:

> *ina mīli kiššati temmenšu lā enēše askuppāt pīli rabbâti ašurrūšu ušasḫira*
>
> Against the weakening of its foundation by floods at their highest, I had its lower course surrounded with great slabs of limestone and so strengthened its base.

This can be described as the only explicitly pragmatic programme in all of the Assyrian royal building accounts[1], if one excludes the frequent references

1 This pragmatic concern is echoed in an inscription of Aššur-aḫu-iddina where the cause for the dilapidation of Gula's temple in Borsippa is given as the river's flooding (cf. RIMB, B.6.31.10). Here, however, there is no mention that planning was designed to prevent damage. Similarly, Salmānu-ašarēd I (RIMA 1, A.0.77.2) reports that a fire broke out in the temple of Aššur under Šamšī-Adad I, and Aššur-bāni-apli mentions that heavy rains destroyed the fortification wall of Aššur under Sîn-aḫḫē-erība (Aššur-bāni-apli, RINAP 5, 4, vii 58 – vii 64) but neither king explicitly states that his rebuilding was designed to prevent further damage.

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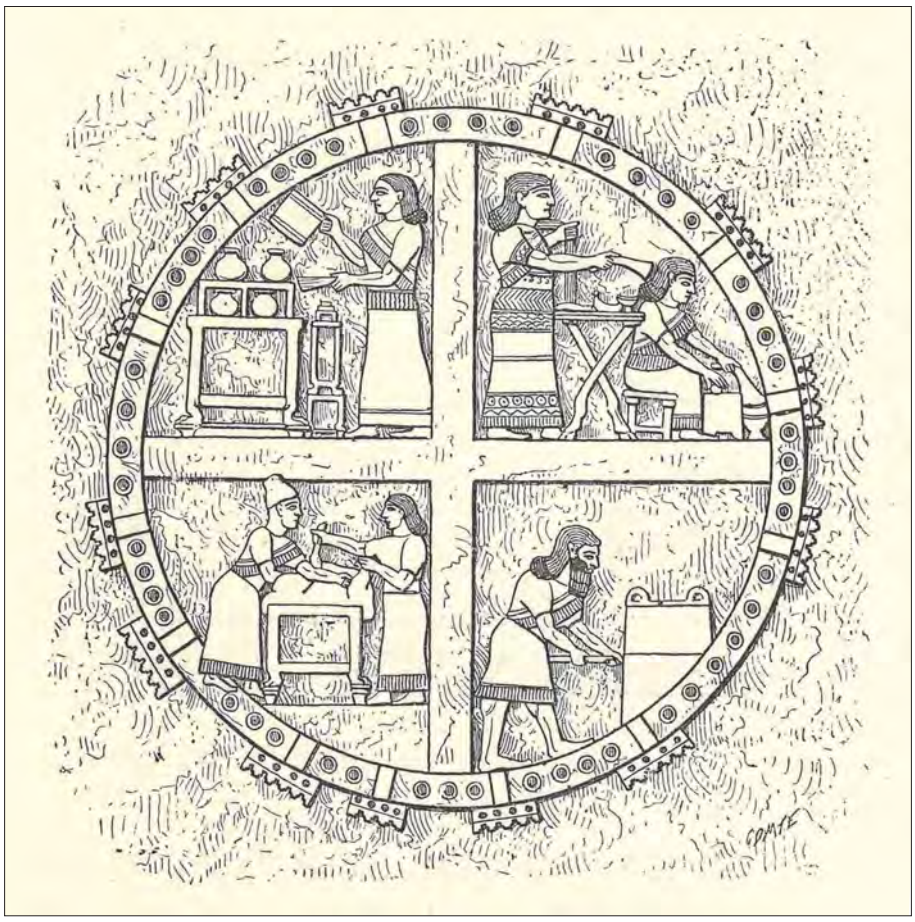

Fig. 1: Symbolic plan of an Assyrian fortress depicted on a relief from the North-West Palace of Aššur-nāṣir-apli II, ME 124548, British Museum (Perrot/Chipiez 1884: Figure 155).

to renovating buildings because they were damaged or have become old[2], given that renovation, although suggesting a form of pragmatism, was in that context essentially a requisite of tradition. Although practical explanations are always missing, pragmatism is nevertheless discernible to some extent in the attitudes to building of certain rulers, such as Aššur-nāṣir-apli II. Of all Assyrian kings with a legacy of building accounts substantial enough to display patterns, Aššur-nāṣir-apli appears to be the most pragmatic. Unlike other kings, Aššur-nāṣir-apli II never explicitly presents his building decisions as divinely inspired, even though the gods are always mentioned. He builds in order to repair what is broken, or for the sake of building as a way of affirming his legitimacy and power **RIMA 2, A.0.101.1, ii 131 – ii 132**:

> (…) *Kalḫu ina eššūte aṣbat tēlu labēru unakkir adi muḫḫi mê lū ušappil 120 tikpī ana mušpāli lū uṭabbi bīt Ninurta bēlīya ina qerbīšu lū addi* (…)
>
> (…) I seized Kalḫu for renovation. I cleared away the old ruin mound. I lowered (it) to water level and sank (it) to a depth of 120 layers of bricks. The temple of Ninurta, my lord, I founded therein. (…)

Further evidence of Aššur-nāṣir-apli's matter-of-fact approach to building is an instance, quite unique in the royal inscriptions, where he declares about the temple of Šarrat-nipḫi:

> *ekurru šī ana nanmar malkī u rubê ša dārâte ēpuš*
>
> I built this temple for the eternal joy of rulers and princes.[3]

This suggests Aššur-nāṣir-apli built the temple of Šarrat-nipḫi more to please future generations of rulers than the goddess herself. A schematic representation of a squarely organised fortress from a relief in Aššur-nāṣir-apli's North-West Palace **[FIG. 1]** somehow evokes this ruler's very pragmatic approach to planning..

2 See for example Adad-nērārī I, RIMA 1, A.0.76.16, 33–41; Aššur-nāṣir-apli II, RIMA 2, A.0.101.56, 14b–17a; Salmānu-ašarēd III, RIMA 3, A.0.102.47, 4–9; Aššur-aḫu-iddina, RINAP 4, 78, 37–39.

3 Aššur-nāṣir-apli, RIMA 2, A.0.101.32, 10.

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Pragmatism could, of course, also be driven by religious beliefs. Such an attitude is discernible in the inscriptions of the Middle Assyrian king Arik-dīn-ili. His incentive for building is pragmatic but the logic behind it is religious. He builds the temple of Šamaš at Aššur so that the harvest of his land may prosper:

enūma aššum ešēr ebūr mātīya epēš bīt šâtu akpudu ina parak Šamši ašri šaqî ša ina maḫra purussû māti ašaršu iddânu inanna ana tubkī u karmī itâru itâtīšu ešrēt nišī ša iṣbatāma [*i*]*rmâ aḫbut*

When I planned to build that temple, so that the harvest of my land would prosper, at the sanctuary of Šamaš, the high place — where previously the judgement of the land was rendered and which by now had returned to heaps and ruins — in its surroundings, the shrines of the people which they had taken hold of and abandoned, I cleared away.[4]

kapādu, libbu, uznu[5]*, kabattu*

The building act was considered a personal initiative of the ruler. It was as such intrinsically linked to the seats of consciousness and emotions, in other words, rationality and sentience. Šarru-ukīn presents planning as an intellectually demanding exercise **Fuchs 1994, Zyl. 49**:

ana šūšub āli šâšu zuqqur paramaḫḫī atman ilāni rabûti u ekallāti šubāt bēlūtīya urra u muša akpud aṣrimma epēšu aqbi

For the settlement of this city, day and night[6] I strove to plan and ordered for execution the erection of pre-eminent daises, cella of the great gods, and of palaces, the seat of my lordship.

Assiduous planning demonstrated the ruler's compliance with the will of the gods. Interestingly, the verb most commonly used for planning, *kapādu*, is used to signify "hasten" in the Neo-Babylonian period, and "make someone hasten" in the Š-stem, suggesting a sense of urgency.[7] It may not be a coincidence if Tukultī-apil-Ešarra I associates planning with constancy and perseverance towards completion **RIMA 2, A.0.87.1, viii 17 – viii 24**:

kīma anāku bīta ella atmana ṣīra ana mušab Anim u Adad Ilāni rabûti akpudūma lā apparkû ana epēši ahī lā addû ḫanṭiš ušeklilūma libbi ilūtīšunu rabīti uṭību Anu u Adad kīniš lisaḫrūnimma.

Because I planned the pure temple, the exalted shrine for the abode of the gods Anu and Adad, the great gods my lords, without ceasing, because I was not slack in the work and had it quickly completed, because it pleased their great divinity – may the great gods Anu and Adad faithfully turn to me!

To justify his architectural decisions, Sîn-aḫḫē-erība evokes the "ingenuity of his heart" **RINAP 3/1, 22, 53–58**:

ina niklat libbīya ekal pīli u erēni nepešti Ḫatti u ekallu ṣirtu epšet Aššur (…) *ušēpiš*

In the ingenuity of my heart, a palace of limestone and cedar of Ḫatti workmanship and a splendid palace — work from the land of Aššur — (…) I had built.

Elsewhere, Sîn-aḫḫē-erība explains that his building project in Nīnawā "came to his understanding" according to the will of the gods, and that he "set his mind to it":

yâti Sîn-aḫḫē-ēriba šar māt Aššur epēš šipri šuātu kī ṭēm ilāni ina uznīya ibšīma kabattī ublamma

To me, Sîn-aḫḫē-erība, king of the land of Aššur, the building of this work according to the will of the gods came to my understanding, and I set my mind (to it).[8]

Sîn-aḫḫē-erība's piety appears to reach beyond religious duty through the experience of divine inspiration. Planning is regularly presented as being divinely inspired. In fact, divine inspiration could be described as a core element of the Assyrian royal dialectic since it is regularly evoked to justify and motivate the most important decisions.

1.1.1 Relationship with the divine

The Assyrians' approach to the divine may be understood as operating within a dichotomy transcendence/immanence[9], and this was reflected in their architecture. Whilst the Assyrians' mental conception of building was fundamentally transcendental, distinguishing between the divine and human realms, their experience of building on a daily life could not be separated from the gods, because divinity, although distinct from humanity, was ubiquitous and immanent. The gods were supreme but they always interacted with humans and therefore had to be taken into account in every planning venture.

4 Arik-dīn-ili, RIMA 1, A.0.75.1, 15–40.
5 See also ▸ **7.1**.
6 This idea that a ruler could be so obsessed with planning that it prevented him from sleeping is already present in Gudea's cylinders. It is said of Gudea as he built the E-ninnu that "sweet sleep did not enter his eyes" and that "he went in constant worry to the house" (Cyl. A, xix 13 – xx 4).
7 Cf. CAD: *kapādu* (5); notice also in Malku 8, 17 the equation *ṣa-ra-mu* | *ka-pa-du.*
8 Sîn-aḫḫē-erība, RINAP 3/1, 4, 68.
9 The term transcendence is here used to describe the understanding that the gods exist above humans beyond the material, whilst the term immanence is used to describe the understanding that the gods exist on the same level as humans within the material world.

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It was accepted that buildings should befit their occupants. Temples were commonly referred to as "seat of divinity"[10] and palaces as "seat of kingship"[11]: they had to be appropriate for the wellbeing of gods and kings respectively. It would therefore be tempting to imagine that these two types of buildings embodied two distinct values of space analogous to their respective religious and political functions, but this is in no way a given conclusion. It may be necessary to separate the notion of spatial value (in this case, sacred/secular) from that of spatial function (in this case, religious/political) because temples and palaces as spatial units appear to have a shared significance: whilst from an external objective perspective temples served mainly religious functions and palaces mainly political functions, one should keep in mind that from the subjective perspective of their occupants both were essentially places to dwell in, where religion was the norm. The semantically loaded translations "temple" for *bīt ili* (E_2.DINGIR) and "palace" for *ekallu* (E_2.GAL) somewhat obscure the original Mesopotamian understanding of these spaces. The terms *bīt ili* (E_2.DINGIR) and *ekallu* (E_2.GAL) are best translated literally, that is "house of the god" and "big house".[12] Both concepts are, of course, based n the Sumerian etymon e_2 (house/building), even though e_2-gal may well represent the Sumerian etymologizing of a Wanderwort of unknown origin.[13] This means that *bīt ili* and *ekallu* were first and foremost domestic spaces designed for the wellbeing of their occupants. Whilst "divine affairs" were principally dealt with in the *bīt ili* and "worldly affairs" in the *ekallu*, there was a distinct porosity between both spheres. The sacred (what pertains to the gods) was not constructed in opposition to the secular (what pertains to humans). Instead, the sacred was part of the secular.

The good fortune of the kings was intrinsically correlated with that of the gods, and as a result, that of the palaces with that of the temples. If the gods were pleased with the worship they received — the most elaborate expression of which were the temples — the king was granted their blessings. Temples were consecrated for divine worship, to host rituals, but divine worship did not stop beyond the limits of the temple, so in a sense, worship space was ubiquitous. This meant that a palace could also be a place of worship, albeit not a consecrated one.[14] A certain religiousness transcended perceptions of space even outside the temples. To please the gods and to legitimise their sovereignty, Assyrian kings celebrated divinity on all levels of their lives. On the architectural level this meant that secular space[15] was made to mirror sacred space. It may be argued that Assyrian kings consciously attempted to blur the boundaries between royal and divine space. This is already suggested in the fact that they were keen to cohabit with their gods, which appears to have been a common practice. Tukultī-apil-Ešarra I presents his palace as a palace of the god Aššur. He points out that since ancestral times, although — unlike temples — palaces are not consecrated as divine residences, once a year, kings welcome gods into their palaces as part of a festival[16] **RIMA 2, A.0.87.4, 85–87**:

> *k*[*ī*] *pî ekallātēma maddāte* [*šar*]*rāni ālik pānīya lā uqaššid*[*ū*]*šināma ana šubāt ilūti lā iškunū* […] *ekallu erēni šâti išteat šatta e*[*kal Aš*]*šur bēlu u ilāni rabûti.*
>
> Like the many palaces which the [kin]gs who came before me did not ma[ke sa]cred and did not consecrate as divine residences […] this cedar palace once a year became the pa[lace of Aš]šur, the lord, and of the great gods.

Tukultī-Ninurta I equally seems to imply that he cohabited with the gods when he states that he built Elugalumunkurkurra as his royal residence and as rooms for all the great gods:

> *Elugalumunkurkurra* [*ekalla šu*]*bat šarrūtīya* [*u bit*]*āt puḫur ilāni* [*rabûti a*]*na bēlūtīya* [*abni*]
>
> Elugalumunkurkurra, a pa[lace, se]at of my kingship, a[nd ro]oms f[or] the assembly of the gr[eat] gods, [I built] for my lordship.[17]

Perhaps also attempting to merge royal and divine space together, Tukultī-apil-Ešarra III builds in his palace a cella (*atmanu*) of gold and choice stones:

> *ana šubat šarrūtīya atman šašši nisiqti abnī šipir tam*[*lê*] *armâ*

10 E.g. Aššur-aḫu-iddina, RINAP 4, 105, v 23 – v 25.

11 E.g. Aššur-nāṣir-apli II, RIMA 2, A.0.101.23.

12 Arguments in favour of understanding Mesopotamian "temples" as houses have long been put forward, starting with Kraus 1935, but the term "temple" seems to have become anchored in the assyriological tradition. For a historical review of the scholarly debate arguing for the understanding of *bīt ilim as* "house" and new arguments corroborating this view, see Neumann 2014: 53–57.

13 For the origins of the Sumerian e_2-gal see Rubio 2017.

14 Typologically, we must agree with Kertai (2015: 239) that late Assyrian palaces appear to not have included rooms which may be qualified with certainty as temples or cellae. That the gods were made to inhabit the palaces, if only temporarily, is however clearly stated in the texts. This suggests we may have to think of palatial space as polyvalent: palace rooms could serve as shrines even though they were not necessarily typologically designed as such.

15 The expression "secular space" designates here those spaces not specifically or exclusively devoted to the performance of religious cult.

16 For discussion of festival see van Driel 1969: 165–167.

17 Tukultī-Ninurta I, RINAP 1, A.0.78.3, 30–34.

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> As seat of my kingship, a cella of gold (and) a selection of stones — the craft of inlay — I established. [18]

It is not clear whether this cella would have been destined for the king's own use or for the worship of the gods, but in any case Tukultī-apil-Ešarra III's project reveals a desire to conciliate the world of the gods with that of the living. The term *atmanu* is usually employed to refer to divine chambers, only one other case in which the term is associated with royalty has been recorded and it is from the inscriptions of the Neo-Babylonian king Nabû-kudurrī-uṣur II[19]. Royal cohabitation with the divine is attested in Assyrian inscriptions until the late Neo-Assyrian period. Naqīa/Zakūtu, Aššur-aḫu-iddina's mother, establishes in an inscription that she built for her son a palace in Nīnawā and invited the gods therein.[20] Also to be mentioned here are the throne-rooms incorporated to temples such as the throne-room attached to the temple of Nabû at Kalḫu in which Aššur-aḫu-iddina's vassal treaties were found.[21]

Another case where space of secular function incorporates divine elements is evidenced in the inscriptions of both Šarru-ukīn and Sîn-aḫḫē-erība: tower gates of their cities' inner fortification wall are named after deities and thereby somewhat personified.[22] Šarru-ukīn builds eight tower gates in the directions of the four winds (NE, NW, SW, SE), and each tower gate is named after a deity according to the deity's properties. In addition, the inner fortification wall containing these tower gates is named after the god Aššur, and the outer fortification wall surrounding the inner fortification wall is named after Ninurta.[23] Sîn-aḫḫē-erība builds fourteen tower gates in the direction of the four winds — eight at the point of sunrise to the south and east winds, three to the north wind, three to the west wind.[24] Each tower gate is named after a deity and according to the significance of its geographical orientation, often pointing to a place to which its direction leads. The inner and outer fortification wall are not named after deities, instead their names suggest they keep enemies away. Naming defensive structures and more specifically the entries to the city after deities no doubt had an apotropaic function. Associating spatial features with deities and wind directions also gave them a distinct cosmological dimension. In a similar way, Šarru-ukīn placed mountain rams and *lamassu*-deities of solid stone at the entrances of his *bīt ḫilāni*, specifying that they were oriented according to the four winds **Fuchs 1994, Stier 75–77**:

> *immerī šaddê lamassāti ṣirāti ša aban šaddi ešqi nakliš aptiqma ana erbetti šārī ušaṣbita šigarīšin*
>
> Mountain rams and tall *lamassu*'s of solid mountain rock I fashioned artistically and I placed their locks towards the four winds.

The fear of the gods triggered the desire to get on their side. To achieve this, it was necessary to avoid evil, which was possible through apotropaic measures. Apotropaism should therefore be understood here, in spite of its etymology, as not only a method to avert evil but also as one to attract fortune. The ideal architecture was conceived as one that kept evil out and brought good fortune in. Sometimes certain buildings proved to have been particularly conducive to happiness due to the positive events they were associated with. They could then be regarded as architectural models to aim for. The desire to re-establish the order that reigned in an idealised past was ever present. Aššur-bāni-apli plans to rebuild the *bīt redûti* where he grew up as crownprince because he believes it has a good fortune. The thought of it brings back to him memories of a blissful past that echo with his present success. For example, not only did the *šēdu*'s and *lamassu*'s of that house protect his crownprinceship (*šēdīšu lamassātīšu iṣṣurū mār šarrūti*) but later it was also in that house that as king he repeatedly received good news of the defeat of his enemies (*kayyān pussurat ḫadê ša kašād nakirīya upassarūinni ina libbīšu*) **RINAP 5, 9, vi 34 – vi 35**.

1.1.2 Finding inspiration and ratification for building projects

1.1.2.a Listening to the gods through divination

Religious observance was inherent to all royal actions. Divine accord was essential to any royal decision, as is attested by the expression employed by Sîn-aḫḫē-erība regarding his Palace Without a Rival: this work came to his understanding and he set his mind "according to the counsel of the gods" (*kī ṭēm ilāni*).[25] The idea that the plans of an omnipotent king were limited by divine will was never an obstacle to the king's scope of action because with a bit of cunning it was always possible to get around divine ordinances. It is the case in one of Aššur-aḫu-iddina's building inscriptions which explains that he undertook to reconstruct Babylon eleven years after its destruction, instead of seventy years as stipulated

18 Tukultī-apil-Ešarra III, RINAP 1, 47, 33′.
19 Cf. CAD: *atmanu* (2).
20 Aššur-aḫu-iddina, RINAP 4, 2003; note that years earlier Sîn-aḫḫē-erība had also invited his gods into his palace at Nīnawā, cf. Sîn-aḫḫē-erība, RINAP 3/1, 15, viii 8′′ – viii 11′′.
21 For a discussion of Mesopotamian throne rooms see Margueron 2007.
22 ▸ **5.2.2.a;** ▸ **8.2.1.b.**
23 Šarru-ukīn, Fuchs 1994, Stier, 81–92 and XIV, 41–49.
24 Sîn-aḫḫē-erība, RINAP 3/1, 15, vii 25 – vii 24′.
25 Sîn-aḫḫē-erība, RINAP 3/1, 4, 68.

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by the tablet of destiny, because Marduk, appeased, reversed the order of signs so that the cuneiform for 70 now read 11 **RINAP 4, 114, ii 12 – ii 18**:

> *70 šanāti minût nidûtīšu ištˇurma rēmēnû Marduk šurriš libbāšu inūḫma eliš ana šapliš ušbalkitma ana ištēššer šanāti ašābšu iqbi*
>
> 70 years the merciful Marduk wrote as calculated time for its[26] abandonment. (But) quickly his heart calmed down. The top turned into the bottom and he pronounced 11 years (as time before) its (re)occupation.

This pragmatic use of a sacred tablet does not however speak against the king's piety. On the contrary, it suggests he was keen to comply with divine regulations. It was important to secure the good grace of the gods. Throughout his inscriptions, Aššur-aḫu-iddina expresses great concern about obtaining divine approval, on more than one occasion he seeks to obtain a categorical "yes" from the gods by divination. The destructive actions implied by renovation were taken very seriously by Assyrian kings, who feared the reaction of the gods. Aššur-aḫu-iddina describes his state of anxiety as he waited for the gods to give their verdict concerning the rebuilding of the temple of Aššur **RINAP 4, 57, iii 42 – iv 6**:

> *ana udduš bīti šuātu akkud aplaḫ aršâ nīd aḫi ina makalti barûte Šamaš u Adad annu kēnu īpulūnīma ša epēš bīti šuātu udduš atmanīšu ušašṭirū amūtum*
>
> I throbbed, I was afraid, I faltered about the renovation of that temple. In the diviner's bowl Šamaš and Adad answered me a firm yes and they had the building of that temple (and) the renovation of its cella written on a liver.

Adad and Šamaš, to whom it was typically appealed in matters of divination and justice, respond favourably. Ea/Nudimmud, in his role as god of wisdom, was also frequently invoked concerning building plans, since building is a craft that requires great skills.[27] Other gods commonly invoked are Kulla, the god of bricks, and Mušdama, the master-builder of Enlil **Fuchs 1994, Zyl. 60**[28]:

> *ana Kulla bēl uššē libitte u Mušda šitimgallum ša Enlil nīqa aqqi serqu asruqūma attaši šu'illakka*
>
> For Kulla, lord of foundations and brick, and Mušda, great master builder of Enlil, I made animal sacrifices, presented strewn offerings and performed a *šu'illaku*-prayer.

The inscriptions make it clear that decisions were made in the fear of the gods and with the help of the gods: ideas came to the mind and heart of kings with the consent of the gods. It is thanks to the deep wisdom and broad understanding granted to him by Nudimmud that Aššur-aḫu-iddina thinks of renovating the sanctuaries of Esagil **RINAP 4, 105, iii 29 – iii 38**[29]:

> *ina uzni rapašti ḫasissi palkî ša išruka apkal ilāni rubû* ^{d}*Nudimmud ana šūšub ali šâšu udduš ešrēti nummur māḫāzī ina uznīya ibšīma uštabil kabattu ana epēš šipri šuāti*
>
> In the deep wisdom and broad understanding that the expert of the gods the prince Nudimmud gave me it came to my understanding to populate the city, renovate the sanctuaries and brighten the cultic centre and the heart prompted me to accomplish that work.

It is also as "slave fearful of his[30] great divinity" (*ardu pāliḫ ilūtīšu rabītim*) that Aššur-aḫu-iddina trusts in his heart to proceed with the building works.[31] There is clear evidence that divine orders came through provoked omens. Aššur-aḫu-iddina, who was afraid to act without divine consent, double checks the appropriateness of re-building the temple of Aššur and renovating its cella through lecanomancy (*ina makalti barûte*) for a yes/no answer and through extispicy for "written" confirmation on a liver (*ušašṭirū amūtum*) of what has to be done **RINAP 4, 57, iv 6**.

It is less clear whether the Assyrians ever relied on unprovoked omens to plan a building.[32] In one inscription Aššur-bāni-apli claims that the goddess Ištar-Kidmūri instructed him regarding building works on her sanctuary "through a dream, the work of ecstatics" (*ina šutti šipir maḫḫê*) **RINAP 5, 6, i 56′**. He had these instructions ratified by Šamaš and Adad who confirmed them with a positive answer. It seems the dream was dreamt by an ecstatic and it is therefore likely it was provoked through professional methods.

Sometimes Assyrian kings declare they received divine orders to build but without specifying how this occurred. Tukultī-apil-Ešarra I claims that the building of temples was ordered to him by the gods,

26 Refers to Babylon.

27 For more on the role of gods see ▸ **7**.

28 See also Aššur-bāni-apli, RINAP 5, 12, Frgm.1 24′.

29 The juxtaposition of *uznu* and *ḫasīsu* is first introduced by Tukultī-apil-Ešarra III. See Tukultī-apil-Ešarra III, RINAP 1, 47, 17′: *ina uzni nikilti ḫasīsi palkê* "with the wisdom of ingenuity and broad understanding".

30 Refers to Marduk.

31 Aššur-aḫu-iddina, RINAP 4, 106, ii 24.

32 This is discussed further down under "Specifications". For comparison, reliance on unprovoked omens is attested under Gudea and in the Neo-Babylonian period under Nabû-na'id. Gudea dreamt Ningirsu was showing him the Eninnu in full grandeur, which was interpreted as a sign to build the Eninnu, the king then implored Ningirsu in his temple for more information and subsequently dreamt another dream in which Ningirsu explained to him how to build the Eninnu (Cyl. A, i 17–23, ix 5 – ix 10). As for Nabû-na'id, he dreamt he had to rebuild the Ebabbar and had a premonition of how this would happen, cf. Schaudig 2001, Nabû-na'id Stelenabschriften, Ebabbar zu Larsa, i 67 – ii 16.

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implying the gods do not only take part in the building process passively but also actively. Adad and Marduk order the rebuilding of their shrines **RIMA 2, A.0.87.1, vii 71 – vii 75**:

> *Anu u Adad Ilāni rabûti bēlīya rā'imū šangûtīya epāš atmanīšu iqbûni*
>
> Anu and Adad the great gods my lords who love my priesthood commanded me to build their cellas.

It is nevertheless not obvious whether this order would have come through provoked or unprovoked omens. Earlier, in the Middle Assyrian period, Tukultī-Ninurta I states **RIMA 1, A.0.78.11, 83–84**:

> *Ištar beltīya bīta šanâ ša el maḫrî ayyakkaša quššudu īrišanimma*
>
> Ištar, my mistress, requested from me another temple which would be holier than her previous shrine..

Here again not much detail is given regarding the nature of the request and it is not clear what is meant by "holier" but everything suggests Tukultī-Ninurta I was obeying very specific orders.

Building projects were not always executed to satisfy divine ordinances. They could also be carried out in recognition of divine favours. Military victories, for example, would have been considered a form of divine favour. Building projects were typically undertaken in the aftermath of successful military campaigns. Not only did successful military campaigns provide the material means to build in the form of spoil but they were also brandished as proof of the divine support enjoyed by Assyrian kings, which could not be more appropriately celebrated than through the renovation or erection of buildings that honoured the gods.

1.1.2.b Auspicious timing

Timing was a major parameter in the planning process of a building. Certain months and days were considered more appropriate than others. This was ordained in omen texts based on signs from heaven and earth, but may also in some cases simply have reflected practical realities, which could in fact equally be the origin of certain omens. For example, summer months, when the climate was at its driest, were always considered propitious for the making of bricks. Šarru-ukīn specifies that he made the bricks for Nabû in *Simānu* (III), i.e. May–June, which is the month for "the making of bricks, the building of city and house" (*ana laban libitti epēš āli u bīti*) and he explains that he laid the foundations in *Abu* (V), which is the month of the god Gibil "who establishes firmly the foundation of city and house" (*mukīn temen āli u bīti*) **Fuchs 1994, Zyl. 61**. With Sîn-aḫḫē-erība appears the expression *ina arḫi šemê ūmu mitgāri* ("in a favourable month, on an auspicious day") to mean the time was propitious for building **RINAP 3/1, 22, 51–52**. Such expressions were thereafter commonly used by Sîn-aḫḫē-erība's successors to indicate the timing complied with the ritual calendars. A variant is *ina arḫi šalmi ūme šemê* ("in a sound month, on a favourable day") employed by both Aššur-aḫu-iddina and Aššur-bāni-apli[33]. Aššur-aḫu-iddina uses it to refer to a time in the month *Šabāṭu* (XI) that he describes as "the month carried in the heart of Enlil" during which he organises the renovation of the *bīt mumme* in Baltil (Aššur).[34]

1.1.2.c Sound architectural choices

To explain his repair works on the Ehusaggalkurkurra at Aššur **RINAP 3/2, 166**, Sîn-aḫḫē-erība reports that "the (original) characteristics of the sanctuary had fallen (into oblivion) since distant days" (*ultu ūmē ruqūti simātīšu imqutāma*) with its "gate built towards the south-east" (*bābšu petû ana šūtim*); he decides to restore the original character of the buildings by opening a new gate "towards the rising sun, opposite the north-east wind" (*ana napāḫ Šamši meḫret šadî*), an orientation also described as "towards the breast of Aššur" (*ana irat Aššur*) suggesting the gate may have been designed to face the statue of the god Aššur, which would then have been placed towards the west[35].

Sîn-aḫḫē-erība claims he took counsel with himself alone through the wisdom and cleverness bestowed upon him by Ea and Aššur respectively, and he points out that he then had his decision ratified by Šamaš and Adad. There is archaeological evidence that Sîn-aḫḫē-erība built an extension to the Aššur temple (known as "Ostanbau"), which was connected to the cult room by the aforementioned new gate.[36] This meant the cult room could now be accessed through two entrances: the old one that was found on the southwest side, and the new one, on the southeast side. It appears that what Sîn-aḫḫē-erība describes as "towards the rising sun, facing the east wind" corresponds to the southeast, whilst "facing the south wind" is the southwest. As noted by Govert van Driel who refers to Otto Neugebauer and Ernst Weidner, this must be a case where wind directions are only meant to indicate very general orientations: it was not unusual that intermediate compass points should be approximated to the most convenient or ideal cardinal points.[37] Using the

33 Aššur-bāni-apli, RINAP 5, 10, v 44. Note that Aššur-bāni-apli also uses the variant *ina arḫi ṭābi ūme šemê*, see for example Assurbanipal, RINAP 5, 12: Frgm.1 19′.

34 Aššur-aḫu-iddina, RINAP 4, 48: 80.

35 The new gate was an addition and would not have replaced the old gate since the old gate appears to have been kept in use, cf. Frahm 1997: 171.

36 See "Ostanbau" in van Driel 1969: 21–31.

37 van Driel 1969: 24. See also Neugebauer/Weidner 1931.

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winds as references offered some flexibility in terms of orientation.

The fact that Sîn-aḫḫē-erība consulted the gods for the orientation of the new gate indicates it had to be ritually sound. According to the *Šumma ālu* omen series, if the doorways of a house open towards sunrise (^{d}UTU.E$_3$/*ṣīt Šamši* distinguished from the east wind IM.KUR.RA/*šadû*) or the south wind they are propitious, if toward sunset (^{d}UTU.ŠU$_2$/*erēb Šamši*, distinguished from the west wind IM.MAR.TU/*amurru*) or the north wind, they are not propitious:[38] adding a gate toward the east would be propitious.[39] Sîn-aḫḫē-erība's decision could therefore be backed up by the omens. Note that Sîn-aḫḫē-erība's inscription makes no mention of the west *erēb Šamši*/*amurru* ("setting sun"/"west wind"), thereby avoiding its negative connotations.[40]

1.2 Creative process: design and measure

Our sources are seldom explicit about the exact dimensions and shapes of buildings. Dimensions are given, but not consistently, and, in royal inscriptions, their precision is typically subject to debate. The shapes of buildings are never described in detail: they can sometimes be broadly deduced from dimensions when these are given, and occasionally they may be hinted at by metaphors or technical jargon. What is made clear is that architecture was planned according to models and ideals, reflecting on the one hand the Assyrian rulers' reverence towards the past and its traditions, but revealing also on the other hand a desire to excel and do always better.

1.2.1 Concepts

nikiltu; iṣratu; šiṭru; gišḫurru; mišiḫtu; šikittu

In passage **RINAP 4, 116, r. 15 – r. 19**, Aššur-aḫu-iddina explains how he built Esagil. This passage is interesting because it introduces various concepts, all referring to different stages or aspects of the construction of a building. A special emphasis is placed on design. After Aššur-aḫu-iddina laid the building's foundations (*uššīšu addīma*) he went on to fastening its brickwork (*ukīn libnāssu*) and arranging its skilful design (*unakilla nikiltuš*). He drew its outline (*eṣṣira iṣrassu*) as the image of its writing (*tamšil šiṭrīšu*), measured its wall's size (*mišiḫtašu amšuḫ*) according to its previous plan (*kī gišḫurrīšu maḫrî*), made fast its foundation like the base of a mountain (*temmenšu kīma šupuk šadî danni udannin*), and built its structure as of old (*kīma ša ūmē pani šikittašu*[41] *abnīma*).

Outline, size, foundation and structure are all designed according to age old principles. The outline (*iṣratu*) follows what is presumably an ancient writing (*šiṭru*). It is not clear what type of writing is meant, it may refer to a written document, but there is also most likely an allusion to *šiṭir burūmê* the "writing of the firmament" recurrently evoked in the building accounts of Assyrian royal inscriptions. The allusion to *šiṭir burūmê* is made more probable by the fact that the concepts *iṣratu* and *šiṭir burūmê* are used together by Sîn-aḫḫē-erība who states that "with the writing of the firmament the drawing was drawn" (*itti šiṭir burummê eṣrassu eṣretma*) **RINAP 3/1, 1, 64**. Admittedly, the constellations of stars informed the outline of the building's ground plan. Exactly how is unclear. It could be that the ground plan reproduced the shape of a constellation.[42] Alternatively, the stars may have permitted calculations which were used in the plan's measurements. Then, the size (*mišiḫtu*) of the wall is measured according to a plan (*gišḫurru*), pointing to the technical function of *gišḫurru*. It suggests *gišḫurru* refers to some form of ancient document onto which would have been recorded the original dimensional specifications of the temple for future architects to consult. Finally, the foundation (*temennu*[43]) is likened to the base of a mountain, which stresses its strong and imutable character, whilst the general structure (*šikittu*) appears to follow ancient tradition.

38 Cf. *Šumma ālu* V, 69–72.

39 *Šumma ālu* V, 73–74 gives the orientations "toward the east wind" and "toward the west wind" (*ana šadî* and *ana amurrî*) as inauspicious, distinguishing the ordinal quadrants "rising/setting sun" from the directions "east/west wind". Sîn-aḫḫē-erība's text specifies the new gate is "towards the rising of the sun" (*ana napāḫ Šamši*), "opposite the east wind" (*meḫret šadî*). There is a nuance between "*ana*" and "*meḫertu*", the latter has a more confrontational connotation. It is therefore safe to assume that the gate was essentially perceived as built toward the rising sun, and not toward the east wind, in spite of being "opposite" the east wind. It may be that the gate was built against the wind blowing from the east. The expression "*meḫret šadî*" could also be understood as "opposite (the direction towards which) the east wind (blows)", i.e. "opposite west", suggesting *šadî* could be referring to the direction of destination rather than origin of the wind. That winds stand for the direction of their destination is also suggested by the Late Babylonian tablet BagM Beih. 2 no. 98 discussed by Horowitz (1998: 193–207, esp. 201).

40 Notice in a parallel inscription by Sîn-aḫḫē-erība (RINAP 3/1, 15 vii 8′ – vii 9′; 16 vii 52 – vii 53) the absence of the logogram UTU.ŠU$_2$, all the more significant since its counterpart UTU.E$_3$ figures. For more on the orientation of gates see ▸ **5.2.2.a**.

41 According to Novotny (RINAP 3/1: 38 fn 78) *tisarru* is sometimes used instead of *šikittu*, for example in RINAP 3/1, 1, 78).

42 See ▸ 1.**2**.3.

43 For a discussion of *temennu* see ▸ **2**.

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išratu/*ešratu* (spelt also *mišratu*) likely corresponds to the outline of the ground plan. The translation "outline" (i.e. "delineation"or "delimitation") is based on the fact that in other contexts *išratu* is found to mean "border line"[44]. *išratu* is similar in meaning to *ušurtu* but less widely attested.[45] *ušurtu* is often used in an abstract sense with the meaning "design". It can nevertheless also be used in a material sense (typically in the plural) to designate ground plans. For example, Nabû-šuma-iddin makes a copy of an inscribed brick from the time of Amar-Suen explaining it was found by Aššur-bāni-apli's governor Sin-balassu-iqbi as he was looking for the ground plan (*ušurāti*) of Ekishnugal **RIMB, B.6.32.2016, iv 32**. The fact that the term *ušurtu* was used to designate a document of obligations in the Old Assyrian period suggests it may also have been associated with the concept of document in an architectural context. The difference between *išratu* and *ušurtu* (*pirsat* and *purust* forms of the same verb *ešēru*) appears to be that the latter is more complex in meaning, the former referring essentially to a two-dimensional shape. Both terms are found in figura etymologica with *ešēru*. Lexical lists associate the verb *ešēru* with the Sumerian verb ḫur[46], meaning "to scratch/trace", which speaks for the graphic value of *išratu* and *ušurtu*: etymologically, both words would mean something like "tracing". "Plan" in both the sense of document and project is rendered by *gišḫurru*. Through its etymology (from Sumerian geš-ḫur), *gišhurru* could be referring to the result of tracing something with a wooden stick. It shares its logogram (GIŠ.ḪUR) with *ušurtu* ("drawing/plan/destiny"), of which it appears to be the Sumerian akkadianised pendent. In the Neo-Babylonian period, *gišhurru* and *ušurtu* are found together, which suggests they had by then acquired different meanings.[47]

1.2.2 Models

Starting in the reign of Aššur-nāṣir-apli II and his campaigns towards the west, Assyrian architecture becomes strongly influenced by foreign art, especially Hittite orthostat inscriptions and portal-figure relief-carving.[48]

Throughout the Assyrian royal inscriptions only one type of structure is explicitly described with reference to its architectural style, the *bīt ḫilāni*[49] from Ḫatti.[50] Tukultī-apil-Ešarra III was the first to mention the *bīt ḫilāni* in his inscriptions[51] **RINAP 1, 47, 18′**:

> *bīt ḫilāni tamšil ekal Ḫatti ana multa''ûtīya ina qereb Kalḫi ēpuš*
>
> A *bīt ḫilāni*, equivalent to a palace from the land of Ḫatti, I built for my pleasure in Kalḫu.

Šarru-ukīn also mentions the *bīt ḫilāni*[52]. He does so extensively, and each time stresses its exotic origins, as would later Sîn-aḫḫē-erība. In various instances Sīn-aḫḫē-erība explains how he designed his palace or parts thereof modelled after palaces of Ḫatti (*tamšil ēkal Ḫatti*). He uses two architectural terms to refer to the structure from Ḫatti, *bīt appāti* and *bīt muterrēti*. He explains that the Akkadian term *bīt appāti* refers to what is known in the language of Amurru as *bīt ḫilāni*, in all likelihood a special type of portico structure or a building characterised by such a structure[53] **RINAP 3/1, 1, 82**:

> *bīt appāti tamšil bīt Ḫatti ša ina lišāni Amurri bīt ḫilāni išassûšu ana multa''ûti bēlūtīya ušēpiša qerebšin*
>
> A *bīt appāti* equal to a palace of Ḫatti, which in the language of Amurru they call *bīt ḫilāni*, for the leisure of my lordship I had made within them[54]

The term *bīt muterrēti*, which should be understood as "building with double doors"[55], is used to designate the *bīt ḫilāni* structure. It is also described as "equal to a palace from the land of Ḫatti" (*bīt muterrēti tamšil bīt Ḫatti*) and is set in front of the gates of the palace of Nīnawā **RINAP 3/1, 17, vi 20 – vi 21**. Interestingly, Sîn-aḫḫē-erība's son, Aššur-aḫu-iddina, makes no mention of the *bīt ḫilāni*. As for Aššur-bāni-apli, he mentions it only once and incidentally, without alluding to its exotic origins: he covered great columns in shining copper and placed the architraves of the *bīt ḫilāni*'s gate on them.[56]

The existence of Akkadian(-ised?) terminology for a structure from Ḫatti suggests the structure was already well implanted in the Assyrian architectural landscape. It is therefore significant that Šarru-ukīn and Sīn-aḫḫē-erība should find it necessary to stress the Ḫatti origin of the structure. Clearly it was an expression of royal power to take over the customs of distant exotic cultures and prestige came with such

44 Cf. CAD: *išratu*.
45 Note that CAD appears to have erroneously listed an attestion of *išartu* under *ušurtu* cf. CAD: *ušurtu* (A.1b).
46 Cf. CAD: *ešēru*.
47 Cf. CAD: *ušurtu* (A.1a).
48 Hawkins 2003: 390.
49 See also ▸ **5.3.**
50 For a discussion of the *bīt ḫilāni* as archaeological and linguistic phenomenon see Novák 2004.
51 Uniquely in royal inscriptions Tukultī-apil-Ešarra III uses the spelling *bīt ḫitlāni*.
52 See Šarru-ukīn, Fuchs 1994, Zyl. l.64; Bro. ll.36–39; Si. ll. 23–24; Go. ll. 27–30; R. ll.20–21; Prunk. ll. 161–162.
53 See Kertai (2017) for the latest take on the *bīt ḫilāni* as structure. Kertai argues that the *bīt ḫilāni* must have belonged to the interior spaces of Assyrian palaces.
54 Refers to the palaces.
55 ▸ **5.2.2**.
56 See Aššur-bāni-apli, RINAP 5, 11, x 103 and 9, vi 56.

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displays of unlimited control[57]. Adopting foreign architectural codes would also make it easier for the Assyrians to communicate beyond the limits of their own culture, conveying their imperial messages to the foreign culture in an understandable and visible manner.[58] The expression "a replica of a palace of Ḫatti" (*tamšil ēkal Ḫatti*) moreover suggests the Assyrian kings would have been familiar with the notion of style. Styles reflect ways of living and thereby efficiently convey ideologies. Acknowledging architectural styles would have provided a basis on which to make decisions of ideological relevance during the planning process. Exoticism was nevertheless restricted to the "secular" architecture of palaces, temple architecture allowed no scope for eccentricity, the more faithful to tradition the better. The fact that Aššur-aḫu-iddina and Aššur-bāni-apli did not seek to establish foreign origins for their architecture may reflect the political shift that took place during their reigns, which was characterized by a willingness to reconcile Assyrian political powers with the Babylonian heartland and its ancestral culture.

It should also be pointed out that although Tukultī-apil-Ešarra III adopted foreign styles for his palace in Kalḫu, he prided himself on having made his palatial halls "more resplendent than the palaces of foreign lands" (*eli ēkallāte mātāti ušar*[*ri*]*ḫa*).[59] His admiration for exotic styles was tempered by a desire to do better.

1.2.3 Specifications

The main architectural landmarks of Assyrian cities were their temples and palaces. These two types of building would have been at the heart of any project of urban planning. Temples and palaces gave a physical visibility to divine and human powers in the city: they fixed messages of power. It was essential that the messages be clear. This relied on architectural specifications.

itti šiṭir burūmê; kīma simātīšu labirāti

It is no surprise that planning should be associated with stars considering the importance of divination to planning and the prominent role of stars in divination. The notion of *šiṭir burūmê* "writing of the firmament[60]" is first attested in the inscriptions of Sīn-aḫḫē-erība and later appears in those of Aššur-aḫu-iddina and Aššur-bāni-apli.[61] It has been convincingly interpreted as referring to constellations.[62] Mesopotamian sources quite commonly associate written signs with stars, which led to the lexical equation mul = *šiṭirtum* (Proto-Aa 139: 1–2/ MSL 14, 94) already in the Old Babylonian period.[63] An example of this phenomenon are the so-called Assyrian "astroglyphs" found on Lord Aberdeen's Black stone and the prisms of Aššur-aḫu-iddina. These have been aptly interpreted by Luckenbill as the *lumāšē* ("constellations") that Aššur-aḫu-iddina mentions in his inscriptions explaining that they have been carved to model his name **RINAP 4, 105, ix 26 – ix 30**[64]:

> *musarê ṭīdu ṣarputu lumāše tamšil šiṭir šumīya ēsiq ṣeruššun*
>
> On inscriptions of kiln-fired clay I carved astroglyphs equivalent to the writing of my name.

Michael Roaf and Annette Zgoll note that the astroglyphs may have been designed according to the relationship between the arrangement of the stars in the constellations and that of the wedges in the cuneiform signs.[65] In tune with these ideas, Francesca Rochberg draws attention to a seventh century scholarly text from Aššur[66] which describes the starry sky as a "lower sky" (*šamû šaplûti*) made of jasper on which Marduk drew the "constellations of the gods" (*lumāšē ša ilāni*) thereby confirming constellations were perceived as being traced on the sky like writing on clay tablets.[67] It is interesting that the verb *barāmu* from which *burūmû* is derived should be homophonous in the Neo-Assyrian period with *barāmu* "to emboss (inscriptions) on metal": this could be evoking the starry aspect of embossed metal. Sīn-aḫḫē-erība describes the god Aššur as dwelling in the pure/shining firmament

57 For a discussion of cultural borrowings as an attempt from the centre (Assyrian capital city and royal palace) to "take on the form of a microcosm which sums up the whole world" see Liverani 1979: 314.

58 For artistic relations between the Assyrian empire and North Syria see Winter 1982. Winter points to the importance of art as a "social and culturally-solidifying force", which would have been especially valuable to the Assyrians at the time of their military and political conquests. Winter suggests the Assyrians borrowed North Syrian forms of art to encode Assyrian imperial messages in a way which would make them publicly visible and understandable beyond the limits of Assyrian culture.

59 Tukultī-apil-Ešarra III, RINAP 1, 47, r. 25′.

60 The term *burūmû* is translated here as "firmament" to convey the association of the sky with stars in accordance with the accepted etymology of *burūmû*. The term *burūmû* has been related to the verb *barāmu* "to be speckled" due to the speckled aspect of stars in the sky, an interpretation which seems even more attractive considering that one Assyrian text (SAA 3, 39) describes the starry sky as jasper, a speckled stone.

61 The notion is also found in Neo-Babylonian texts in the form "*šiṭir šamê/šamāmi*", cf. Rochberg 2004: 1.

62 See for example Rochberg 2004: 1–3.

63 See Klein/Sefati (2014) for a discussion of mul "star" and mul.an "stars of heaven" in relation to the concept of cuneiform writing.

64 Luckenbill 1925: 165–173.

65 Roaf/Zgoll 2001: 289.

66 See SAA 3, 39, line 33.

67 Rochberg 2004: 1.

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(*āšib burūmû ellūti*), which reflects the luminous aspect of *burūmû*.[68]

Sîn-aḫḫē-erība explains that the drawings for the foundation of Nīnawā were drawn "with celestial writing as of old" (*ultu ulla itti šiṭir burummê eṣrassu eṣretma*) **RINAP 3/1, 1, 64**, which suggests celestial writing encapsulated meanings which were read and used to make planning choices. This metaphor of reading the sky could be referring to celestial divination, which already for the Assyrians would have been an ancestral lore. Celestial divination was based on unprovoked omens from lunar, planetary, astral and meteorological phenomena all compiled into series such as *Enūma Anu Enlil* the use of which is attested in reports from Assyrian scholars to kings, mainly Aššur-aḫu-iddina and Aššur-bāni-apli[69]. The expression *šiṭir burūmê* could therefore not only be referring to the stars but also to all other types of celestial phenomena. That *šiṭir burūmê* may be referring to celestial divination is also suggested by a passage in Aššur-aḫu-iddina's inscriptions which states it is appropriate to renovate the sanctuaries of Esagil because the stars (*kakkabāti*) of the sky are in their (normal) stations having taken the right path.[70] In another passage, Aššur-aḫu-iddina compares Esagil to the *apsû* and states "I built it as the equivalent of the constellation *ikû* (field)"[71] (*tamšil ikû arṣip*) **RINAP 4, 104, iii 50 – iii 51**, reproducing word for word a description from the creation epic *Enūma eliš*[72] and thereby anchoring the temple in its cosmogony. It has been suggested by Frahm that *ikû* (today known as the square of Pegasus) may have been regarded as a prefiguration of the square Mesopotamian city and that the aforementioned *šiṭir burūmê* may even be an oblique reference to the constellation *ikû*.[73] As an ideal form, *ikû* may well have inspired the shape of architectural plans. The series MUL.APIN (I, i 40) explains that *ikû* is the dwelling of Ea. This transposition of celestial dwellings onto terrestrial ones corroborates the idea that instructions may have been sought in the sky to design structures on earth. It may be significant that the auspicious location of planets in the sky was known in Akkadian as *bīt niṣirti*, "house of secret knowledge": the notion of house was thus used to reflect correct order. It is already clear from earlier Sumerian texts that in Mesopotamia the planning process was strongly associated with celestial knowledge. In Gudea's account of the building of his E-ninnu, the goddess Nisaba appears to be responsible of the project's astronomical dimension. She announces the auspicious stars for construction (Cyl. A, vi 1 – vi 2), and then opens the "house of knowledge" (e_2-ĝeštug) where her lapis lazuli tablet containing the signs of heaven is kept so that Enki may put right the design of the temple (Cyl. A, xvii 15–17).

Aššur-aḫu-iddina also refers to architectural design in relation to the past. He builds the structure of Esagil "as that of the days of old" (*kīma ša ūmē pāni*) and measures its wall "according to its previous plan" (*kī gišḫurrīšu maḫrî*) **RINAP 4, 116, r. 17**. It is clear that the past served as standard. A recurrent planning specification for temples or temple structures in Aššur-aḫu-iddina's inscriptions is *kīma simātīšu labirāti* "according to its ancient characteristics". For example, Aššur-aḫu-iddina rebuilds the temple Ebaradurgura of the goddess Gula in Borsippa[74] as well as the platforms and daises of Esagil, "according to their ancient characteristics" (*kī simātīšunu labirāti*) **RIMB, B.6.32.6, 19**. The term *simtu* is associated with an idea of appropriateness. It is tempting to imagine ancient characteristics may have been recorded somewhere. The fact that specific parts of temples such as walls or platforms and daises followed ancient plans suggests these may have been quite precise. Aššur-aḫu-iddina prides himself on restoring the ancient foundations of Esagil to their exact original dimensions not diminishing them by "one cubit", nor increasing them by "half a cubit" **RINAP 4, 104**, suggesting he may have had some knowledge of the exact original dimensions from written records supplementing the information provided by whatever was left on the ground. It was important to also respect the location of original foundations. In another inscription, Aššur-aḫu-iddina points out that the location of the foundations of Aššur's temple was kept unchanged[75]. He restores the destroyed ground plans (*ĝišḫurre šuḫḫâte*) of shrines, daises and socles, he makes them good and makes them shine like the sun.[76] It is assumed here that the "previous plan" (*gišḫurrīšu maḫrīti*) described by Aššur-aḫu-iddina refers to an original plan. It could be, however, that the "previous plan" refers to the plan left by Sîn-aḫḫe-eriba after he redesigned it. Novotny argues that Aššur-aḫu-iddina may have been reticent to alter the temple's plan once more, even if only to bring it back to its original form, because he believed his father's death came as a punishment for the alterations and preferred to avoid making any sort of change himself.[77]

68 Sîn-aḫḫē-erība, RINAP 3/2, 159, 5.
69 See for example SAA 8 and SAA 10.
70 See Aššur-aḫu-iddina, RINAP 4, 116, o. 10′–12′.
71 See also Aššur-aḫu-iddina, RINAP 4, 54, o. 33′ for association of constellation *ikû* with Esagil in relation to its foundations ([*tamšil*] *ikû attaddi temmenšu*) — maybe an allusion to the shared rectangular characteristic between fields and foundation sites. ▸ **2.2.1.a** sub *uššu* vs. *temennu*.
72 See *Enūma eliš* V, 119–122.
73 Frahm 2013: 108.
74 Aššur-aḫu-iddina, RIMB, B.6.31.11, 15–16.
75 Aššur-aḫu-iddina, RINAP 4, 59.
76 Aššur-aḫu-iddina RINAP 4, 57, vi 15 – vi 20.
77 Novotny 2014.

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eli ša ūmē pāni/eli ša maḫri

The urge to build always better was a generalised trend that could apply to any type of structure, from daises, to temples, to palaces, to fortifications walls. It is nevertheless best attested in relation with temples and palaces. The trend can be traced back to the inscriptions of Erišum[78], then again it surfaces in those of Šamšī-Adad I[79] and finally is developed enough by Salmānu-ašarēd I to continue vigorously into the following periods.

As "palaces of the gods" temples were made better than before on all fronts — size, splendour, holiness. Salmānu-ašarēd I boasts he put a lot of effort into rebuilding the temple of Aššur to increase its size and make it more artistic than ever before.[80] He claims to have improved the Aššur temple from the time of Erišum and Šamšī-Adad I, the two kings who established the trend of architectural improvement before him also based on the Aššur temple. This suggests Salmānu-ašarēd I must have read the inscriptions of Erišum and Šamšī-Adad I. Interestingly, architectural changes could also improve the holiness of a structure. As seen above, Tukultī-Ninurta I builds for Ištar a shrine "holier" than her previous one (*ša el maḫrî Eannaša quššudu*) **RIMA 1, A.0.78.11, 83–84**. Presumably, this was achieved by making the structure more orthodox, in other words more "proper". Aššur-nāṣir-apli II makes Emašmaš the temple of Ištar larger (*eli maḫrê ušātir*)[81], more proper and more splendid than before (*ussim ušarriḫ eli maḫrê ušātir*).[82] This makes it clear that for a temple both size and splendour were independent from "appropriateness". Aššur-aḫu-iddina, makes Esagil "the palace of the gods" greater, higher and more splendid than before.[83] Height may have been a criterion of appropriateness. Aššur-bāni-apli Is careful not to build his *bīt redûti* on a platform higher than that of neighbouring temples as this would upset the gods.[84] Inversely, the higher a temple, the better. Temples were often built to be as high as mountains.[85] The concept of ziqurrat (<Akk. *zaqāru*, "to project; to build high"), encapsulates the idea that an elevated height was essential to divine residences.

Any new building project took into account previous building achievements because continuity was fundamental to the Assyrian royal ideology. However, whilst it was recommended that new temples follow the plans of old temples, especially regarding their emplacement, it was quite commonly accepted that new palaces, although inspired by old palaces, should be greater than these in every aspect, and erecting them from scratch on virgin soil was laudable. This is one of the main distinctions between the ways in which temples and palaces were perceived. The gods were eternal so their dwellings had to be eternal too. Because mud brick, the main building material, produced buildings that were prone to disintegration, the eternity of the temples could not be achieved through a permanence in construction so it was achieved through a continuity in design and place, which was supported in writing through the inscriptions. Inversely, the kings were mortals, their dwellings were understood to be ephemeral. To leave a trace, palaces had therefore to be unique and, ironically, the ephemeral nature of mud brick structures, a factor of discontinuity, encouraged creativity, hence uniqueness, which was further emphasised in the inscriptions.

Palaces were expected to be always better, especially size-wise because size was associated with wealth, which was instrumental to power.[86] Aššur-bāni-apli makes the foundations of the Review Palace in Nīnawā stronger than before (*eli ša ūmē pāni udannina*) **RINAP 5, 3, viii 64** and makes the seat of his *bīt redûti* larger than before (*eli ša maḫrî šubassu urappiš*).[87] He also makes the fortification wall of Nīnawā thicker than before (*eli ša maḫrî dūru šuātu ukabbir*)[88] and the foundation of Nīnawā stronger than before (*eli ša ūmē pāni udannina temmenšu*).[89] Both Šarru-ukīn[90] and Sîn-aḫḫē-erība[91] boast that not one of their predecessors[92] thought of planning their cities in the way they did. Sîn-aḫḫē-

78 See Erišum, RIMA 1, A.0.33.2.
79 See Šamšī-Adad I, RIMA 1, A.0.39.2, ii 1 – ii 20.
80 Salmānu-ašarēd I, RIMA 1, A.0.77.1, 129–148.
81 Aššur-nāṣir-apli II, RIMA 2, A.0.101.40, 36.
82 Aššur-nāṣir-apli II, RIMA 2, A.0.101.57, 3.
83 Aššur-aḫu-iddina, RINAP 4, 106, iii 46 – iii 47. See also Aššur-aḫu-iddina, RINAP 4, 114 where the same is said not only about Esagil but also Babylon, its inner wall Imgur-Enlil and outer-wall Nēmed-Enlil.
84 Aššur-bāni-apli, RINAP 5, x 11, 79–80.
85 See for example Aššur-aḫu-iddina, RIMB, B.6.31.11 and Aššur-bāni-apli, RIMB, B.6.32.15.
86 One should bear in mind that the building of greater palaces would also have been accompanied if not triggered by economic growth. As pointed out by Liverani (2017: 171), the spatial expansion of capitals was related "to the increased availabilty of resources, to a rising population, and to the level of administrative complexity".
87 Aššur-bāni-apli, RINAP 5, 11, x 97.
88 Aššur-bāni-apli, RINAP 5, 4, viii 66 – viii 67.
89 Aššur-bāni-apli, RINAP 5, 4, viii 69.
90 Šarru-ukīn, Fuchs 1994, Stier, ll.43–45.
91 Sîn-aḫḫē-erība, RINAP 3, 4, 66–67.
92 Šarru-ukīn specifies the number of predecessors was 350. Past sovereigns put a ruling king's hegemony into a universal perspective thereby giving it more weight, it was therefore important for kings to present themselves as heirs to a long chain of royal transmission: numbers became important. At the same time, however, new kings also sought to distance themselves from the previous ones by proclaiming their ability to bring improvements: power was in constant need of legitimisation. This is also illustrated in the inscriptions of Šamšī-Adad I who boasts he rebuilt the temple of Emenue in Aššur, which had been neglected for seven generations before him, from the fall of Akkad (cf. RIMA 1, A.0.39.2, i 7 – i 25).

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erība says of the *ēkal kutalli* built by his predecessors that its terrace did not exist, its site was very small and its construction was not skilled (*tamlûša ul ibši šubassa ṣuḫḫuratma lā nukkulat epištaš*)[93]. It was important to make palaces better not only on the temporal scale but also on the spatial one. Tukultī-apil-Ešarra III claims he made his palaces more resplendent than the palaces of foreign lands (*eli ekallāte mātāti ušar*[*rī*]*ḫa*), which may also indicate that foreign architecture enjoyed a prestigious reputation.[94]

pān [D/PN] *maḫir*

Planning had to abide by the rules of "appropriateness" as defined by tradition, taking into account ideas of right and wrong. A notion that comes up frequently in the state archives is that of "acceptable" in the form *pān* [*D/PN*] *maḫir*. Architectural designs had to be acceptable to the gods and the king. Here should be mentioned the case where corvée workers deem their work on temples is "most acceptable to Bēl" (*ina pān Bēl maḫir adanniš*) **SAA 5, 294, o. 4′ – o. 5′**. Another example are the letters to Aššur-aḫu-iddina and Aššur-aḫu-iddina/Aššur-bāni-apli(?), which call upon the king's judgement to decide what is "acceptable to the king" (*pān* šarri *maḫir*). In the first case[95], Aššur-aḫu-iddina must decide whether his name should be written on an old foundation stone or a new one: both ideological and aesthetic criteria could be taken into account. In the second case[96], Aššur-aḫu-iddina/Aššur-bāni-apli Is asked to choose between two draft depictions of himself, probably for a relief. Attention is drawn to the hands, the chin, the hair and the posture: whilst one concern would have been to idealize the king, another, possibly of greater importance here, may have been to achieve a degree of resemblance by faithfully representing and accentuating the king's most agreeable characteristics.

A votive donation by Sîn-aḫḫē-erība, similar in style to the royal inscriptions, describes the king's building of the *akītu* temple outside of Aššur.[97] The temple had to be "appropriate to the characteristics of his (Aššur's) great divinity" (*ana simāt ilūtīšu rabīti šulukatu*). To achieve this Sîn-aḫḫē-erība took the foundations down to underground waters, skilfully built it from the foundations to the parapet with mountain limestone, raised it as high as a mountain, opened a canal, and surrounded the whole with orchard trees, fruits and aromatic plants. Again, the motivations behind these choices which were meant to please Aššur would have been both ideological and aesthetic as they follow ancestral traditions but also aim to create an agreeable dwelling.

An important planning criterion seems to have been spaciousness. That this was one of the criteria underlying the constant ambition of Assyrian kings to enlarge their palaces is suggested on the smaller scale by a private letter which gives an idea of what may have been good proportions for a house. An official writes to Aššur-aḫu-iddina about two houses he was asked to inspect:

> *bīt rab ṭupšarri qalal* [*i*]*mērumma ina libbīšu lā errab bīt Aššur-naṣir mār banê damiq batqu mā'da ina libbi*
>
> The house of the chief scribe is small, even a donkey could not enter it. The house of Aššur-naṣir the nobleman is good, (although) much repair is (required) in there.[98]

Although it is certainly an exaggeration that not even a donkey would fit in the house of the scribe, it does suggest the house must have been unusually small, space being a valued criterium.

ultu ūmē panû

SAA 16, 143, o. 15 – o. 16 a letter from Nabû-rā'imnišēšu to Aššur-aḫu-iddina indicates the king expressed interest in the reasons which dictated certain architectural decisions. Aššur-aḫu-iddina asks why layers of limestone blocks for the city wall of Tarbiṣu do not go one after another (*atā tikpī ša pūli išten iddāt šanie lā illak*), and why crosses have been put on them. The text is damaged so we only have Nabû-rā'im-nišēšu's answer to the second question: the limestone blocks were brought into the *bīt kutalli* when Aššur-aḫu-iddina was crown-prince by order of his father, Sîn-aḫḫē-erība, and the crosses were put on them then (*ina bīt kutalli ina pān šarri ussēribšunu ispillurāt issaknūšunu*). Crosses were emblematic of crown-princes.[99]

Great works of the past were the ultimate source of inspiration. A letter to Šarru-ukīn from a certain Rēmūtu in Babylon acknowledges that "the previous kings had been wanting excellent work of days past for Esagil" (*dullu babbanû ša ultu ūmē pānû šarrāni maḫrûti ina Esaggil ṣībû*).[100] Older works were used as models. This is also suggested in a letter addressed to Šarru-ukīn where it is said a bull colossus is being made according to the bull colossus of Duianusi, presumably an older famous sculptor.[101]

It is not inconceivable that mythological knowledge should also have informed the Assyrians' perception of architectural features. For example, the literary composition known as the "Marduk Ordeal"

93 Sîn-aḫḫē-erība, RINAP 3/2, 22, vi 42 – vi 43.
94 Tukultī-apil-Ešarra III, RINAP 1, 47, 25′.
95 SAA 16, 125.
96 SAA 13, 34.
97 SAA 12, 86.
98 SAA 16, 89, o. 9 – o. 15.
99 This is mentioned by a scholar to Aššur-bāni-apli (?) in letter SAA 10, 30.
100 SAA 17, 47.
101 SAA 5, 299.

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(Aššur version) refers to a "door of lattice" (*dalat birri*), giving a mythological episode as explanation for its name: Marduk, chased by the gods, found refuge locking himself up behind a door, but the gods bored holes in the middle of the door and did battle through it.[102] Such aetiological explanations could have legitimated the use of lattice doors in certain contexts.

1.2.4 Numbers and precision

As seen previously, a question that arises is to what degree planning was specified. For example, to what extent were ancient planning specifications for temples known — were they recorded? If so, how and where? The royal inscriptions seem to hint at the existence of a written "planning lore" but without ever providing any substantial evidence. What the royal inscriptions do reveal is that there was an esoteric element to planning, a form of secrecy that had to be preserved, perhaps coded in the elaborate sets of numbers given as dimensions of buildings throughout the inscriptions: the significance of these dimensions although often explained is never entirely clear, and it is not always possible to verify them archaeologically. Measurements often lack sufficient referents to be spatially intelligible without the insider's knowledge, and at times they are explicitly cryptic.

Sîn-aḫḫē-erība gives the measurements of the new Southwest Palace's terrace in different inscriptions. The information provided sums up to:

—lengths of the sides of the former palace's terrace

—length added to the new palace's terrace to make it larger than the former palace's terrace

—lengths of the sides of the new palace's terrace

—height of the (new) terrace

In a survey of all passages from Sîn-aḫḫē-erība's inscriptions referring to this terrace's dimensions, Frahm notes that different inscriptions will give the same measurements in different units whilst maintaining on the whole consistent values, and that the later inscriptions give less information than the earlier ones. He interprets the decrease in information as an indication that concerns evolved.[103] After a while the new terrace would have been well known so it was not necessary anymore to stress its dimensions. The fact that throughout the various inscriptions different units are used for the same measurements but with broadly consistent values reveals a desire to maintain a basis of accuracy but more with the intention of displaying scholarly knowledge than anything else. The inconsistencies in values surpass mere computing errors, in some cases they appear fabricated.

For example the length of the terrace's west side behind the ziqurrat is given as 383 great cubits in the Rassam cylinder but as 443 great cubits in Frahm T10/11 (= RINAP 3/1, 15 and 16) and 440 great cubits in the following inscriptions. Frahm notes that the value 383 appears as the most legitimate, since it is specified consistently in other inscriptions that the old terrace was originally 95 cubits long and independently from this T10/T11 specifies that the old terrace's length was increased by 288 cubits: 288+95=383. No inscription however gives both specifications together with these values. Frahm conjectures that such an inscription may have existed. This would suggest there was a "right version". In any case there appears to have been a deliberate attempt to give increasingly high values for the length of the new terrace albeit maintaining an illusion of accuracy. New length values seem to have been invented somewhat randomly as they were not correctly adjusted to values given for the original length and additional length. Values given for additional length were also randomly increased by 1 point to 289 from the more plausibly original additional length of 288. Also increased are the values given for the height of the terrace, starting off with 160 *tipku*'s in the First Campaign (dated to year 702), reeaching 180 *tipku*'s in the Bellino (dated to year 702) and Rassam cylinders (dated to year 700), and finally settling to 190 *tipku*'s in T10/T11 (dated to years 697–695).[104]

Fabricated increments testify to the importance of asserting the grandeur of a palace. There may have been restrictions for doing so in practice, physical (e.g. terrain) or ideological (e.g. the terrace of a palace should not be higher than that of a temple), so it was done in writing. Estimating the realism of the various dimensions given by Sîn-aḫḫē-erība for the Southwest palace terrace should take into account archaeological reconstructions of the palace. However, although these dimensions combine into plausible sizes and shapes for the terrace, they cannot altogether be verified against archaeology because the southeast sector of Tall Qūyunǧuq onto which the terrace encroaches has not been excavated yet.

Of all Assyrian kings, Sîn-aḫḫē-erība is the most explicit about dimensions in his inscriptions. Note that the measurements given concern essentially the ground plan (length + width of building), the building's elevation measurements are not supplied although indications are given regarding the height of the terrace on which it rests. The absence of ele-

102 SAA 3, 34.

103 Frahm 1997: 270–272.

104 See tables in Frahm 1997: 270–271.

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vation specifications is a noticeable feature of Assyrian inscriptions.

Numbers are employed cryptically by Šarru-ukīn who builds the outer-wall of Dūr-Šarrukīn 16280 cubits long according to the "spelling" of his name (*nibīt šumīya*) **Fuchs 1994, Zyl. 65**.[105]

1.3 Technical process

Practically no information is available in the royal inscriptions and state archives about this crucial aspect of planning, proving that the king was barely involved in such matters, as is to be expected.[106] The main actors of the technical process would have been workmen that relied more on oral communication and personal knowledge than written records. It is also likely that most of the shorthand notes that may have been taken on the field by officials supervising the works were not meant to be preserved and would have been inscribed on perishable materials (e.g. papyrus) or on clay tablets that were swiftly recycled.

The creative process heralded by the king was restricted only by technical requirements. The king had the final say on all matters but regarding technical issues it was necessary to tactfully direct him towards realistic decisions: his sole desires could not always prevail. A letter addressed to Šarru-ukīn explains to him clearly that second-rate logs will not do for the job.[107] The king is nevertheless left to decide whether they should be used or not. In case the king should decide he wants the logs to be used, he is asked to specify whether he would want them to be cut in two or kept whole, suggesting the officials may be planning to use the logs for a different job.

The scarcity of explicit technical arguments regarding the planning of temples and palaces specifically is made more significant by the existence of such arguments for more common buildings. A letter from Nabû-bēlu-ka''in to Šarru-ukīn **SAA 15, 41** presents a rare case of a scholar justifying a building decision to the king with technical arguments. Šarru-ukīn has asked that houses for deportees be coated with a mystery material (text damaged), probably bitumen (*ku-pi-ru*). It seems, however, that Šarru-ukīn's recommendation will be of no avail. Nabû-bēlu-ka''in explains that there are no more kiln-fired bricks. The houses, which had to be built with sun-baked mud bricks, are now disintegrating due to very harsh winter conditions. It is interesting that Šarru-ukīn should be personally involved even in the construction of houses for deportees, but not surprising that he would have left the technical planning of temples and palaces to others!

For the technical planning of a building one has to bear three questions in mind:

1. what the building should look like, which requires a visual project

2. how to adapt the space to its function, which requires some knowledge of the user's activities and habits

3. how to obtain a physically viable structure, which requires technical know-how

These three stages of reasoning are discernible in the state archives.

1.3.1 Graphics

On various occasions, the state archives mention sketches/drawings and models.

līṭu

The term *līṭu* is used to refer to sketches. It is often combined with the verb *eṣēru* "to draw". It seems *līṭu* refers specifically to sketches on leather. In one letter, Nabû-šūmu-iddina informs Šarru-ukīn that he has drawn a sketch of a fort on leather (*līṭi ša birti* [*ina muḫḫi*] *maški ēteṣir*).[108] If architectural sketches were commonly made on leather it is no wonder that not many were recovered on clay. In another letter, addressed to Aššur-aḫu-iddina/Aššur-bāni-apli(?), it is reported that Pūlu a disruptive priest was caught making a sketch (*līṭu*) of Nabû's socle, presumably to usurp the concept: sketches would have been a primary medium for recording important technical, and often confidential, information.[109] Sketches could also be used to plan gardens or objects such as beds. Marduk-rēmanni tells Šarru-ukīn that he will plant the saplings according to the sketch (*līṭu*),[110] the scholar Rāši-ili informs Aššur-aḫu-iddina that he has sent him the sketch (*līṭu*) of the bed of the lord of heaven and earth.[111]

The same design could be conceived of in two or three dimensions. This is attested for the production of statues. Nabû-ašāred explains that two different types of sketches have been produced to depict the king (either Aššur-aḫu-iddina or Aššur-bāni-apli): one was drawn in the preliminary stage as an outline (*ša mīṣiri*) and the other was already

105 ▸ **4.1.1.a**.
106 For a discussion of technical planning in Mesopotamia based on a broad range of sources see Bührig 2014.
107 SAA 5, 295.
108 SAA 15, 136.
109 SAA 13, 134.
110 SAA 1, 110.
111 SAA 13, 175.

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carved in the round (*ša kabbusīte*[112]).[113] In **SAA 5, 15, r. 9** Lipḫur-Bēl tells Šarru-ukīn he has drawn the king's image/form/statue (*ṣalam šarri*) in the palace. What exactly is meant here is not obvious but it most certainly alludes, at least in part, to the visual representations of the king in the palaces, typically as reliefs or sculptures: the king's image was physically integrated into the architecture. Drawings were, of course, also used to design buildings. Ṭāb-šār-Aššur tells Šarru-ukīn that houses have been drawn in Kalḫu (*bītāti ina Kalḫa eṣrā*).[114]

▸ **8.2.1.**

1.3.2 Design and function

Buildings designed for specific activities were often also designed for specific events because the Assyrians planned many of their activities according to their seasonal and ritual calendars. For example, a letter from Marduk-šumu-uṣur the chief haruspex reminds Aššur-bāni-apli that in his time his father (Aššur-aḫu-iddina) had built a temple of cedar outside of Harran so that he may visit it before campaigning to Egypt.[115]

Removed from their original functional context, certain designs would make no more sense. In a letter mentioned previously, Aššur-bāni-apli does not understand why the limestone blocks of the city wall of Tarbiṣu were designed with crosses on them.[116] It seems these limestone blocks were originally destined for another type of structure, probably the *bīt redûti* palace built in Tarbiṣu by Aššur-aḫu-iddina for Aššur-bāni-apli when he was crown prince, since the crosses were emblematic of crown princes.[117]

For the function of space see ▸ **7.**

1.3.3 Measurements

The state archives provide a number of documents containing measurements related to the building process but these are often meagre on words, supplying too little information for any sense to be made out of them without internal knowledge.

Tablet SAA 1, 202 from Nabû-pašir to Šarru-ukīn lists the measurements of beams for doors, indicating length, width, and thickness. SAA 1, 203 is a similar type of list, it concerns a total of 36 doors and at least two buildings.

1.4 Administrative process

Planning is fundamental to large-scale building ventures since it fixes the desired objectives, endeavouring to anticipate possible outcomes and granting scope for manoeuvres in case things have to be rectified or improved at a later stage. The substantial dimensions and fine quality of royal building projects usually required the skills of many specialised individuals who dealt with different tasks and materials, and were arranged hierarchically — from administrative supervisors, to building experts and chief craftsmen, to labourers, the professional status of whom is not always clear.[118] Such a workforce operated in all sectors of construction across the empire; it therefore had to be distributed efficiently and was expected to carry out assignments according to strict schedules.

A strong administrative apparatus was needed for coordinating building activities, but there is evidence it sometimes weighed the system down by provoking delays. Effective planning was about adapting administrative requirements to time constraints, and this was achieved through the careful management of human and material resources at the construction site.

Time constraints were dictated and conditioned by three main parameters:

1. seasons and calendars
2. formalities
3. political strategy

The management of human and material resources on the construction site was channelled through four stages:

1. delegating tasks
2. establishing work assignments and quotas
3. keeping track of activities
4. exerting pressure on personnel

The state archives provide practically all of the data available for this topic.

112 The translation of *kabbusīte** is inferred from the context.
113 SAA 13, 34.
114 SAA 1, 72.
115 SAA 10, 174.
116 SAA 16, 143.
117 See ▸ **1.2.3**.
118 ▸ **7.**

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1.4.1 Adapting administrative requirements to time constraints

1.4.1.a Seasons and calendars

The Mesopotamian building tradition was subordinate to seasonal patterns because it had to follow the manufacturing requirements of mud-brick, the basic primary material. Mud-brick was best produced in the early summer, after harvests for the straw and chaff which served as temper for bricks and mortar respectively, and just after the spring rains, when water was plentiful but already the climate was sunny and dry so that the bricks could be baked by the sun throughout the season if necessary.[119] It is probably not a coincidence if the Akkadian month of *Simānu* (May/June) was known in Sumerian as iti šeg$_{12}$.ga, the month of brick.[120] This suggests building customs were perceived as intrinsic to the calendar.

Building decisions based on seasons could influence or be influenced by the ritual calendar. Occasionally the correspondents of the state archives will describe certain times of the year as being good for work but it is not always clear whether the reasons are pragmatic or superstitious, although in many cases the latter seems plausible. Not much information is given to explain timing decisions, as though it were implicit or commonly accepted. Interestingly, the dates chosen never seem out of phase with building recommendations in omen series of hemerological content.[121] The formula *arḫu ṭābu* (wr. ITI DUG$_3$.GA) is consistently used to signify a month is favourable for carrying out such and such building activity. This usage of the term DUG$_3$.GA is frequently encountered in hemerologies. Hemerologies determined the auspiciousness of days and months in different contexts. They were consulted by scholars to advise kings on what decisions to make. Most of the evidence for the practical use of hemerologies to distinguish good (DUG$_3$.GA) from bad (NU DUG$_3$.GA) indicates that these were consulted prospectively in order to make plans,[122] occasionally it is about timing building activities.

That hemerologies were effectively consulted for the purpose of building is suggested by a letter from the astrologer Issar-šumu-ereš to his king (Aššur-aḫu-iddina? Aššur-bāni-apli?) in which he complies with a request from the king for building the chamber of the god Nusku, he confirms "I looked up a good day" (*ūmu ṭābu āmur*) **SAA 10, 14, o. 12**: the month of *Simānu* (III) and the 17th day of the month are described as favourable but since they have already passed *Ululu* (VI) is proposed as a very good alternative. Two letters prove that specific months were chosen to perform building tasks based on theoretical criteria rather than practical ones. The authors of these letters are not directly involved in the building process, they are intermediaries managing orders that come from above. In both cases the workers are expected to stick to schedule. In the first letter Taqiša instructs Aššur-šarru-uṣur to make sure the carpenters working on the offering pipes of the temple of Adad and Babu carry out the work on the first of *Šabāṭu* (XI) quickly.[123] The author of the second letter is Urdu-aḫḫešu, agent from the reigns of Aššur-aḫu-iddina/Aššur-bāni-apli. He appears to be in charge of supervising building works in Babylon and wants to make sure that the foundations of the ziqqurrat are laid in *Šabāṭu* (XI) **SAA 13, 161, o. 15′ – o. 16′**:

> *šabāṭu urḫu ṭābu šū šarru bēlī* [*i*]*šappar ikarrurū*
>
> *Šabāṭu* (XI) is a favourable month. The king my lord will send word and they will lay (the foundations).

1.4.1.b Formalities

Building operations followed strict protocols. Planning could not go ahead without explicit orders from the king, even if everything was already in place. Dīdî, an architect[124] who worked in Babylon under Aššur-aḫu-iddina/Aššur-bāni-apli, is often involved in administrative turmoil. Urdu-aḫḫēšu reports to the king that Dīdî will not lay the foundations (*uššu*) for a storeroom in Esagil because his document (*egirtu*) has not been officially approved yet **SAA 13, 161, r. 2 – r. 4**[125]. This document is likely to have contained specifications for the building project and would therefore be an important component of the planning process. Royal approbation is again sought when Bēl-iqīša requests an order from Aššur-aḫu-iddina so that the master-builders may be called in to lay the foundations of the queen's palace in Kalzi. Apart from that, everything is in place to start: the house was demolished, the space for the foundations is open, bricks have been stocked up for laying the foundations **SAA 16, 111, o.′ 10 – r.′ 1**:

> *bētu uptaṭir bētu uššē pate uššē ana karāri karmat*
>
> I have demolished the building. The space for the foundations is open. The bricks are piled to lay the foundations.

The king's life was considered to be directly at stake in matters of planning. This was no doubt one of the reasons why obtaining his explicit approval of

119 Cf. Moorey 1994: 302–305.
120 Cf. Cohen 1993: 92–95.
121 ▸ **1.7**.
122 See example in CAD: *ṭābu* (r).
123 SAA 13, 40.
124 ▸ **7.4** for discussion of term *šelapāyyu*.
125 Urdu-aḫḫešu reports another instance of Dīdî setting an obstacle in SAA 13, 163 when the latter refuses to let go of cedar beams.

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plans was so important. In a literary composition known as "The Sin of Šarru-ukīn"[126] and produced during Aššur-aḫu-iddina's reign,[127] Sîn-aḫḫē-erība complains about having been wrongfully advised by Assyrian scribes not to complete Marduk's statue, a mistake which, he says, shortened his life.[128] Such planning mistakes could also affect buildings, as in the Akkadian period when, according to legend, Naram-Sin unadvisedly destroyed the Ekur temple in Nippur in order to renovate it, prompting the anger of the gods.[129] The Assyrian archives are silent about inauspicious building plans, but the opposite is documented. As seen previously, an administrative official under Šarru-ukīn reports that corvée workers have predicted that the work planned for a temple will be "pleasing to Bēl", which means "the days of the king will be long" (*ūmē ša šarri irrikū*) **SAA 5, 294, o. 5′ – o. 6′.**

Time was pressing even for the king. The king was expected to respond to divine orders. Moreover, his most important personal initiatives had to be ratified by divine decree. The king was not perceived as all powerful since he was himself at the mercy of the gods. He was not immune to divine ire. The Babylonian astrologer Bēl-ušēzib advises Aššur-aḫu-iddina to follow ominous portents and rebuild Nippur which like Babylon is a "destroyed sanctuary" (*ayyakku šulputu*).[130]

1.4.1.c Political strategy

Royal building projects were often divided into multiple work assignments the supervision and management of which were entrusted to various provincial governors. It was important to make fair calculations to stay on good terms with the governors. In one letter, the governor of Kalḫu believes he was unfairly allocated more work than the governor of Arrapḫa, but it is a misunderstanding. Ṭāb-šar-Aššur the treasurer arbitrates between the two men and clarifies the situation to Šarru-ukīn.[131]

Keeping building works strong on the edge of the empire was essential to fortify it. A letter from Mār-Issar to Aššur-aḫu-iddina warns the king that construction works for the temple of ad-Dair (Dēr) are lagging behind and suffering from neglect, "one day they do it, another day they leave it" (*ūmu eppušu ūmu urammû*), so that the city of ad-Dair itself is at risk of falling into Elamite hands **SAA 10, 349, r. 18**. In the absence of resistance, the crown-prince of Elam was able to place his corvée workers on the construction site and is slowly gaining control of the area so if nothing is done to stop him he will soon be in a good position to take over the city.

The weakness of building operations at ad-Dair indicates it must have fallen out of the management circuit, possibly due to its peripheral location. In a letter to Šarru-ukīn Nabû-dūru-uṣur assures the king he will have towers built in ad-Dair if the king comes to ad-Dair.[132] This demonstrates that the sole presence of a king in a city could have an impact on the city's monumental landscape. The architecture of a city in which the king's presence was not very strong could easily deviate from traditional paradigms, which supposes architectural planning was quite centralised. This idea is again suggested in a letter from Issar-dūri to Šarru-ukīn which reports that there are no inscriptions in the walls of the temple of ad-Dair and asks whether some should be placed there (*muššarāni laššu ina libbi igārāti ša bīt ili lā niškun*) **SAA 15, 4, o. 19 – b.e. 21**. The absence of foundation deposits in a wall could be symptomatic of a city on the edge of the empire which was falling out of tradition and control.

In the context of imperial expansionism, the act of making bricks could be taken as an indicator of political threat. A letter from Nabû-uṣalla, governor of Tamnuna, to Šarru-ukīn reveals that Šarru-ukīn had his men work against the clock to produce bricks on the Urartian border, anticipating that sooner or later the Urartians would attempt to crush the bricks.[133]

1.4.2 Managing human and material resources on the construction site

1.4.2.a Delegating tasks

Who worked on what was established very precisely. Different criteria were taken into account. These could range from social status, to physical fitness, expertise and experience. Building operations practically always required bricks, and brickwork often demanded substantial labour. The work was executed by builders (*etinnāni*) and corvée workers (*urāsī*)[134] under the supervision of administrative officials. Officials had fixed quotas of builders at their disposal. It appears all builders were under control of the king's central authority as the king had the final say on how builders were allocated. There seems to have existed a general pool of master-builders and corvée workers from all parts of Assyria and they circulated like commodities. Builders were a precious human resource, and treated as such, as obvious in one letter where outriders are

126 Cf. SAA 3, 33.
127 Attribution to Aššur-aḫu-iddina is based on the facts that Sîn-aḫḫē-erība's death is implied (SAA 3, 33, r. 21) and that the Babylonians are treated with special respect (SAA 3, 33, r. 26′ – r. 27′).
128 SAA 3, 33, r. 21′ – r. 23′.
129 For the interpretation of Naram-Sin's act as hybris, cf. Liverani 2001: 380.
130 SAA 18, 124.
131 SAA 1, 64.
132 SAA 15, 129.
133 SAA 19, 183.
134 ▸ **7.4;** ▸ **7.5**.

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needed to accompany corvée workers across the country.[135]

A problem often encountered by administrative officials was not disposing of sufficient workmen. It was difficult to rely on numbers. Workmen were usually in high demand and thus not readily available. It was also not always easy to secure workmen, sometimes they were needed elsewhere by royal order, other times they went missing or fled, or simply did not do the work.

Šarru-ukīn asked Aššur-dūr-pānīya to give away the young sons (*mārēšunu qallūti*) of his builders to the magnates (provincial governors) who need assistance with their working assignments.[136] The young boys are described by Aššur-dūr-pānīya as apprentices who do no work whatsoever (*talmidāni šunu dullu mimī*[*ni lā eppušu*]). The official explains that the work "is not within their understanding" (*ina libbīšu*[*nu*] *lā ḫak*[*im*]): all they do is carry chests; as for his builders, out of a total of 16, he has already given 6 away for building assignments of the city centre and the palace herald, and the remaining 10 are working on his own brickwork assignment; he is already struggling with 10 builders, he cannot do with less.[137] Šarru-ukīn also receives a letter from an official in Dēr/Yadburu who complains about magnates not bringing builders (*etinnānni*) to their work assignments in spite of his constant advertisements; he is not able to give them any of his master builders since these are already engaged in work.[138]

A letter from Taklak-ana-Bēl, governor of Naṣibina, to Šarru-ukīn signals that Dugul-pān-ili the shepherd only brought half of his men to the work assignment and that these did not deliver the straw and reeds necessary for the job.[139] In another letter, Taklak-ana-Bēl notes the shepherd Ilu-pîya-uṣur is not delivering straw and reeds for bricks either, instead he stole the sheep in his charge.[140]

When all workmen were in place at their tasks and working properly so that work assignments were carried out in order, it was worth mentioning it to the king. Metūnu(?) is happy to let Šarru-ukīn know that no-one is missing to do the brickwork for the *akītu* temple, 30 courses of bricks have been laid, all is well.[141] Sometimes all the workmen were ready by direct orders of the king but it was the officials who were missing to supervise. This is reported to Šarru-ukīn by Ṭāb-šar-Aššur the treasurer: the master builder Paqaḫa complains that there are no "leaders" (*radiāni*) to help him direct a hundred men (*ṣābu*) for a month.[142] Another similar case is reported to Šarru-ukīn by Ša-Aššur-dubbu the governor of Tušḫan: the governor of Šubria is not complying with his obligations, he should be transporting door and roof beams, poplar and reeds to Dūr-Šarrukīn.[143]

Not all building jobs required specialised professionals. The greater building enterprises would have required massive quantities of workmen and these would have been recruited from amongst prisoners of war and other enslaved populations. Such forced mass labour is not documented in much detail, at least not proportionally to its size. More detail is available for smaller building operations. Assyrian archives reveal members of local populations could be picked for building work on the off-chance, regardless of their qualification. Moreover, specialized personnel had to be flexible as they could be assigned to jobs beyond their specializations.

Ṭāb-ṣill-Ešarra, governor of Aššur, writes to Šarru-ukīn about reconstructing the wooden store for the iron brazier in the palace of the Inner City of Aššur.[144] He consulted the mayors, corvée workers and scribes regarding labour force and it has been decided that the chief of work will be in charge of organizing the brickwork whilst the sons of the palace maids will supply the materials and plaster the roof; if necessary the corvée workers can provide replacement beams. Ṭāb-ṣill-Ešarra meets resistance as the chief of works refuses to do the demolition and brickwork and proposes instead to be in charge of beams. It was not always easy for governors to put into effect their plans, especially if the workers had their say as is the case here. Changes of plan lead Ṭāb-ṣill-Ešarra to predict the work will not be completed soon.

Practically anyone was capable of taking part in the activity of brick moulding so the job was easily shirked.[145] Of the different types of people who are known to have been appointed to the production of bricks, one will draw attention to all the inhabitants of Akkad[146], shepherds[147], servants working day and night[148], and even the scholar Ṭabīya[149]. Ṭabīya was ordered to make bricks by the king as a symbolic act of demotion. He fears he may die from such degradation.

135 SAA 16, 90, o. 6′ – o. 7′.
136 SAA 5, 56.
137 SAA 5, 56, o. 13 – o. 17; r. 1 – r. 8.
138 SAA 15, 151, o. 4 – o. 12; r. 4 – r. 8.
139 SAA 1, 235, o. 18 – o. 23.
140 SAA 1, 236, r. 1 – r. 6.
141 SAA 1, 264.
142 SAA 1, 65.
143 SAA 5, 34, r. 21 – r. 22.
144 SAA 1, 77, o. 14 – r. 3.
145 ▸ **1.4.2.b**.
146 SAA 10, 368.
147 SAA 1, 235 and 236.
148 SAA 5, 211.
149 SAA 8, 442.

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1.4.2.b Establishing work assignments and quotas

tikpu/tikbu/tibku, pilku[150]

Building projects were divided into working sectors; these were known as *pilku* (pl. *pilkāni*). The *pilkāni* were assigned to administrative officials for supervision and management, they were calculated in units of brick courses: the work consisted essentially of making and laying courses of bricks known as *tikpu* (Bab. *tibku*). The *pilku*'s were very precise divisions. The units of *tikpu* allocated could range from as little as 30 to as much as 850.[151]

There are reports of work assignments being traded. A letter from Šarru-ukīn to an official reveals the king's disappointment after discovering that work assignments are being traded and neglected: Šarru-ukīn accuses his official of being inefficient because the workers under his command have been shirking work.[152] Conversely, a letter to Šarru-ukīn records a case in which a keen official takes over the 100 *tikpu*'s assignment of another individual with the intention of completing it.[153] One letter suggests that *pilku*'s assigned by the palace carried a certain amount of prestige: an official complains to the king about an individual who is bragging about his *pilku* "as if it were a *pilku* of the palace or of anybody".[154] As much as 125 workmen could be involved at once on one *pilku*.[155] Ṭāb-šar-Aššur the treasurer reports to Šarru-ukīn that the master builder Paqaḫa is alone to take the lead of as many as 100 men for a month and could do with assistance.[156]

1.4.2.c Keeping track of activities

Texts SAA 11, 15–21, rather fragmentary and cryptic are progress reports and planning specifications for building works under Šarru-ukīn at Dūr-Šarrukīn. It is conceivable that these documents should have been recorded *in situ*, directly on the building site. This may account for the visible inferior quality of the tablets which are not well preserved, maybe they were produced in haste. A letter from Aššur-ilik-pāni to Šarru-ukīn indicates officials kept writing boards of the work in progress (*lē'u ša dullāni*), which they then read to the king on demand.[157]

In tablets SAA 11, 15–19 single numbers or series of decreasing numbers are associated with urban architectural elements such as towers, ramparts, drainage pipes, brick courses, etc. Series of numbers are always associated with governors and other officials, or cities, suggesting the context is that of *pilku* service **SAA 11, 15**. Numbers associated with brick courses are regularly in series, usually in groups of three, in decreasing order, and often they are recorded in clusters of descending rows following from one another by decreasing numbers. The numbers always seem to record the courses of bricks left to complete, except in the cases where they specifically quantify finished or prospective architectural structures. It is probable that series of descending numbers represent progressive checks.[158] In addition to information about how much work remains and how much was produced at different stages, these tablets sometimes provide short qualitative descriptions of what has been done.

Tablets SAA 11, 16+20+21 stand out. Tablet SAA 11, 16 is more articulate than the other tablets and does not refer to courses of bricks. Tablet SAA 11, 21 is unique in giving brief indications on what to do next. Tablet SAA 11, 20 has been interpreted as a ration list for builders because it seems to associate series of decreasing numbers with totals and amounts of seahs, the grain capacity.[159] It could be that they were calculating seahs per amount of work completed and per head, the total may be referring to the number of workers. Note that rows II 3′-5′ do not follow from one another in decreasing numbers indicating three different independent cases of progression are recorded here, possibly representing different groups of workers.

Tablet **SAA 13, 166** contains memory notes for matters of various kinds to report to the king, amongst which are building matters. This indicates the king had a strong and constant input in the planning process. Urdu-aḫḫēšu must remember to tell Šarru-ukīn about: a) the doors of Esagil to be mounted with precious metals; b) the cedar beams for roofing the temples of Babylon, Sippar and Kutha; and c) the corvée workers of Kutha about whom the king said "I shall send word, they shall do it" (*anāku ašappar eppušu*). Other matters referred to in the notes include wine quotas, sheep offerings and taxes, indicating building was treated as a daily matter.

Pressure often had to be exerted on personnel. The workers were mustered to their tasks and everything was reported hierarchically. Taqīša, a priest of Aššur from the late reign of Aššurbanipal, writes to Aššur-šarru-uṣur, another temple steward, urging him to get the carpenters to work efficiently as has been ordered by the palace.[160] Taqīša insists that Aššur-šarru-uṣur must not be negligent. Royal orders were thus relegated hierarchically, from

150 For *tikpu* and *pilku* see also ▸ **3.1.2**.
151 Cf. 30 units in SAA 1, 264 and SAA 19,123; 850 units in SAA 1, 64; 100 units in SAA 15, 107; reference to 10 units in SAA 19, 156, but no indication that it constituted in itself an assignment.
152 SAA 1, 4.
153 SAA 15, 107.
154 SAA 15, 84.
155 SAA 1, 143, o. 10′.
156 SAA 1, 65.
157 SAA 5, 152.
158 Fales/Postgate 1995: xvii–xviii.
159 See Fales/Postgate 1995: 20.
160 SAA 13, 40.

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the king to his palace entourage, to the officials in charge, to the workers — a laborious work chain that must have slowed the pace of things. Cases in which the king "sent his word"[161] may indicate a more direct form of royal command and control. A letter from the reign of Šarru-ukīn contains a message of encouragement addressed to a hundred corvée workers (*abat* [*šarri*] *ana meat u*[*rāsi*]) **SAA 1, 25, o. 1 – o. 2**.

Šarru-ukīn was passionately engaged in the construction of Dūr-Šarrukīn. He expected to be kept informed about even the smallest detail and it seems he was impatient to see the works completed. Ṭāb-šar-Aššur responds to Šarru-ukīn's enquiries about the *bīt ḫilāni* gates. He gives him completion dates for different building operations, with varying degrees of preciseness. The *bīt ḫilāni* bronze column bases will be cast in *Araḫšamnu* (VIII), the *bīt ḫilāni* bronze lions will be cast at the start of the year, and the temple doors of the temples of Sîn, Šamaš and Nikkal will be finished by the 1st of *Tašrītu* (VII) (*ištētum ūmum ša tašrītu agammar*) **SAA 1, 66, r. 11**.

An official could request that the king intervene directly with the workers if the workers persisted in their slackness. Direct orders from the king were used as last resort to enforce a certain work ethic. Taklak-ana-Bēl advises Šarru-ukīn to reprimand his workers if they continue to avoid the work.[162] Excessive pressure led to complaints. The city rulers of Milqia appeal to Šarru-ukīn because the messengers and trackers will not let go of them so they are not able to do their work.[163] Sometimes, it was the officials who needed to be reminded of their duties. The king made no concessions and did not skimp on means to obtain what he wanted. Šarru-ukīn informs Šulmānu-[...] that he will not recover his silver loan until the work on Dūr-Šarrukīn is complete, which poses some questions as to the way building projects were financed:

> *mā adi dullu ša* [*Dūr-šarrukīn*] *ugammarūni mā memēni ḫabullī*[*ka*] *lā ušal*[*lam*]
>
> "Until the work at Dur-Šarrukin is complete, no one will pay back your loans!"[164]

1.5 Planning as moral act

Aššur-aḫu-iddina was keen to have his plans ratified by the gods. This is obvious from a number of letters written to Šamaš, god of justice. Aššur-aḫu-iddina implores the god to give him a firm positive answer to questions regarding plans, which he has written on a papyrus.[165] Answers to the questions asked on the papyrus were obtained by extispicy.[166] The nature of the plans is usually not specified, it would be no surprise should they include building projects.[167] In any case, what is interesting here is Aššur-aḫu-iddina's attachment to the notion of planning (*kapādu*) and how he relates it to justice. Planning was important because it would determine the course of events. Relating planning to justice reaffirms the idea that planning was affected by beliefs about what is right and wrong. Aššur-aḫu-iddina announces his intentions to strive (*ṣarāmu*) in planning.[168] Planning is once again associated with a sense of urgency.

The text known as "The Sin of Šarru-ukīn" which speaks in the name of Sîn-aḫḫē-erība but was written under Aššur-aḫu-iddina is a vivid illustration of Aššur-aḫu-iddina's commitment to proper planning.[169] It seems to have been composed to function as a moral tale warning future kings against the dangers of making plans without obtaining the explicit approval of the gods by divination. Sîn-aḫḫē-erība explains that his life was shortened because Assyrian scribes presumably neglectful of divination wrongfully prevented him from working on a statue of Marduk. The king advises on the best method of divination by extispicy, which he used to determine the sin of his father Šarru-ukīn: extispicers are to be divided into several groups so that they may analyse and interpret the omens independently. This system is devised to limit fraud or inaccuracies: the various interpretations are compared and those that coincide would be the right ones.

1.6 Planning experts

Regarding planning in the technical sense, there is evidence that expert craftsmen were in charge. The *šitimgallu* is the only specific building professional explicitly mentioned by the royal inscriptions in relation with the planning process, suggesting he played a key role. Aššur-aḫu-iddina employs master builders to renovate Esagil: he assembled "capable master-builders who establish plans" (*šitimgallī le'ûti mukinnu gišḫurrī*) and with them exposed the ground where Esagil stands and inspected its structure **RINAP 4, 105, iv 30 – iv 32**. Sîn-aḫḫē-erība mentions that his palatial halls in Nīnawā were built with the work of "wise master-builders" (*šitimgallī enqûti*) **RINAP 3/1, 22, 57**. In the state archives, the term *šelapāyyu* is used to designate professionals re-

161 Cf. for example **SAA 13, 166**.
162 SAA 1, 235.
163 SAA 1, 147.
164 SAA 1, 159, o. 5 – o. 8.
165 SAA 4, 132 and 137.
166 SAA 4, 130.
167 A first millennium ritual for exorcising Kulla after the construction of a house implores Šamaš to draw a good plan (GIŠ.ḪUR) for the house, cf. text K 3397+, line 31′, edited in Ambos 2004: 94–109.
168 SAA 4, 137; Note the equation in Malku 8, 17: *ṣa-ra-mu* | *ka-pa-du* "to strive" (means) "to plan".
169 SAA 3, 33.

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lated to the planning process, such as the aforementioned Dīdî **SAA 13, 161, o. 17′**.

For more on building professionals see ▸ **7**.

1.7 Omen series

The information about planning obtained from the royal inscriptions and state archives may be read against the planning principles which can be inferred from the omen series *Šumma ālu* and *Iqqur īpuš*.

Šumma ālu and *Iqqur īpuš* indicate the most propitious ways of building, renovating, demolishing or inhabiting either houses, temples or parts thereof, in general and specifically. Admonitions are critical regarding the times (months and days) chosen for the building, renovation, demolition or occupation of a structure, and the overall appearance, location, layout, position and quality of the structure.

It is not obvious whether recommendations for humans' houses could also apply to temples (houses of gods). A distinction is made between *bītu* (E_2) and *bīt ili* (E_2.DINGIR). It seems likely that *bītu* on its own should here mean "building", which would apply to all types of buildings, including individuals' houses and palaces, but excluding the special buildings that are temples. The dichotomy between human and divine buildings would moreover be stressed by the occasional specification that the building/house belongs to a man (LU_2/NA). Temples nevertheless still fit under the category *bītu.* For example, Šarru-ukīn implicitly includes temples and palaces in the category "cities and houses" when he explains that he laid the foundations of Dūr-Šarrukīn in the month of Abu which is the month of Gibil, "who makes firm the foundation of city and house the foundations of city and house" (*mukīn temmen āli u bīti*) **Fuchs 1994, Zyl. 61**, and then mentions the different temples and the palace that he built in his city at the time.

It appears likely that the category *awīlu* (LU_2/NA) used in *Šumma ālu* could include both ordinary citizens and kings.[170] Some omens seem to be addressed specifically to ordinary citizens,[171] whilst others were used by kings as we shall see. The choice of a general term such as *awīlu* was probably intentional since it allowed for greater flexibility in the interpretations. The same reasoning must have underscored the phraseology of omens that either use protasis verbs in the third masculine singular without specifying the subject, or simply omit mentioning human actors in the protasis by describing the building works in the stative. Such omens are characteristic of *Iqqur īpuš. Iqqur īpuš* also includes omens that specifically mention the king as actor of the protasis.[172] Note that the omens that specify the king as actor of the protasis are typically unambiguous in their relevance to royalty, so it would superfluous to opt for vague phrasing.

Do omens mean only what they say or do they imply things, does analogy apply and is negative evidence valid? It seems omens have to be taken word for word and that analogy does not apply, which would also rule out negative evidence, according to one letter:

> *pišrāte ša šume ša arḫāni kī ḫannie išten ana šanie lā mušul ina battataya pišrātēšunu il*[*lu*]*ku*
>
> Interpretations of monthly omens are like this: one is never similar to another, their interpretations go separately.[173]

If there is an internal logic in omen series then it may be the ordering of omens in categories (which would have had empirical foundations[174]) and the use of either analogy or inference in the formal semantic relation connecting protasis and apodosis.[175] Not much more can be said with certainty about internal logic. What is clear is that omen compendia seem to be responding to an external logic driven by social factors. The omen compendia derived from and fed into the ancient Mesopotamian "ideational system"[176] very profoundly. To quote Annus, they are "a blend of observational sciences, common-sense attitudes and religious beliefs",[177] and we may thereby assume that they would have found a strong anchoring in daily life, many intricacies of which would have fallen prey to time.

Planning was fertile soil for divinatory thinking[178] since it required guarantees in order to be carried out: the mechanisms of divinatory thinking provide a means of self-assurance. It is interesting to compare planning recommendations in omens with the

170 The distinction between LU_2/NA and LUGAL appears to be ideologically meaningful but not ritually determining in the context of omens. As pointed out by Livingstone (2013: 260), sections of *Inbu bēl arḫi* copy the series *Iqqur īpuš* with substitutions such as "king" for man or "palace" for "house".

171 For example, "If the foundation trench of a house encroaches onto the street…" (*Šumma ālu* V, 22) clearly invokes urban discipline which could hardly have affected an all-powerful king.

172 For comparison, the royal hemerology *Inbu bēl arḫi* also refers to kings specifically.

173 SAA 10, 56, o. 13 – r. 2.

174 For the empirical foundations of omen lists see Rochberg 1999.

175 For form and reasoning in Babylonian divination see Rochberg 2010.

176 This expression is used here to refer to the complex topic of Mesopotamian "rationality" (to be understood emically) and the constructs thereof (whether fictional or not), which on the epistemic plane often manifested themselves in the form of divinatory thinking and ominous representations.

177 Annus 2010: 13.

178 For a general discussion on the processes of divinatory thinking in Mesopotamia and beyond see Guinan 2002.

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State archives			*Šumma ālu*				*Iqqur īpuš*			
reference	**planning event**	**timing/orientation**	**reference**	**planning event**	**timing/orientation**	**interpretation**	**reference**	**planning event**	**timing/ orientation**	**interpretation**
XIII, 161	laying foundations for ziggurat	*Šabāṭu* (XI)	V, 15	foundations of building are laid	Šabāṭu (XI)	(+/–)	§1, 13	foundations of building are laid	*Šabāṭu* (XI)	(+/–)
XIII, 14	setting wooden drainage pipes for temple	*Šabāṭu* (XI)	N/A	N/A	N/A	?	N/A	N/A	N/A	?
X, 14	erecting shrine	*Simānu* (III) 17	N/A	N/A	N/A	?	§32, 3	building temple renovating sanctuary	*Simānu* (III)	+
X, 14	erecting shrine	*Ululu* (VI)	N/A	N/A	N/A	?	§32, 6	building temple renovating sanctuary	*Ululu* (VI)	+
V, 80	laying bricks to build houses for deportees	*Ululu* (VI) 20	V, 39	house built	*Ululu*	–	§5, 6	building house	*Ululu* (VI)	–

Royal inscriptions			*Šumma ālu*				*Iqqur īpuš*			
reference	**planning event**	**timing/orientation**	**reference**	**planning event**	**timing/orientation**	**interpretation**	**reference**	**planning event**	**timing/ orientation**	**interpretation**
Šarru-ukīn Zyl.	laying foundations of city and house	*Abu* (V)	V, 8	foundations of building are laid	*Abu* (V)	+	§1, 6	foundations of building are laid	*Abu* (V)	+
Šarru-ukīn Zyl. und XIV	making bricks for temple	*Simānu* (III)	N/A	N/A	N/A	?	§32, 3	laying bricks for temple (implies making them)	*Simānu* (III)	+
Aššur-aḫḫē-iddina RINAP 4, 48	adding bricks to foundations of temples	*Šabaṭu* (XI)	N/A	N/A	N/A	?	§32, 11	laying bricks for temple (implies making them)	*Šabāṭu* (XI)	+
Sîn-aḫḫē-erība RINAP 3, 166	new entrance for temple	east	V, 69	new entrance for house	east	+	N/A	N/A	N/A	?

Key:
+ good
- bad
(+/-) good or bad (variant)
? specific information lacking

Fig. 2: Interpretation of planning events (timing and orientation) according to omen series.

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evidence of planning choices effectively made in daily life provided by the state archives and royal inscriptions. Concordances between real life choices and omen recommendations are probably not coincidental.[179]

The main overlap between planning recommendations in omen series and planning choices recorded in the state archives and royal inscriptions concerns timing and orientation. The following table lists all planning events related to timing and orientation that were recorded in the state archives and royal inscriptions, indicating their interpretations according to the omen series *Šumma ālu* and *Iqqur īpuš*.

Dates chosen for work on temples and palaces in the state archives are overall auspicious according to the information supplied by the omen series. Contrasting with this is the date chosen for work on houses for deportees, which is not auspicious. It is probable that less care was put into choosing dates for houses of low class commoners than for houses of gods and kings. When both a positive and negative interpretation are possible (yellow boxes) it may be that the positive outcome was subject to special conditions, such as the absence of secondary factors inducing evil or the performance of apotropaic or exorcistic rituals.

Information from the royal inscriptions corroborates the idea that planning decisions could be made according to the same superstitions on which omen series were based. Real events conform with omen recommendations.

Omens may also have influenced planning choices evidenced in our sources regarding the materials used. *Šumma ālu* VII, 98 states that if poplar beams roof a house the owner of the house will grow old. This can be related to the frequent mention of what appears to be poplar wood in the correspondence of Šarru-ukīn for his building of Dur-Šarrukin.[180] Note moreover that poplar was the most common roofing timber in Mesopotamia, as demonstrated by archaeological evidence.[181]

Our sources also provide information suggesting that lighting may have been adjusted in the awareness of omens. Sīn-aḫḫē-erība brightens the darkness of the internal part of the roofs (*ṣulūl tarāni*) from the corridors of his palace, making them shine like the day (ūmiš ušnammir) **RINAP 3/2, 43, 28**.[182]

This action is in tune with omen recommendations. *Šumma ālu* VI, 9 notes that "if a house's roof (*tarānu*) shines (*namāru*) inside, its inhabitant will be happy".

The maintenance of buildings was also subject to omen stipulations and their associated rituals. Tablet XII of *Šumma ālu* lists omens related to fungus in houses and gives instructions for rituals to exorcise the evil. This can be linked to a letter from the priest Nergal-šarrānī that informs the king (either Aššur-aḫu-iddina or Aššur-bāni-apli) that a *kamunû*-fungus and a *katarru*-fungus have appeared in the inner courtyard of the temple of Nabû and on the walls of the central storehouses (*abusāte*) respectively:[183] specific *namburbî* rituals of the type indicated in *Šumma ālu* are to be performed.[184]

Some omens are clearly directed specifically at commoners because they warn against adopting building customs that we know were being practised by royalty.[185] For example, it was not recommended that a house be surrounded by pegs (as were temple plans during the foundation process),[186] it was inauspicious if a man's house smelled of ghee, oil, aromatic plants or wine (substances typically mixed into the mortar of temples during the foundation process)[187], misfortune was predicted to the man who when building his house found silver/gold/copper/stone/tin/lead in the ancient foundations (materials typically deposited by kings in the foundations of temples),[188] and using the colour black for plaster (one of the most common colours for plasters in Mesopotamian palaces[189]) was unfavourable.[190] In a few instances, the "man" in question is opposed to the palace, as in the case where he should find silver in the ancient foundations of his house, the palace would take possession of the materials necessary for the building of his house,[191] or if the house's plaster is a combination of white, black, red, green/yellow[192] (colours found in the interior of palaces), the palace would make a claim on the owner.[193]

Not all royal customs are treated as royal prerogatives, which suggests some customs were considered universally valid. For example, the colour red is presented as auspicious[194] whilst blue/green

179 For a statistical study that quantifies calendrical recommendations from the Babylonian hemerologies against dated Neo-Assyrian oracular enquiries and legal reports see Livingstone 2013: 275–278. The correlations revealed by this study are significant and point to an active use of the hemerologies.

180 See GIŠ.A.AM in SAA 5, 34: r. 5; GIŠ *ṣarbutu* in SAA 5, 253: 6′.

181 Cf. Oates/Oates 1989: 209–210; Moorey 1994: 355.

182 ▸ **6.2**.

183 SAA 13, 71.

184 For *namburbî* rituals against the calamity brought about by funghi on walls see text VIII.10 in Maul 1994: 354–366. The ritual described in *Šumma ālu* XIII corresponds to lines 24–27 of text VIII.10.

185 See Guinan 1993: 66–67.

186 *Šumma ālu* VI, 93.

187 *Šumma ālu* VI, 101–104.

188 *Iqqur īpuš*, §6 1–10.

189 ▸ **6.2.1**.

190 *Šumma ālu* VI, 29.

191 *Iqqur īpuš*, §6, 1.

192 The term used is SIG_7 (*warqu*).

193 *Šumma ālu* VI, 32.

194 *Šumma ālu* VI, 30.

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(*zagindurû*) is not even mentioned (and therefore not banned), although the use of blue/green and red is evidenced extensively in Neo-Assyrian mural depictions.[195] The possibility that kings may have been interested in these omens should not be ruled out. Kings were protected from believing the negative omens because these were addressed to the simple "man". On the other hand, they could happily believe that the positive omens concerned them too, in their quality as men, especially when the omens seemed to point out to universally valid customs. As for the omen rulings against the usurpation of royal prerogatives, these may only have provided satisfaction to the kings. An omen states: "If the foundation of a house encroaches upon the main square, the inhabitants of that house will not agree with one another".[196] This omen finds an echo in a passage from Sîn-aḫḫē-erība's inscriptions: "If ever (anyone from) the people in that city tears down his old house and builds a new one, and the foundations of the house encroach upon the royal road, they shall hang him upon a stake over his house."[197]

195 For the polychromy of Neo-Assyrian reliefs and the prevalence of the colours red, blue, black see Sou 2015: 5.

196 *Šumma ālu* V, 24.

197 Sîn-aḫḫē-erība, RINAP 3, 38, 24–27.

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2 SITE SELECTION AND FOUNDATION

Selecting the site and laying the foundations of the building marks the beginning of the building's material existence. The significance of this phase for the Assyrians is clear from the wealth of the materials it triggered. The term "site" is used here primarily to refer to the ground on which a building is built, and not to a settlement (town/city), with the understanding that a site can be part of a settlement. The term "foundation" refers to both the process of settling a construction into the ground and the basic structure obtained.

2.1 Site selection (general)

In most cases, the royal inscriptions do not provide much explicit information about the building sites' topologies or the reasons for their selection: clues have to be sought in concomitant factors. This is not surprising. Since royal inscriptions were addressed to future rulers, they were primarily intended as a reminder of impermanent objects and events such as buildings and wars, not of permanent places. Royal inscriptions tended to be physically bound to the sites they referred to: as the future ruler discovered the royal inscription he would naturally also acknowledge the site. The foundation and restoration of buildings often followed military victories since these provided some of the necessary materials and workforce in the form of spoil and captives. The Assyrian kings could be inspired to build in specific areas during the course of their campaigns, as they discovered new lands, conquered more space and became increasingly indebted to the gods on their side. Oates and Oates speculate that the erection of the temple of Mamu at Imgur-Enlil may have been related to the taking of omens for a coming campaign, since this could be the spot where Aššur-nāṣir-apli II would have slept on his first night out of Nīnawā as he marched to battle against places such as Zamua.[1] Aššur-nāṣir-apli's inscriptions reveal he was impressed by the diversity of vegetation across the lands he conquered. In one inscription he lists the many different trees which he saw on campaign and which he presumably imported for his gardens in Kalḫu.[2]

Šarru-ukīn was equally sensitive to the environments encountered on his campaigns and may have chosen to build Dūr-Šarrukīn at the foot of Mount Muṣri in order to keep in spirit with the scenery of the Amana range, which his son Sīn-aḫḫē-erība is also known to have appreciated.[3] A number of inscriptions concern renovations where building sites are presented as if they originated from times immemorial. This mainly affects temples since their sites were considered sacred. If sacred sites were not kept permanently functional they would at least be preserved for future re-use. Sites with a sacred history were usually preferred to virgin soil, so a majority of temples were (re-)built on such sites. These temples were never considered entirely new, instead they were perceived as rebuildings of the original temples. A new temple on the site of an ancient temple was considered a revival of the ancient temple, not a similar one. When Aššur-nāṣir-apli II rebuilds Kalḫu, he describes the ancient city as being tired (*ālu šū ēnaḫma*)[4], an expression he commonly uses to describe architectural dilapidation[5]. It was important to treat new temples as regenerations rather than imitations of older temples in order not to disrupt the sacred transmission of divine power essential to the building tradition. New palaces were also conceived of with a sense of continuity, often consisting in enlargements or emulations of older palaces. However, since they were primarily an expression of the ruler's individuality, they could more easily be presented as unique prototypes than temples: this would be perceived as a statement of fresh political power rather than religious dissidence. Agents of destruction were typically given as natural, including rain[6], river flooding[7], fires[8], earthquakes[9]. Neglecting or wilfully abandoning a building, especially a temple, was considered an act of hybris[10], since the buildings were believed to have an existence of their own, belonging to the gods if temples, and respected as the legacy of previous rulers, when palaces.

1 Oates/Oates 1974: 174.

2 Aššur-nāṣir-apli II, RIMA 2, A.0.101.30, 40–48.

3 Cf. Sîn-aḫḫē-erība's comparison of his park in Nīnawā to Mount Amana in RINAP 3/1, 17, vii 53 – vii 57.

4 Aššur-nāṣir-apli II, RIMA 1, A.0.101.26, 47.

5 See for example Aššur-nāṣir-apli II, RIMA 2, A.0.101.40, 32–33: Aššur-nāṣir-apli explains how Emašmaš previously built by Šamšī-Adad had become tired and gone into ruins (*bītu šū ēnaḫma labērūta illik*).

6 Šarru-ukīn, Winckler 1889, Nimrud Inscription, 13–15: the *duprānu*-juniper palace built by his ancestor Aššur-nāṣir-apli II was destroyed by the rain because its foundations were not strongly secured.

7 Adad-nērārī I, RIMA 1, A.0.76.10, 40: the wall of the New City which faces the Tigris was eroded by a flood.

8 Shalamaneser I, RIMA 1, A.0.77.2, 12–14: the Ehursag-kurkurra temple and its sanctuary were destroyed by fire.

9 Shalamaneser I, RIMA 1, A.0.77.17, 6–8: the temple of Ištar was destroyed by an earthquake.

10 For the question of hybris in the ancient Near East see Frankfort 1978: 267–269.

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The state archives are less loquacious about site selection and foundation, suggesting this process had more impact on the Assyrian culture ideologically than materially. It is however clear that the foundation procedure was considered important even on a daily basis. Foundation matters are a common correspondence topic served by a precise terminology, and certain documents contain evidence for the actual practice of foundation rituals.

2.1.1 Selecting new sites: building from scratch

The Assyrian royal inscriptions record the building from scratch of two cities important for their religious and royal sites: Kār-Tukultī-Ninurta established as capital by Tukultī-Ninurta I, and Dūr-Šarrukīn, the new capital of Šarru-ukīn. Both Kār-Tukultī-Ninurta and Dūr-Šarrukīn were founded on the aftermath of military campaigns. The spoils of war could have been an incentive to undertake such significant building projects, but it is not clear that sufficient spoils were always available and there is little evidence that the workers were ever paid, on the contrary, corvée work is described as something to be proud of. Even if facilitated by financial factors, the momentum chosen to found a city would have been, more often than not, symbolic. Accounts of the foundation of Dūr-Šarrukīn at the foot of Mount Muṣri on the site of the former village of Magganubba combined with a narrative of Šarru-ukīn's campaigns appear in various inscriptions.[11] The site's foundation is presented as a final stage of conquest and a statement of triumph. Founding new sites was a form of conquest. It was also a form of investment for which financial assets could be used but such transactions seem to have been mentioned only because they were unusual and could serve as propaganda. When Šarru-ukīn founds Dūr-Šarrukīn he is investing his spoils into empty land, transferring riches from their source of origin to a new source for new benefits. He sets his mind to the settling of barren steppes, the cultivation of wasteland and the plantation of fruit orchards (*ana šūšub namê nadûte petê kišubbê zaqāp ṣippāte*).[12] According to his own words, Šarru-ukīn buys off the land at market rate. He offers the inhabitants of Magganubba silver in exchange for their fields and if they refuse the silver he invites them to choose equivalent fields anywhere else in the country.

There are also accounts narrating the selection of new sites to extend or improve existing sites and accommodate new constructions. Sîn-aḫḫē-erība uses the site of the former palace in Nīnawā[13] to build the Palace without a Rival, his main palace. He adds land to the site of the old arsenal to build the new *ēkal kutalli* ("Rear Palace")[14], which had two palatial wings, one in Ḫatti style (*nēpešti Ḫatti*), and one of Assyrian workmanship (*epšet māt Aššur*). Sîn-aḫḫē-erība's son Aššur-aḫu-iddina later built an extension to Sîn-aḫḫē-erība's *ēkal kutalli*, renaming the building *ēkal māšarti* ("Review Palace"); he selected wasteland (*qaqqaru kišubbû*) for the addition.[15] In the same way he added extra land (*qaqqaru atru*) to his palace in Tarbiṣu.[16] A prevailing idea is that when the seat (*šubtu*) of a building site was too small, it was increased by an addition (*atartu*) of land (*qaqqaru*). Both Sîn-aḫḫē-erība and Aššur-aḫu-iddina employ this terminology to describe the enlargements they made on their arsenals.

2.1.1.a Principles of purity

qaqqaru, erṣetu, eperu

It was regarded as positive that new foundations should be laid on ground bereft of impurities such as debris of a previous occupation. Tukultī-Ninurta I describes the land chosen to build his new capital Kār-Tukultī-Ninurta as follows:

> *ašar bītu u šubtu lā bašû tīlu u epēru lā šapkūma libittāti lā nadât*
>
> A place where there was no house nor dwelling, where no ruin mounds or dust had accumulated and no bricks had been laid.[17]

The term *qaqqaru* was commonly employed to denote vacant land. Tukultī-Ninurta's inscriptions suggest previously occupied land did not fall into the same category as *qaqqaru*: Tukultī-Ninurta identifies north of Aššur "large (plots of) houses, remote stretches (of land) and much terrain (*qaqqarāti mādāti*)" which he seizes to build the New Palace.[18] Tukultī-Ninurta is more concerned about the purity of the land for his temples in Kār-Tukultī-Ninurta than for his palace at Aššur.

The type of vacant land to be used was sometimes specified. Sîn-aḫḫē-erība abandons the site of the old palace of Nīnawā, which was on the Tebiltu river and had been destroyed by high waters, and seizes land from within the river flats (*qaqqarī ušallī*) on the edge of the Tebiltu river to elevate the terrace of his new palace.[19] He also chooses wasteland (*kišubbû*) from the river flats (*ušallu*) and irrigation fields (*tamirtu*) in the environs of the city to build an extension for his new arsenal[20]. Naqīa,

11 Šarru-ukīn, Fuchs 1994, Zyl., 44–56 for the most complete account of Dūr-Šarrukīn; in the same edition see also, for example, Stier, 39–41 and Ann., 425–426.
12 Šarru-ukīn, Fuchs 1994, Zyl., 34.
13 Probably that of Mutakkil-Nusku, cf. Russell 1999: 124.
14 Sîn-aḫḫē-erība, RINAP 3/1, 22: vi 45 – vi 47.
15 Aššur-aḫu-iddina, RINAP 4, 77, 48.
16 Aššur-aḫu-iddina, RINAP 4, 93, 22–23.
17 Tukultī-Ninurta I, RIMA 1, A.0.78.23, 95–97.
18 Tukultī-Ninurta I, RIMA 1, A.0.78.3.
19 Sîn-aḫḫē-erība, RINAP 3/1, 22: vi 48 – vi 51.
20 Sîn-aḫḫē-erība, RINAP 3/1, 22: vi 45 – vi 47.

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Aššur-aḫu-iddina's mother, uses a piece of *qaqqarū puṣê*[21] (litt. "grounds of bare lands") in the centre of Nīnawā behind the Sîn-Šamaš temple to build a palace for her son.[22] Such bare land is also mentioned by Tukultī-Ninurta I when he builds his New Palace in Aššur: he selects[23] *qaqqarī puṣā'ē* in the area of the ziqqurrat of Adad.[24] The noun *puṣû* is derived from *peṣû* (white/clear), which is evocative of what dry empty land would have looked like in the Assyrian steppe-dominated landscape. Vacant land would have been rare inside cities and hence worth mentioning.

The royal inscriptions and state archives provide no indications that new sites could be purified, as one might expect. There is textual and archaeological evidence for such practices earlier in Babylonia, however.[25]

2.1.1.b Strategic locations

One of the main qualities sought for a building site was that water supplies be readily available. Šarru-ukīn states he founded Dūr-Šarrukīn above a spring at the foot of Mount Muṣri, a mountain upstream from Nīnawā.[26] The importance of water is clear from his description. Plentiful water was necessary to irrigate fields and for human and animal consumption, but also to create lush gardens and parks, which were a feature most prized by the Assyrian kings. For example, Šarru-ukīn designs a park in the image of the Amana mountain with perfumed aromatic trees of Anatolia and orchards.[27] Similarly, Sîn-aḫḫē-erība describes directing the water of the Husur into canals to create herb gardens, orchards, vineyards and other tree plantations evocative of the Amana.[28] River flats (*ušallu*) and other terrains neighbouring rivers such as irrigated land (*tamirtu*) are therefore commonly mentioned as choice locations, and digging canals was one of the first moves undertaken when a city was founded.

Kār-Tukultī-Ninurta was built as a cultic centre (*maḫāzu*), on the Tigris, on the opposite bank (*ebertu*) from Tukultī-Ninurta I's previous city Aššur. Tukultī-Ninurta explains he makes canals flow to the sanctuaries, suggesting these are somewhat inland from the river.[29] On the other hand, he specifically points out that he chose much land (*qaqqarāti maddāti*) for his palace on the riverbank. This would have created a striking visual effect symbolic of the king's power as one arrived from Aššur. Šarru-ukīn also describes his choice of site for Dūr-Šarrukīn as on the opposite bank (*ebertu*) of an older city, Nīnawā. It is significant that new cities should be built on the opposite bank of older cities, as a sort of reflection. This may have been a subtle way of affirming an allegiance to previous seats of power, whilst at the same time establishing new paradigms. When Sîn-aḫḫē-erība renovates Nīnawā, he diverts the course of the Tebiltu river to accommodate his new palace on the site of the old palace including an extension: the extension is built on the former grounds of the river after drainage, which Sîn-aḫḫē-erība describes as similar to dry land (*nābališ*).[30]

Not only were buildings adapted to river systems but the opposite could also occur. The importance of river systems to construction were such that their related infrastructures warranted detailed descriptions in the building accounts. Sîn-aḫḫē-erība devotes a substantial piece of his inscriptions to describing his construction of a canal, which in all likelihood[31] corresponds to the Ḫinis-Husur canal system, the last stage of Sîn-aḫḫē-erība's irrigation programme named by Sîn-aḫḫē-erība "Sîn-aḫḫē-erība's canal". This canal system diverted waters from the Gomal river above the village of Ḫinis north of Nīnawā into the Ḫusur river to lead them south into "The City of the Assyrians",[32] and included a bridge (*titurru*) known today as the Jerwan aqueduct **[FIG. 3]**. Sîn-aḫḫē-erība narrates the building process of this monument in much detail, more than he deemed necessary for monuments as important as temples and palaces. He presents the canal as an engineering feat, swearing to future kings by the oath of Aššur that with only a small number of men, in a year and three months, he achieved this work, thereby averting potential disbelief. Sîn-aḫḫē-erība does not specify the number of men who worked on this project: describing them as a small workforce may have been exaggerated, but even so, he could

21 *qaqqarū puṣê* is to be understood as a plural in the construct (see Deller 1962). For *kaqqerē puṣā'ē* (KI.MEŠ BABBAR.MEŠ) in Neo-Assyrian legal documents see Radner 1997: 255–256.

22 Aššur-aḫu-iddina, RINAP 4, 2003, ii 15′.

23 The action performed by Tukultī-Ninurta is unclear due to text damage, but the verb in question could plausibly be restored ⌜ *u*$_2$ ⌝-[*na-si*]-⌜ *iq* ⌝.

24 Tukultī-Ninurta I, RIMA 1, A.0.78.2, 39–45.

25 Ellis (1968: 9–10) points to archaeological evidence from different periods of Mesopotamian history that suggests offerings were made to purify new sites before construction. Fire is known to have been used as a means to purify soil. Ellis mentions a layer of ashes extending under the Old Babylonian temple of Ištar Kitītum at Ischali. As noted also by Ellis (1968: 9–10) textual evidence for purification rituals with fire can be found in the Neo-Sumerian building accounts of Gudea and Ur-Bau. Gudea purifies the foundations of the temple of Gatumdu with fire (Gudea, RIME 3/1, E3/1.1.7.StF, iii 1 – iii 2), whilst Ur-Bau purifies the earth fill of the foundation trench of Ningirsu's Eninnu with fire (Ur-Bau, RIME 3/1, E3/1.1.6.5, ii 4 – ii 8). It may not be a coincidence that the Sumerian sign for fire god (^{d}gibil$_4^{gi}$) is written with the sign for 'to be new' (gibil$_4$).

26 Šarru-ukīn, Fuchs 1994, Stier, 39–40.

27 Šarru-ukīn, Fuchs 1994, XIV, 28–29.

28 Sîn-aḫḫē-erība, RINAP 3/1, 18, viii.

29 Tukultī-Ninurta I, A.0.78.22, 45–46.

30 Sîn-aḫḫē-erība, RINAP 3/2, 4, 15–20.

31 Cf. Frahm 1997: 154.

32 Probably Yarimjah, cf. Bagg 2000: 318.

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Fig. 3: Sîn-aḫḫē-erība's canal (Jacobson/Lloyd 1935: Plate 10).

legitimately be proud. Considering the dimensions of this canal[33] and the limited technological resources the Assyrian had at their disposal, a timing of one year and three months for completion would have been impressive even with a large workforce. Sîn-aḫḫē-erība pursues his narrative with a description of the rituals involved.[34]

The amount of detail provided about the construction of this canal suggests that its construction may have been more elaborate or complex than that of temples and palaces.

It may also be that Sîn-aḫḫē-erība perceived his canal project as out of the ordinary and therefore chose to highlight more of the foundation process than was customary.

An interesting narrative is Sîn-aḫḫē-erība's account of his notorious destruction of Babylon in 689 BCE — an attempt to crush the Babylonian rebellion. It resembles a building account run backwards.[35] Sîn-aḫḫē-erība destroys city and houses "from foundations to parapet". The assets of the building site, such as water, are transformed into liabilities. The king digs ditches and lays the earth flat with water (*erṣessu ina mê aspun*). He states **RINAP 3/2, 223, 53–54**:

> *aššu aḫrât ūmē qaqqar āli šuātu u bītāt ilāni lā mušší ina māmī ušḫarmiṭsūma agtamar ušalliš*
>
> So that in days to come the ground of this city and temples should not be distinguishable, I had it dissolve in the water and finished it off (so that it became) like a river flat.

Three aspects of land may be distinguished: *qaqqaru* (the ground with building potential), *erṣetu* (the earth more generally) and *epēru* (the soil specifically). After destroying Babylon, Sîn-aḫḫē-erība removes some ground (*qaqqaru*) from the city and has it carried into the Euphratēs down to the sea so that the soil/dust (*eperu*) should reach Dilmun on the shores of the Arabian peninsula as a message of Assyrian might. Sîn-aḫḫē-erība sends samples of dust to peoples throughout the confines of his empire, and also saves some as a trophy that he stores in his *bīt akīti*[36]. This episode illustrates the importance of the building ground as mineral substance. A building site's ideological value was so strong that it supported the material value: although determined by location, a building site's material value was not

33 The entire canal ran on 35 km; the Jerwan aqueduct alone is 280m long, 22m wide (with parapets), 9m high (with parapets), cf. Jacobsen/Lloyd 1935 and Ur 2005: 335–339.

34 ▸ **2.2.2.a**.

35 Frahm (1997: 256) sees in this negative building narrative a form of humour which he ranges, according to Freudian typology, in the category of double-meaning (*Doppelsinn*), i.e. a technique that leads to psychological displacement (*Verschiebung*).

36 Sîn-aḫḫē-erība, RINAP 3/2, 168, 38–41, 46–47.

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physically bound to location, it could be contained in a sample of dust and made to circulate around the world. The importance attached to a site's soil as indicator of its value explains why for new foundations sites with pure soil were preferred to sites with soil mixed to debris and why purifying only the soil would have been enough to consider the entire site purified.

The correspondence of the state archives provides further evidence that site selection for royal/state buildings was usually strategically motivated. For example, one letter from Sîn-aḫḫē-erība to Šarru-ukīn reports that the ruler of Ukku has written to the king of Urarṭu complaining that the Assyrians are building a fort in Kumme.[37] This indicates the Assyrians' building agenda was politically significant and would thereby have to be strategic. Here the fort represents a potential military threat to the surrounding populations. Also to bear in mind when considering political strategy is the historical and subsequently ideological value that sites could acquire. This is suggested in the survey of an estate being sold to members of a crown prince's court (Sîn-aḫḫē-erība?): two sets of plots are described as dating from the reigns of Tukultī-apil-Ešarra (III) and Salmānu-ašarēd (V), respectively[38]. There is also evidence regarding the appreciation of water as a factor of strategic importance for the viability of a settlement. A letter from an Assyrian official (Il-yada'? Šarru-emuranni?) to another unnamed official reports that the Assyrian official Marduk-šarrāni is conspiring with the Babylonian Marduk-apla-iddinainforming him that: "There is no water in the town of Dūr-Šarrukku (Assyrian outpost about 80 km north of Babylon) so if you come and launch an attack on it you will take it in a matter of a day."[39]

An interesting text from Nīnawā purports to be a contract between two demons for the purchase of property.[40] The composition is humoristic, standing for just the opposite of what a proper real contract would be. It offers a parody of what a buyer would usually look for when selecting a site: the buyer purchases land adjoining a graveyard, where there is no water and where no barley is grown, for no profit.

šubtu/mūšabu, maškanu

The idea that the seat (*šubtu*) of a building had become too small is commonly used to justify the abandonment or enlargement of sites. Sîn-aḫḫē-erība explains how the seat of the "chamber of lordly residence" (*kummu rimīt bēlūtu*), i.e. the palace, at Nīnawā had become too small (*ṣuḫur šubassu*) **RINAP 3/1, 1, 68**. He begins by praising the qualities of Nīnawā, as if the qualities of this site were to be reflected in the new palace. Nīnawā is at once "supreme cultic centre" (*maḫāzu ṣīru*), "city beloved of Ištar" (*ālu na*[*rām*] *Ištar*) "eternal foundation" (*temennu dārû*), "base of distant time" (*duruš ṣâti*), "artistic site" (*ašru naklu*) and "seat of secret (*šubat pirišti*) where all kinds of fine craftsmanship, every type of rite, and the secret lore of the subterranean waters are deliberated". The seat of the palace therefore lies within a city which is itself described as the "seat of secret". The palace is thereby doubly anchored, belonging to both a geographical and cosmological setting. This layered picture is accentuated by the fact that the palace is described as "chamber (*kummu*) of lordly residence". Designating the palace with *kummu,* a term that usually denotes the cella of a temple, suggests it was perceived as a very secluded place, which agrees with the secretive aspect of Nīnawā.

Etymologically *šubtu* is the place where someone or something sits: it anchors an individual or thing into a place. Linguistically, one will distinguish *šubtu* from *mušabu*: the former is a regular feminine noun (<(*w*)*šb*), the latter a "*mapras*" noun indicating a place. Although these terms can apply to the same objects and are treated as synonymous in lexical lists[41] there are tendencies in the alternative usage of the terms, which suggests nuances in meaning. It appears *šubtu* can be used in allusion to a volume of space but is also commonly used to denote an area of space, whereas *mūšabu* is somewhat exclusively used in allusion to a volume of space.

Both *šubtu* and *mūšabu* can be used to refer to the space in which are carried out specific human or divine activities such as "living" or "ruling". Throughout the inscriptions, countless times, Assyrian rulers will refer indistinctively to temples or palaces as *šubtu/mūšabu* of divinity or royalty respectively. In the same passage, Aššur-aḫu-iddina alternatively uses *šubtu* to denote the area of his palace that has become too small, and *mūšabu* to describe his palace as residence of kingship.[42] *šubtu* is special in the sense that it also functions as a signifier of ground surface referring to a building or a city's area of contact with the ground in a geographically material way. Linking *šubtu* with the subterranean waters of the *apsû* suggests it functions as an anchor point between the activities of humans and the domain of the gods, which makes it also geographical in the cosmic sense. It is therefore intrinsically locational. This connotation is also illustrated by the fact that in its narrowest sense the "seat" (*šubtu*) of a god was the pedestal on which his image/symbol rested in the shrine, typically represented on reliefs by a box-like object, the god's point of connection with the

37 SAA 1, 29.
38 SAA 11, 222.
39 SAA 15, 189.
40 SAA 6, 288.
41 Cf. entries for both terms in CAD.
42 Aššur-aḫu-iddina, RINAP 4, 77, 44 + 51.

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material world.[43] In contrast, *mūšabu* is generally employed to refer to the usage of space as it were "above" or "below" the *šubtu* surface, reflecting specific human or divine activities attached to the area but without any fixed spatial limits.

Whilst *šubtu*/*mūšabu* reflect the idea of a building as inhabited space, *maškanu* renders the notion that a building has been set in a particular place. In Nīnawā, Sīn-aḫḫē-erība abandons the emplacement of the old palace (*maškan ēkal maḫrīti*) and seizes new ground on the river flats for his new palace[44]. Aššur-aḫu-iddina's inscriptions indicate the concept of *maškanu* had a special significance as it is used to specify *ašru* ("site") in itself already significant: Aššur-aḫu-iddina prides himself on rebuilding the Aššur temple in Aššur without changing the site of its emplacement (*ašar maškanšu ul ušannīma*)[45]. The same expression is employed with reference to Esagil as Aššur-aḫu-iddina describes exposing the *ašar maškan Esagil*[46].

2.1.2 Selecting ancient sites: building on ancient foundations

Building on ancient foundations was the most common form of construction. It was important to identify the exact location of the ancient foundations, especially for religious buildings. As seen previously, Aššur-aḫu-iddina explains how when laying the new foundations of Esagil he did not diminish the previous foundation area by one cubit nor increase it by half a cubit **RINAP 4, 104, iii 42 – iii 46**:

> *ṣēr uššēšu maḫrûti išteat ammata ul ašēṭ mišil ammati ul utter kī pî gišḫurrīšu maḫrīti attadi temenšu*
>
> Against its previous foundations — 1 cubit I did not omit, 1/2 a cubit I did not add. According to the previous plan I laid its foundation (plan).[47]

Both textual and archaeological evidence indicates, however, that the exact location of ancient foundations was not necessarily respected. In his inscriptions Tukultī-Ninurta I acknowledges changing the site of the Ištar temple of Aššur, he states: "I changed its location and laid (its foundations) in another site" (*qaqqaršu ušešni ina ašri šanîmma addi*).[48] This is confirmed archaeologically. Richard Ellis points out that, according to Walter Andrae's excavation reports, Tukultī-Ninurta I rebuilt the Ištar temple of Aššur over earlier private houses.[49] Hence, the Ištar temple of Aššur was rebuilt many times in the course of its history always more or less in the same place but not always exactly on top of the previous ruins. That Tukultī-Ninurta should consider the site (*ašru*) of the temple changed when the building's position was only slightly moved, the general area of its emplacement being respected, speaks for the *ašru* being a very specifically defined area.

ašru

Associated with the original foundations was the idea of original site often referred to as *ašru*. The notion of *ašru* typically occurs in descriptions of how ancient foundations were identified. In the context of site selection, the term *ašru* (plur. *ašrū* or *ašrāti*) has very much a sacred connotation. It is usually used to refer to the original sites of temples. It is probably no coincidence if the term for sanctuary (sing. *aširtu*/*eširtu,* plur. *ašrāti*/*ešrāti*) is etymologically linked. Aššur-aḫu-iddina prides himself for not changing the site (*ašar maškani*) of the Aššur temple which Salmānu-ašarēd I had established "586 years" earlier.[50] In the same spirit he carefully seeks out the sanctuaries (*ašrāti*) of the Eanna precinct and calls for future kings to do likewise.[51] The term *ašru* is sometimes used in lieu of *aširtu,* which highlights the overlap in significance between the two concepts: both denote clearly defined sacred spaces. For example, when appealing to deities, Tukultī-apil-Ešarra III and Aššur-bāni-apli claim to visit sacred sites/sanctuaries (*ašru*) regularly.[52] The clear preference for the term *ašru* (as opposed to *maškanu* for example) to designate building sites could stem from the heavenly connotation of *ašru*: *ašru* is attested as a poetic name for heaven.[53] Also connected to *ašru* is the cosmic place name *ašrata.*[54]

It is made clear in the inscriptions of Aššur-dān II and Aššur-nāṣir-apli II that the *ašru* of a building, whether temple or palace, was a well-delineated area. The rulers employ what appears to be a standard expression *ašaršu umessi*, "I identified its site".[55]

43 George 1992: 9–10.
44 Sîn-aḫḫē-erība, RINAP 3/1, 22, vi 48 – vi 51.
45 Aššur-aḫu-iddina, RINAP 4, 59, ii 2– ii 4.
46 Aššur-aḫu-iddina, RINAP 4, 105, iv 34.
47 It is not clear why the values specified for the negative and positive differences should not be the same. It could be referring to an actual case witnessed in the past and from which Aššur-aḫu-iddina wishes to distance himself. The idea of not changing the size of the layout in the slightest is adopted later in the Neo-Babylonian period by Nabû-na'id who seems to have made it a literary motif, see Schaudig 2001: 688, sub *ubānu*.
48 Tukultī-Ninurta I, RIMA 1, A.0.78.13, 31–34.
49 Ellis 1968: 12–13.
50 Aššur-aḫu-iddina, RINAP 4, 59, i 24 – i 25.
51 Aššur-aḫu-iddina, RINAP 4, 133, 32 + 37.
52 Tukultī-apil-Ešarra III, RINAP 1, 35, 22; Aššur-bāni-apli, RINAP 5, 3, v 32 – v 33.
53 See Horowitz 1998: 225.
54 Horowitz 1998: 226.
55 In two comparable instances the verb *mussû* is applied to *qaqqaru* instead of the expected *ašru*. Tukultī-apil-Ešarra I (RIMA 2, A.0.87.1, vii 76) identifies the ground of the

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The verb is *mussû* ("to identify"), which corresponds to *mesû*[56] ("to clean") in the D-Stem, thereby reflecting the physical aspect of the process. Aššur-dan II identifies (*mussû*) the *ašru* of the old palace of Aššur to build his New Palace.[57] Aššur-nāṣir-apli II identifies (*mussû*) the *ašru* of the temple of Ištar of Nīnawā on the grounds (*qaqqaru*) of the Emašmaš built previously by Šamšī-Adad[58] in Kalḫu.[59] The sites of the temples of Sîn and Šamaš in Aššur[60] and of Adad in Nīnawā[61] are identified in the same way. Tying in with the idea of "identifying/cleaning" the site is the idea of "clearing" it. Adad-nērārī I describes "clearing" the site (*ašru*) of the *mušlālu* of the temple of Aššur and of the wall of the New City at Aššur (with the verbs *paṭāru* and *nakāru*, respectively).[62] The clearing of the site to begin the works is a recurrent theme in the Assyrian inscriptions, but the object of the action is rarely the site (*ašru*) itself, rather the verb[63] applies more commonly to the concept of dilapidation (*anhūtu*)[64] which alludes to the material ruins. Clearing old ruins was an intrinsic aspect of the foundation process. It is perhaps the same mindset that underlies the Arabic verb وضع which means both "to found (a city)" and "to raze (a building)".[65]

Taking the logic further, the ruins of an old building are somewhat amalgamated with the foundations of a new building since the noun وضعة applies to anything laid down, including the ground levelled off as the base of a building. Likewise, the *ašru* was associated with both construction and destruction. Aššur-aḫu-iddina prides himself of conquering Ṣīdūnu and then destroying it to the extent that he even made the site where it stood disappear (*ašar maškanīšu uhalliq*).[66]

As with new sites, Assyrian building accounts never explicitly specify ritually "purifying" the soil of ancient sites. The purification of ancient sites is however attested in written sources from other periods of Mesoptoamian history.[67] For example, in the late third millennium Gudea says he purified the foundations of Eninnu and made fire go over the foundation trench (uš-bi mu-ku$_3$ izi im-ta-la$_2$ temen-bi)[68] whilst in the late first millennium Nabû-apla-uṣur claims to have purified the site of Etemenanki (*ašrim šâtê ullilma*) through exorcism and with the intelligence of Ea and Marduk[69]. In addition to fire and incantations, clean earth could also be used to purify ancient sites. This is attested both in the written and archaeological records.[70] Nabû-kudurri-uṣur explains he packed down clean earth on the foundation of Ebabbar in Larsa (*eli temennīšu labīri epērī ellûti amquqma*).[71] In Babylonia, layers of clean sand are often found between reconstructions of temples.[72]

A site did not have to be ancient to be considered an *ašru.* Šarru-ukīn boasts that of all his 350 ancestors, none was able to identify (*ul u$_2$-maš-ši-ma*) like him the site (*ašru*) of Dūr-Šarrukīn.[73] The concept of *ašru* was expandable. Cities could be considered as such. Šamšī-Adad V describes Kalḫu as "pure shrine, spacious site" (*kiṣṣu ellu ašru šumdulu*), which underlines the physical dimension of *ašru*.[74] In contrast, Sīn-aḫḫē-erība describes Nīnawā as an "artistic site" (*ašru naklu*), which highlights the more abstract dimension of the term **RINAP 3/1, 1, 65**.

2.2 Foundation process (general)

Accounts of the foundation process concern mainly ancient sites, where new foundations were established to revive old ones, as this was the most common building situation. First, the old foundations

foundations of the temple of Anu and Adad which had been dilapidated for 641 years until it was completely torn down and then abandoned again for another 60 years. Adad-nērārī I mentions identifying ground for a new palace around the deserted and uncultivated area of Taidu (Adad-nērārī I, RIMA 1, A.0.76.23). It seems that in both cases the term *qaqqaru* was chosen because the rulers were building on wasteland and not on a clearly recognizable site (*ašru*). That the concepts of qaqqaru and ašru should be so closely connected suggests that an ašru site could be determined by material features visible on the ground: *ašru* would not only refer to a broad volume of space, but also to a specific area.

56 Ellis (1968: 16) points to the distinction established by Baumgartner between *mussû* ("to clean") and *ullulu* ("to purify"), common in Neo-Assyrian and Neo-Babylonian inscriptions respectively. Baumgartner posited that *mussû* may have reflected more technical concerns than *ullulu* which seems to have had a more ritual significance.

57 Aššur-dan II, RIMA 2, A.0.98.1, 74–75.

58 Both Šamšī-Adad I and IV worked on this temple, cf. RIMA 1, A.0.39 and A.0.91 respectively.

59 Aššur-nāṣir-apli II, RIMA 2, A.0.101.40, 34–35 and A.0.101.56, 15–16.

60 Aššur-nāṣir-apli II, RIMA 2, A.0.101.52, 5′.

61 Aššur-nāṣir-apli II, RIMA 2, A.0.101.66, 10.

62 Adad-nērārī I, RIMA 1, A.0.76.7, 40 and A.0.76.10, 40.

63 Other verbs used to refer to clearing are *paṭāru* ("dismantle"), *nakāru* ("change"), *nasāku* ("throw down"), *hasāpu* ("tear away"), *nasāhu* ("uproot"), *dekû* ("lift"); *nakāru* is nevertheless the most common, possibly because the most general in meaning. Notice each verb suggests a different aspect of clearance. The objects of the verbs vary.

64 Another term referring to ruins, used mainly in the Sargonid period, is *miqittu*.

65 Curious coincidence the homophony in English of the building-related verbs "to raise" and "to raze".

66 Aššur-aḫu-iddina, RINAP 4, 2, i 14 – i 18.

67 See Ellis 1968: 15–17.

68 See Gudea, RIME 3/1, E3/1.1.7 StC, iii 6 – iii 7.

69 See Nabû-apla-uṣur, RIBo/Babylon 7, 5, ii 33.

70 See Ellis 1968: 15–16.

71 See Nabû-kudurri-uṣur II, VAB 4, no. 10, ii 4.

72 See Ellis 1968: 15–16.

73 Šarru-ukīn, Fuchs 1994, Stier 43–46 and XIV 29.

74 Šamšī-Adad V, RIMA 3, A.0.103.1, i 24.

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had to be identified. The ruins would have to be cleared out to the bottom of the foundation pit for a total reconstruction, or simply levelled for repair. Subsequently, the foundation trench might have to be redefined. A base of limestone or mountain rock could be laid upon the foundation pit to strengthen the ground and as support for the foundation stones or bricks, to increase the load transfer. The limestone blocks might themselves already be considered foundation stones. Occasionally the foundation trench reached bedrock which was used as base for the foundations. A terrace was sometimes raised in continuation for added height to protect the building from waters or for a better visual effect. Then the new foundation stones or bricks could be set, establishing the base for walls, usually a composite of stones (in the lower courses) and bricks, the whole bound together with mortar and sometimes bitumen.

Assyrian kings will not necessarily mention the old foundations specifically, they usually acknowledge clearing the site of its ruins, may explain they set a base, might mention raising a terrace (*tamlû*), and will often happily summarise the rest by "I (re-) built it (the building) from its foundation to its parapet". The basic formula employed with some variations is *ultu uššīšu adi gabaddibbîšu arṣip*.[75] It is used to refer to all types of monumental structures, this includes walls and storehouses. For new sites, such as those in Dūr-Šarrukīn or Kār-Tukultī-Ninurta, no mention is made of old foundations of course, but one would expect extra information regarding site preparation, and special technical details about the process of founding new buildings from nil that would single them out as special. This type of data is however not normally supplied. Accounts of foundations on new sites are not more descriptive than accounts of foundations on ancient sites, rather the opposite. Unlike accounts of foundations on old sites, accounts of foundations on new sites can be subject to a dearth of tangible data, as if the new buildings had risen out of a void. Most notable is the absence of formulaic expressions.

Aššur-nāṣir-apli I ii1 reports that as he was renovating Kalḫu he founded temples "which had not previously existed" (*ša ina pān lā bašû*) such as the temple of Enlil and Ninurta, and "founded anew" therein (*ana eššūte ina libbi addi*) temples which had already existed there and which he lists.[76] No formulaic expressions are provided regarding the new temple foundations, not even in texts that specifically focus on them.[77] The same is true of the new palace foundation.[78] Such formulae are also absent from Šarru-ukīn's accounts of the foundation of new buildings at Dūr-Šarrukīn. In contrast, Aššur-nāṣir-apli's description of the reconstruction of the temple of Ištar in Nīnawā is typically formulaic — the site is identified, the foundation pit dug out, the temple is rebuilt from foundations to parapet and completed.[79] The same can be said of Šarru-ukīn's account of the reconstruction of Eanna in Babylon.[80]

What is perhaps more pronounced, at least in Šarru-ukīn's accounts of new foundations, are the details relating to the cosmic dimension of the foundational process. Šarru-ukīn describes the auspicious time when Dūr-Šarrukīn was founded and mentions the gods involved in the operation. Offerings and prayers are performed for Kulla, lord of foundations and bricks, and Mušdama, master builder of Enlil. The sacred daises are described as firmly consolidated like mountain rock but the actual process of their foundation is not evoked.[81]

2.2.1 The foundations

Modern perceptions of what 'foundations' ought to be can bias our understanding of the ancient Mesopotamian concepts. According to the modern western architectural definition, the foundations of a building are its lowest division, partly or wholly below the ground; buildings built flush with the ground are seen as having no foundations.[82] In their excavation reports of Dūr-Šarrukīn (Khorsabad), more specifically the citadel and town, Loud and Altman remark that "one might almost say with impunity that the city was built without foundations", asserting that artificial platforms and terraces do not count as foundations.[83] Yet Šarru-ukīn makes it very clear in his inscriptions that he laid the *uššū* of Dūr-Šarrukīn (*uššēšu addīma*)[84], also specifying that he fastened the *temennu* of the city's exterior wall over massive mountain rock (*eli aban šadê zaqri ušaršida temmenšu*)[85]. Archaeological excavations at Dūr-Šarrukīn confirmed Šarru-ukīn's allegation that his city wall was built on stone foundations.[86] They also showed that whilst the city and citadel walls

75 A variant for *gabadibbīšu* in the later periods starting with Sīn-aḫḫē-erība is *naburrīšu*; a common variant for *arṣip*, mainly before Tukultī-apil-Ešarra I, is *ēpuš*. This phraseology is noticeably absent from Šarru-ukīn's Dūr-Šarrukīn inscriptions.

76 Aššur-nāṣir-apli II, RIMA 2, A.0.101.30, 53–59.

77 See for example Aššur-nāṣir-apli II, RIMA 1, A.0.101.31, 13: no specifications are given regarding the foundation procedure of Ninurta (and Enlil)'s temple; note the data about the foundation pit sunk to a depth of 120 layers of bricks is mentioned recurrently — it refers to work on the mound of Kalḫu as a whole, not to specific temple sites.

78 See for example Aššur-nāṣir-apli II, RIMA 2, A.0.101.35, 8.

79 Aššur-nāṣir-apli II, RIMA 2, A.0.101.40, 34–36.

80 Šarru-ukīn, RIMB, B.6.22.3, i 37 – ii 6.

81 Šarru-ukīn, Fuchs 1994, Zyl., 57–62.

82 Cf. Aurenche 1977 sub "fondations" and "cru (à)".

83 Loud/Altman 1936: 18.

84 Šarru-ukīn, Fuchs 1994, Zyl., 61.

85 Šarru-ukīn, Fuchs 1994, Zyl., 65.

86 See Loud/Altman 1938: 18.

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(excluding citadel gates) were built on stone foundations, most buildings and the citadel gates were brick-built directly on the ground, their walls being slightly sunk into the ground but without variation in material. The palaces and the Nabû temple were built upon terraces that seem to have been natural mounds levelled and reinforced with bricks.[87]

It appears then that for the Assyrians the lower most part of a building did not have to be below ground to be considered a foundation. Although the Assyrians left examples of foundations flush with the ground, they more commonly laid the foundations into trenches. The foundation trench typically delimited the plan of the building. The foundations stones were laid in the trench to transfer the load of the building into the ground for stability. The structure obtained was consolidated and built upwards with stones or mudbricks to form the walls of the building-to-be. In summary, the basic concept of 'foundation' could include every form of a building's lower most part. What made something a 'foundation' was not its "subterreanean" aspect but its position in relation to the rest of the building, which was itself temporally determined since the foundation was the first stage of the building process.

To understand the language employed by the Assyrian kings when referring to the foundation of their buildings one may, for a start, like to think of architectural constructions in "four dimensions", which means integrating into one's mental map not only the horizontal plan (length x width) and vertical elevation (height) of buildings, but also, in some measure, the flow of time that can affect spatial perception.

2.2.1.a Foundation structure as a whole

uššu (URU_4), *išdu*, *temennu* (TEMEN), *duruššu*[88]

uššu

There are reasons to believe that the primary idea underlying *uššu* is that of foundation trench, not only because this is chronologically the first form taken by a foundation, but also because the hollow aspect of the foundation trench is contained in the logogram $UŠ_8$ which in Sumerian does not only mean "foundation" but can also be read apin ("plow"), uru_4 ("to plough"), $absin_3$ ("furrow"), reflecting an array of ideas associated with the action of carving the ground. Commenting on the double dimension of *uššu* as trench and foundation stone, Dunham draws an analogy with *īku* which can mean both ditch (that which is dug up) and dyke (that which is heaped up).[89] These analoguous semantic patterns could be further evidence that the original idea underlying *uššu* is that of foundation trench, a concept very close to ditch/dyke.

The *uššu* encapsulates the hollow aspect of the foundation trench. On the one hand, the *ušše* can be "opened" (*petû*)[90]. On the other hand foundation tablets and other objects can be deposited "inside".[91] Deposit caches were found integrated into the pavement of Dūr-Šarrukīn, which could also explain how the *uššu* would "contain" things.[92] This suggests the term *uššu* could be used to refer to the limestone blocks used as pavement: as the buildings' main point of contact with the ground these stones were *de facto* foundation stones. Šarru-ukīn laid the *ušše* of his palaces on top of foundation deposits including tablets of gold, silver, lapis lazuli, jasper, *parūtu*-alabaster, *gišnugallu*-alabaster, bronze, tin, iron, lead and fragrant aromatic woods.[93] At least one deposit cache, an inscribed gypsum box recovered by Victor Place, should have contained seven tablets each made of a precious material, namely gold, silver, copper, tin (*annaku*), lead (*abāru*), lapis lazuli, *gišnugallu*-alabaster **[FIG. 4]**.[94] The caches found by Loud and Altman contained at most sand[95]: whatever perishable materials may have been deposited inside would not have survived, and it is likely that any non perishable materials such as valuable stones or metals would have been 'recycled' during Šarru-ukīn's reign or in the course of the centuries that followed.

It is an established fact that *ušše* also came to designate the actual solid foundations of a building. In fact, this solid aspect of *uššu* appears to be implied in what is possibly the most recurring catchphrase

87 Loud/Altman 1938: 54.

88 For a more detailed discussion of the terms *uššu*, *išdu*, *temennu* and *duruššu* see Tudeau 2017.

89 Dunham 1980: 405.

90 See Sîn-aḫḫē-erība, RINAP 3/1, 17, viii 7. A letter from Bēl-iqīša to Aššur-bāni-apli makes it clear that although by analogy the *ušše* may be said to be opened, what is actually being opened is the area where the solid *ušše* are to be laid: the plot of the foundations has been opened (*bēt ušše pate*) and the bricks have been stocked up to lay the foundations (*ušše ana karāri libitti karmat*) **SAA 16, 111, o. 12 – r. 1**. Note that *temennu* is also described as being "opened " to reach the water table in the inscriptions of the Neo-Babylonian king Nabû-kudurrī-uṣur II (VAB 4, no. 14, ii 13 and no. 15, vii 59), which indicates the terms could be used synonymously.

91 Šarru-ukīn, Fuchs 1994, Go., 32, Ant., 18–21; Sîn-aḫḫē-erība, RINAP 3/1, 3, 53 and RINAP 3/2, 168, 51.

92 Loud/Altman 1938: 21.

93 See for example Šarru-ukīn, Fuchs 1994, Prunk., 159–160.

94 Each tablet mentions that seven tablets were deposited in the box, but the box was found by Place containing only five tablets identified as gold, silver, copper, lead and alabaster; the lapis lazuli and tin were missing. For more on how the materials were identified, and hypotheses as to why the number of tablets in the box did not match the number specified on the tablets see Bjorkman 1987.

95 Loud/Altman 1938: 21.

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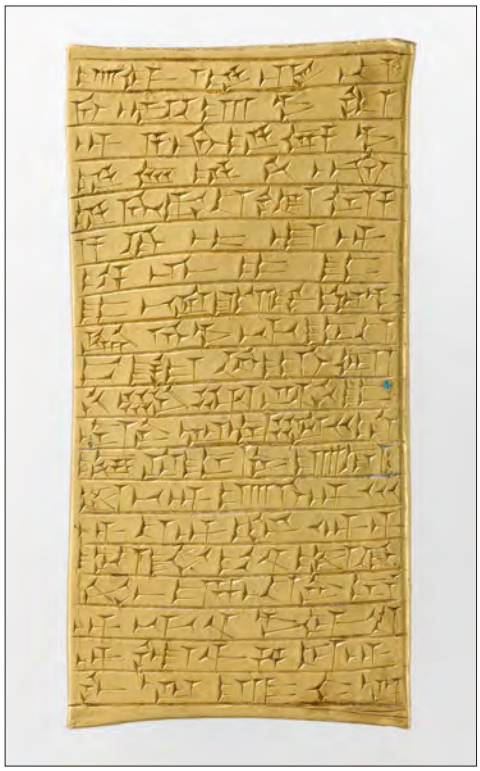

Fig. 4: The gold foundation tablet of Šarru-ukīn found by Victor Place, AO 19933 (© Musée du Louvre).

in the Assyrian building accounts seen previously already: *ultu uššēšu adi gabaddibbîšu* "from its foundations to its battlements".[96] The *uššē* are presented as the starting point of a vertical upward progression that ends with the battlements. One expects *uššu* to be the architectural pendant of *gabadibbû*: if *gabadibbû* designates the uppermost part of a building, then *uššu* must designate the lowermost part of a building, i.e. the foundation structure. The bipartite aspect of the expression *ultu uššēšu adi gabaddibbîšu* moreover pleads in favour of the *uššē* being perceived as a single entity. The plural attestations of *uššu* suggest that the term typically refers to a *quantity* of foundation stones or bricks. The English plural "foundations" renders well the material and composite nature of *uššu* as single entity. In his "Eigth Campaign", Šarru-ukīn crushes minutely "like pottery" the fortification walls of Mannean cities "down to the core of their foundations" (*adi šipik uššīšunu*).[97] Here it is clear that although multiple, the foundations are bound by a common core. A convenient translation of *uššu* in the singular to convey the idea of foundations, in the sense of a solid base of stones/bricks that form a whole, would be "foundation course".

The physicality of *uššu* is also very tangible in more destructive contexts. In his narrative of the destruction of Babylon, Sīn-aḫḫē-erība says that he hacked down, dismantled and burnt with fire the city and its buildings from foundations to parapet (*ultu uššēšū adi gabaddibbîšu appul aqqur ina gīri aqmu*), and laid waste the structure of the city's foundations (*šikin uššēšu uḫalliq*) **RINAP 3/2, 223, 52**. The emphasis on the "structure" of the *uššē* highlights their physicality, as did the emphasis on the "core" (*šipku*) in the previous paragraph.

The *uššē* appear visible at times, which confirms their materiality. A letter informs Šarru-ukīn that a guard is to repair damaged foundations (*uššē batqūti*) of an unspecified building, proving that the foundations were not only solid but also visible. Working from the royal inscriptions, Lackenbacher also remarks on the potentially visible character of the *uššē* pointing out that Tukultī-apil-Ešarra I surrounds the *uššē* of his "palace of weapons" in Aššur with slabs of *gišnugallu*-limestone (*uššēša ina agurrī ša gišnugalli ana siḫirtīša lū almi*).[98] When referring to the house of the *šaḫūru* Tukultī-apil-Ešarra I also mentions the use of limestone slabs, to found firmly the *uššē* like bedrock (*uššēšunu ina pīli kīma kiṣir šadî ušaršid*)[99]. Likening the foundations of a building to bedrock is a popuar theme in the royal inscriptions. The image conveyed is that of massive foundations, visually comparable to the base of mountains, which again speaks in favour of the solid aspect of *uššu.*

More rarely, *uššu* can be used to denote the (symbolic) foundations of a throne, a meaning which would normally be rendered by *išdu*: in his "Treaty Inscription", Aššur-aḫu-iddina makes all the lands take an oath by the gods to establish the foundations of the throne of Aššur-bāni-apli and Šamaš-šūmu-ukīn (*uššē kussîšunu*).[100] This suggests that *uššu* was starting to acquire a more abstract meaning.

temennu

Analogous to the concept of *uššu* is *temennu*. The term *temennu* (TEMEN) is derived from the Sumerian temen[101] and was introduced in the Assyrian royal inscriptions by Šarru-ukīn in parallel to *išdu* which had been used exclusively until then, serving a similar purpose. *temennu* is nevertheless not an exact equivalent of *išdu* which has fewer meanings. Of all terms referring to foundations *temennu* is the most encompassing. It typically refers to what will

96 The earliest attested version of this expression is *ištu uššēšu qadu šaptīšu* ("from its foundation to its crest") which is first partially preserved in the inscriptions of Enlil-naṣir I, see RIMA 1, A.0.62.1001. The version *ultu uššēšu adi gabaddibbîšu* was first implemented by the scribes of Aššur-uballiṭ I, see RIMA A.0.73.1. Note this expression (different spellings attested) is found exclusively with *uššu*.

97 Šarru-ukīn, Eighth Campaign, 165 (cf. Mayer 2013: 112).

98 Lackenbacher 1982: 102. Tukultī-apil-Ešarra I, RIMA 2, A.0.87.4, 74–75.

99 Tukultī-apil-Ešarra, RIMA 2, A.0.87.4, 56–57.

100 SAA 2, 14, o.i. 25′.

101 For a study of the Sumerian term temen see Dunham 1986.

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here be termed "foundation plan", but can also designate foundations stones or foundation deposits, most notably foundation pegs. The original meaning of the Sumerian temen is likely to be "foundation peg".[102] Since pegs were used to delimit areas, temen and its Akkadian equivalent, *temennu,* eventually came to designate an area.[103] The translation "foundation plan" is convenient because it conveys two closely related meanings which the Akkadian *temennu* equally appears to convey, namely the idea of foundation as the horizontal delineation of a building's base anchored in the ground (foundation square) and as a design loaded with symbolic significance. Occasionally, *temennu* can also be employed with a deliberately physical meaning,[104] either as a synonym of *uššu,* or to refer to foundation deposits through synecdoche.[105]

Interestingly, the term *temennu* is absent from the state archives. It seems this term belonged more specifically to the elevated language register that is employed in the royal inscriptions. Probably its strong abstract dimension would make it less suitable for everyday use than a more neutral, concrete term such as *uššu.*

išdu

išdu often points to the fastening quality of foundations, conveying the idea that the foundations are the roots of a building, sometimes used metaphorically with concepts of sovereignty[106]. Although *temennu* is used synonymously it is not as specific. For example, Sîn-aḫḫē-erība explains that whilst the *temennu* of his *bīt kutalli* had become weak (*ēnišma*) the *išdā* had become loose (*irmâ*)[107]: in this particular case the deterioriation of the *išdā* is described more precisely probably because the concept itself is more precise.[108] That *išdu* should be used in the dual to designate foundations reflects the special significance of the term.[109] In Akkadian, the dual case is very much reserved for natural pairs (eyes, ears, etc). This suggests *išdu* was perceived as an instrinsic quasi-organic component of the building, which ties in with the "root" analogy. Note that in Old Babylonian *išdu* is used in the dual to designate the legs of a person.[110] Moreover, the Sumerian logogram for *išdu* is suhuš, a gunified version of the pictograph DU, which represents feet. The evidence suggests that *išdu* conveys the idea of foundations as "feet" of the buildings. As pointed out by Walter Baumgartner, a Semitic etymology can be traced for *išdu,* shared with Hebrew שׁת and Arabic است. This speaks in favour of the widespread use of the term, which could explain, in part, its broad semantic range.[111]

durušš̆u

A more literary term encountered in the Assyrian inscriptions, which also means 'foundation', is *durušš̆u*. The word is, however, only attested in Sîn-aḫḫē-erība's inscriptions. It is used in a hyperbole, alongside *temennu*, as one of many terms to describe Nīnawā **RINAP 3/1, 1, 64**. Nīnawā is various distinctive loci (cult centre, artistic place, dwelling of secret) including *temennu darû* and *duruš ṣâti*, which suggests there must be a significant nuance in meaning between *temennu* and *durušš̆u.* Whilst *temennu* is "eternal", *durušš̆u* is "enduring", as if the latter were more material than the former. Nīnawā is presented as a city favoured by the gods, and then it seems the description gradually comes into focus from the most transcendental aspects of Nīnawā (*temennu darû* then *duruš ṣâti*), to the most human and artistic (*ašru naklu* then *šubat pirišti*), with *temennu darû* being to *durušš̆u ṣâti* what *ašru naklu* is to *šubat pirišti*. The impression is that *durušš̆u* and *šubtu* are put on the same level due to their intrinsically "inhabitable" nature, in contrast to *temennu* and *ašru*, which have a greater abstract dimension and therefore require a higher degree of intellectual assimilation to be "experienced". A reasonable translation for *durušš̆u* would be "base" which in English can designate a foundation structure as well as an inhabited place.[112]

102 See Tudeau forthcoming.

103 See Dunham (1986: 33–39) for the use of the term temen with the meaning "traverse" in Ur III mathematical texts dealing with the measuring of fields: here temen was used to designate regular polygons.

104 Read on ▸ **2.2.1.a** sub *uššu* vs. *temennu*.

105 ▸ **2.2.2.a**.

106 For example, in a curse to a potential future enemy, Aššur-nāṣir-apli II wishes "the uprooting (*nasaḫ*) of the foundation (*išdu*) of his sovereignty and the destruction of his people" (RIMA 2, A.0.101.17, v 54b – v 96a).

107 Sîn-aḫḫē-erība, RINAP 3/1, 22, vi 39– vi 44.

108 Note the significance of terms is interpreted relatively to their context. Elsewhere the *uššū* are described as weak (*enahū uššēšu*) whilst *temennu* is described more specifically as becoming weak/submissive (*temmenšu irbubma*), cf. Aššur-bāni-apli, RINAP 5, 3: viii 58 + viii 61. This, rather than pointing to the specificity of *temennu* emphasises its distinctively cosmic dimension: the concept of submission is characteristic of the state of humans in their relationship to the divine.

109 Most attestations of *išdu* referring to buildings (cf. CAD: *išdu* 1) when not in the singular appear to be in the dual, mainly *išdā* or *išdī*. Interpreting *išdī* as an oblique plural is less convincing given that the feminin *išdāte* seems to be preferred for the plural of this term, most notably with a different meaning (cf. CAD: *išdu* 3.b.2′).

110 Cf. CAD: *išdu*.

111 Baumgartner 1925: 236.

112 It is not inconceivable that the use of *durušš̆u* should have been intended as a pun on the concepts of wall (*dūru* I) and foundation (*uššu*) with an underlying sense of permanence (*dūru* II). This possibilty is corroborated by the apparent play on the words *darû* and *durušš̆u* in **RINAP 3/1, 1, 64**.

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uššu vs. *temennu*

The semantic nuances between these two terms extensively used in the Assyrian inscriptions warrant further attention. As seen previously, the most notable difference between the terms *uššu* and *temennu* is that the meaning of *uššu* is exclusively physical whereas that of *temennu* can also be abstract. *uššu* is usually found in the plural, typically as *uššē.*

In the same way that *uššū* is used in the formula "from foundations to parapet" to denote a basic constructive element, it is also used in the context of destruction. As seen previously, in his narrative of the destruction of Babylon, Sîn-aḫḫē-erība says that he hacked down (*napālu*) city and houses from foundations (*uššū*) to parapet and laid waste (*halāqu*) the structure (*šiknu*) of the houses' foundations (*uššū*) **RINAP 3/2, 223, 50–51**. The emphasis on the "structure" of the *uššū* again highlights their physicality. Also indicative of the material aspect of *uššu* is the fact that it is often linked to precious foundation deposits. For example, Sîn-aḫḫē-erība lays in the foundation (*uššu*) of his *bīt akīti* the tribute of the king of Saba namely: silver, gold, carnelian, lapis, *hulālu*-stone, malachite, alabaster, chalcedony, red earth, and all kinds of fragrant plants **RINAP 3/2, 168, 48–51**.

Other foundation deposits frequently associated with *uššu* are the royal inscriptions themselves (*mušarû*). The term *mušarû* was employed by the Assyrians to refer to the royal inscriptions mainly as foundation documents. Šarru-ukīn sets royal inscriptions (*mušarê*) made of precious materials as well as aromatic woods in/under the foundations (*uššē*) of his palace in Dūr-Šarrukīn **Fuchs (1994), Prunk., 159–160; Fuchs (1994), Go., 32–36**.

When the foundation deposits are royal inscriptions (*mušarê*), *uššu* and *temennu* can be used alternatively to refer to the foundations. Sîn-aḫḫē-erība describes leaving for the future one *mušarû* with his name in the foundation (*uššu*) of his palace's terrace[113], and one *mušarû* recording his deeds in the foundation (*temennu*) of his palace[114]: the same *mušarû* may be meant in both cases. It is possible that the transcendent nature of the *mušarû* as representative of the foundations (*pars pro toto*) would warrant referring to the physical foundation (*uššu*) where the deposits are made as *temennu*, which is more ideologically loaded. It seems therefore that with its added nuances *temennu* could occasionally function as signifier of *uššu, uššu* being the signified; the opposite, however, would not occur.

It must be noted that the physicality of *uššu* is not what sets it apart from *temennu,* as *temennu* can also be used in a very physical sense. Sîn-aḫḫē-erība explains that the Tebiltu river had come up to the side of the Old Palace at Nīnawā and "brought about a swamp" (*abbu ušabšû*) in its foundation course (*uššu*) whilst "submerging" (*rabû* III) its foundation plan (*temennu*).[115] It is clear from this that the *temennu* could be visible, at least in the form of a two-dimensional delineation. The tangibility of *temennu* was important. Related to this is the notion of 'examination', which seems specifically associated with *temennu.* This is referenced once in the Assyrian inscriptions when Aššur-aḫu-iddina surveys the foundation of Eanna (*temenšu uṣabimma*).[116] This action of examining foundations is referenced in sources from different periods of Mesopotamian history[117], which indicates it had a special significance. Evidence suggests that the examination was necessary due to the epistemic significance of the *temennu*. For example, the Neo-Babylonian king Nabû-na'id says that expert specialists (*ummânu mūdû*) inspected (*hiāṭu*) the ancient foundation (*temennu*) of the Eanna temple and investigated (*ṣubbû*) its characteristics (*simtu*)[118], implying that *temennu* contained some form of knowledge. Also to be pointed out is the instance in Gilgameš where the narrator instructs:

> *elīma ina muḫḫi dūri ša Uruk itallak*
> *temennu ḫīṭma libitta ṣubbu*
> *šumma libittāšu lā agurrat*
> *u uššūšu lā iddû sebēt muntalkū*
>
> Go up on to the wall of Uruk and walk around,
> investigate the foundation plan, inspect the brickwork!
> See if its brickwork is not kiln-fired brick,
> and if the Seven Sages have not laid its foundation course![119]

Here *temennu* was specifically chosen as object of the verb *ḫiāṭu,* as if to stress a special connection between the two terms; it is in opposition to the *uššu* used to describe the physical foundations two lines further. It seems that as foundation plan the *temennu* contains in its design the knowledge that the Seven Sages had in mind when they laid the foundation course of the wall, which would justify the need to examine it.[120] The idea that the *temennu*

113 Sîn-aḫḫē-erība, RINAP 3, 3, 53.
114 Sîn-aḫḫē-erība, RINAP 3, 4, 92.
115 Sîn-aḫḫē-erība, RINAP 3, 1, 74.
116 Aššur-aḫu-iddina, RINAP 4, 133, 32.
117 See Schaudig (2010: 147–149) for an overview of attestations.
118 Nabû-na'id, Schaudig 2001, 2.11 1 ii 57.
119 Cf. The Standard Babylonian Epic of Gilgameš, I 19–21, in George 2003.
120 Note the role of the Seven Sages (*apkallū*) in the building project. The Seven Sages were traditionally associated with laying the foundations of the seven original cities Eridu, Ur, Nippur, Kullab, Keš, Lagaš, Šuruppak (cf. Wiggermann 1992: 75). Possibly by reason of their connection to foundations, the Seven Sages are mentioned as apotropaic figurines in a Neo-Assyrian ritual text for the purification of a new house (cf. Wiggermman 1992: 123). Matching textual and material evidence from the

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of a building may contain some form of sacred knowledge is also suggested in the fact that, as we have seen, Aššur-aḫu-iddina describes laying the foundation of Esagil like(?)[121] the constellation "the Field" which corresponds to the Square of Pegasus ([*tamšil*?] *ikû attaddi temmenšu*[122]). The comparison with the constellation *ikû* brings forth the idea of a "foundation square", since *ikû* does not only denote a cultivated surface (field) but also a square area equal to 60 × 60 metres (= 100 *mūšar*). The origin of the meaning "foundation square" for TEMEN seems clear here: it is an area delimited by foundation pegs.

Instances in which *uššu* and *temennu* appear concurrently are numerous. Here is a representative sample from the Sargonid inscriptions:

Ruler	Reference[a)]	*uššu*	*temennu*
Šarru-ukīn	Fuchs 1994, Zyl., 61	*u*. laid	*t.* established in month of *Abu*
	RIMB, B.6.22.3	*u.* laid	*t.* fixed on breast of *kigallu*
Sîn-aḫḫē-erība	RINAP 3/2, 168, 48–57	*u.* receives precious deposits and libations	*t*. invoked
Aššur-aḫu-iddina	RINAP 4, 116, r. 22	*u*. laid with(?) wine and beer	*t*. made firm
Aššur-bāni-apli	RIMB, B.6.32.2001	*u*. covered over	*t*. abandoned

a) References according to the main editions of the rulers' inscriptions.

In each case, the contextual meaning of *temennu* is more abstract than that of *uššu* and as such also more encompassing so that *uššu* could be considered an aspect of *temennu.* This possibility is confirmed by Sîn-aḫḫē-erība's use of the two terms when he states he laid the *uššu* of the *temennu* of his *bīt akīti* with mountain limestone[123]. Also in Sîn-aḫḫē-erība's inscriptions, notice from the table above how *temennu* can be invoked **RINAP 3/2, 168, 55**. Here by *temennu* the text clearly refers to the foundation document on which it is inscribed. It is interesting that the foundation document[124] should be personified, what is more as a second person singular. A direct personal relationship is thereby established between ruler and foundation. The transfer of meaning from foundation plan to foundation document (and vice versa) points to the universal dimension of *temennu*: it can signify a range of foundational aspects from the most abstract that make it intangible/indestructible, to the most material that make it real. The fact that in its most material/objectified aspect (foundation document) *temennu* could still be personified and thus metaphorically elevated to an abstract form suggests there was a need to differentiate the physical foundation (*uššu*) which would be ephemeral from the ideological one (*temennu*) which was to be eternal.

2.2.1.b Parts of the foundation structure

dannatu, asurrû[125]*, pīlu*[126]

Three components of the foundation structure are granted special attention in the inscriptions, namely *dannatu* (foundation pit), *asurrû* (base course, damp course) and *pīlu* (limestone block). The structural significance of these terms highlights the technical dimension of founding a building, especially during the excavation procedure. The excavation procedure required for rebuilding a monument, which was the most common type of royal building enterprise in Assyria, resembled in some ways modern archaeology. It was necessary to recover as much as possible of the previous building and respect its structural principles. The foundation trench had to be very clearly defined. The aim was to reach the foundation pit of the previous building — which usually corresponded to the hardest bottom-most surface below accumulation debris — and also to disencumber the base course of previous walls. The notion of "reaching the foundation pit" (usually in the form *dannassu akšud*) is typically expressed in Assyrian building accounts from Adad-nērārī I to Aššur-nāṣir-apli II. It is less popular in the Sargonid period, attested only once, in Aššur-aḫu-iddina's inscriptions. By then, it seems the idea of *dannatu* had been somewhat re-

Neo-Assyrian Haus des Beschwörungspriesters at Aššur confirms the use of *apkallu* figurines as apotropaic devices buried in houses (cf. Nakamura 2004: 19).

121 Due to text damage it is not clear what the relationship between AŠ.IKU and *temennu* was meant to be. Similarities with **RINAP 4, 104, iii 50 – iii 51** suggest the two terms are being compared.

122 Aššur-aḫu-iddina, RINAP 4, 54, o. 33′.

123 Sîn-aḫḫē-erība, RINAP 3/2, 173, 8–10.

124 In this particular case, an alabaster tablet.

125 For *asurrû* in relation to walls see ▸ **4.1.2**.

126 For *pīlu* as stone see ▸ **1.3.2.a**.

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placed by that of *asurrû*.[127] Although both concepts are not equivalent, they structurally imply one another. Aššur-bāni-apli thus states he "reached the base course" (*akšuda asurrûšu*) of his *ēkal māšarti*.[128] *asurrû* otherwise refers to the bottom most part of walls, one which would have been hidden. It is typically covered with slabs of limestone either for functional or decorative purposes and does not seem to have been granted any intrinsic value. Sîn-aḫḫē-erība reports surrounding the *asurrû* of his palace with great slabs (*askuppātu*) of limestone to strengthen the substructure (*šupku*) so that its foundation (*temennu*) should not be weakened by high water.[129] Elsewhere Sîn-aḫḫē-erība surrounds the *asurrû* of his *bīt appāte* with slabs of limestone to make the palace an object of "wonder" (*ana tabrâti ušālik*) **RINAP 3/1, 1, 86**.

In contrast with *asurrû*, *dannatu* appears to have a greater intrinsic significance, pointing to a cosmic connexion. Based on Malku I, 51, the Babylonian Theodicy (BWL 74: 58) and the equivalence of Akkadian *dannatu* with Sumerian ki-kal, Horowitz suggests that the *dannatu* of the "three earths" mentioned in KAR 307, a first millennium mystical text, may be the earthly equivalent of the stone surfaces ascribed to the "three heavens" in KAR 307 and AO 8196, a late Babylonian collection of astronomical, astrological and religious information.[130] Horowitz interprets the stone surfaces as the floors of heaven, and the floor of each heaven would serve as roof to the heaven below. As ground surface, the *dannatu*'s would also function as floors: they would be the floors of the earth on its different levels, namely the world of the living, the *apsû* and the netherworld. It is possible that the cosmic meaning of *dannatu* was already in existence when the term was introduced in the Assyrian inscriptions during the late second millennium. The idea of *dannatu* as a floor of the earth ties in well with the idea that the foundations of a temple can be rooted in the *apsû*. Šarru-ukīn fixes the foundations of Eanna into the breast of netherworld like a mountain (*timenšu ina irat kigalla ušaršid šadduā'iš*)[131]; Aššur-bāni-apli describes the Egigunu ziqqurrat of Nippur as being rooted by its foundations into the breast of the *apsû* (*ša ina irat apsî šuršudu timmenšu*)[132]. Note that the *apsû* is already frequently mentioned in relation to foundations in earlier Sumerian texts. The inscriptions of Gudea provide an eloquent example:

ensi$_2$-ke$_4$ e$_2$ mu-du$_3$ mu-mu$_2$
kur gal-gin$_7$ mu-mu$_2$
temen abzu-bi dim gal-gal ki-a mi-ni-si-si
^{d}en-ki-da e$_2$-an-gur$_4$-ra-ka
ša$_3$ mu-di$_3$-ni-ib$_2$-kuš$_2$-u$_3$

The ruler built (and) raised the house. Like a great mountain he raised (it). Its *abzu* foundation pegs, the great mooring poles, he drove into the ground so that with Enki in the E-engur they may take counsel.[133]

To found the Eninnu, Gudea drives "its *apsû* foundation (pegs)" (temen abzu-bi) into the ground so that they may "take counsel" with Enki in the E-engur. As noted by Edzard, it is very likely that the foundational role of the *apsû* would have been inspired by the ground water usually encountered when digging foundation trenches.[134] The existence of this water is acknowledged by various rulers.[135] For example, Sîn-aḫḫē-erība mentions reaching ground water (*mê nagbi*) when opening up the foundations (*ušše*) of his city's outer wall.[136] Notice here again the connection of the *apkallū* sages with the foundations. Underground water (*nagbu*) was intrinsically connected to the god of wisdom Enki/Ea who lived in the cosmic underground waters of the *apsû*. It appears Enki/Ea was commonly associated with foundations. This may explain why Aššur-aḫu-iddina laid the foundations of Esagil in the likeness of the constellation "Field", which, as seen previously, is described as the abode of Ea **RINAP 4, 104, iii 50**.[137]

Also to be discussed here is the term *pīlu*. The most common meaning of *pīlu* is "limestone". Its extensive use in construction means it also acquired the meaning "(limestone) block". The quality of the limestone is sometimes specified as "white" (*pēṣû*), "mountain rock" (*aban šadê*) or both; it is assumed that when not specified the mountainous quality would still be implied. A lexical equivalence emphasises the connection between limestone and the colour white: NA$_4$.NA.BUR = *pīlu* = *peṣû* (Hg. B IV 133, cf. *MSL* 10 34).[138] As seen previously, limestone blocks were multifunctional, serving both as paving/revetment and foundation stones. Šarru-ukīn spreads (*tarāṣu*) blocks of limestone over gold, silver, bronze and aromatic woods from the Amana mountains and thus lays the foundations of his city.[139] The verb *tarāṣu* here would have the meaning of "to pave". As for Sîn-aḫḫē-erība, he uses limestone

127 ▸ **4.1.2**.
128 Aššur-bāni-apli, RINAP 5, 3, viii 62.
129 Sîn-aḫḫē-erība, RINAP 3/1, 1, 77.
130 Horowitz 1998: 16.
131 Šarru-ukīn, RIMB, B.6.22.3, i 39 – i 40.
132 Aššur-bāni-apli, RIMB, B.6.32.15.
133 Gudea, Cyl. A, xxii 9 – xxii 13 (lines 602–606 in online ETCSL version [accessed 03.02.2011]).
134 Edzard 1987: 16.
135 Tukultī-Ninurta I (A.0.78.19), Šarru-ukīn (Fuchs 1994, Prunk., 128, referring to Merodach-Baladan's defensive moat fortifications in Bīt-Yakin), Sîn-aḫḫē-erība (see following footnote), Aššur-aḫu-iddina (RINAP 4, 104, v 26 – v 27).
136 Sîn-aḫḫē-erība, RINAP 3/1, 15, vii 25′ – vii 27′.
137 ▸ **1.2.3**.
138 ▸ **3.2.1**.
139 Šarru-ukīn, Fuchs 1994, Stier, 55–56.

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for revetment and foundations: he surrounds the base course (*asurrû*) of his palace with slabs (*askuppātu*) of limestone, lays the foundation (*uššu*) of the *bīt akīti* in Aššur with "mountain limestone"[140] and the foundation (*temennu*) of the court of Ešarra with "white limestone"[141].

Interestingly, only the term *temennu* is associated with *white* limestone; the *uššū* are sometimes of "mountain limestone" but are never specifically described as being of "white limestone". Mentioning white limestone specifically with the cosmic *temennu* suggests it was decisively symbolic. Tukultī-Ninurta I uses white limestone and bricks for the foundations of the temple of Adad in Aššur.[142] Aššur-aḫu-iddina lays the foundations of the *bīt mušlālu* (gatehouse) of his palace in Aššur (Baltil) with white limestone.[143]

2.2.2 Foundation rituals

The founding of a temple or palace was a sacred moment. It established and referenced the presence of a god or king both spatially and temporally. The function of rituals was to define and accentuate this sacredness. Building rituals were passed down from generation to generation and very much served to bind dynasties of rulers around their achievements. This is clear from the formula at the end of royal inscriptions in which future rulers who might find the inscriptions and associated ruins are exhorted to perform the correct rituals and rebuild the monument appropriately.[144] Those who could fail in their obligations are cursed ad eternam.

For a ritual to be valid it had to fit into a long-lived tradition. In a letter from Kalḫu, a priest describes a practice to the king but warns him that "this is not a ritual, this is nothing, it is not ancient, your father introduced it" (*lā dullu lā memēni lā lābiru šû abūka ussellī*).[145] The long tradition of temple and palace building in Mesopotamia suggests that associated rituals would certainly have counted as "something".

It is clear that rituals are inseparable from the building process. It was of prime importance to secure solid foundations for temples and palaces. This is reflected in the special rituals involving the foundation stones themselves. The process of laying the foundations was perceived as a stage in itself. This is clear in a letter from Mar-Issar to Aššur-aḫu-iddina, in which the former singles out the moment when the foundations of the temple of ad-Dair were laid by referring to the interval of time "since its foundations were laid until now" (*bēt uššēšu karrūni adunakanni*) **SAA 10, 349, r. 12 – r. 13**. The laying of foundations was an important moment which had to be supervised by officials. Aššur-lē'i reports to Tukultī-apil-Ešarra III that he is laying the foundations in the city of Sarun and will then be laying them in the city of Birdunu.[146]

2.2.2.a Deposits

Various objects and materials were typically integrated into the foundations or inside the elevations of buildings[147] for good fortune. Here is a list of items representative of the Assyrian tradition:

—*libittu maḫrītu* (first/previous brick)

—*sikkatu* (metal peg/clay nail)

—*narû*, *musarû, temennu*, *šumu šaṭru/šiṭir šumi, ṭuppu* (inscribed objects)

—miscellaneous valuables (precious stones and metals, beads, shells)

—consumables (aromatic herbs, spices, honey, ghee, oil, resin, wine, beer, milk)

—animal sacrifices

Ellis has discussed the aforementioned Akkadian terms extensively.[148] Many of the ambiguities he pointed out in his reference work are still valid today. It is nevertheless possible to argue more solidly in favour of certain interpretations based on the general principles that are emerging from our analysis of Assyrian building semantics at large. Some terms are particularly relevant to this chapter.

libittu maḫrītu

This expression is best understood (literally or symbolically) as "first brick", since it is always singled out in the context of foundation, which is by definition the first and foremost stage of construction. Occasionally, it could have the double meaning "first/previous brick" since there is evidence that a *libittu maḫrītu* could be recycled from previous buildings.

A *libittu maḫrītu* is mentioned by Aššur-aḫu-iddina regarding the construction of Ešarra: he makes a brick with his "pure hand" (*ina qātī*[*ya*] *ellēti*) and then carries it as *libittu maḫrītu* ("first brick") on his neck **RINAP 4, 57, v 25 – v 26**. This passage can be read in the light of a Babylonian *kalû* ritual included in tablet O.174, an edition of which can be found in the treatment of Mesopotamian building rituals

140 See for example Sîn-aḫḫē-erība, RINAP 3/2, 168, 31.
141 See for example Sîn-aḫḫē-erība, RINAP 3/2, 169.
142 Tukultī-Ninurta I, RIMA 1, A.0.78.3, iv 37 – iv 39.
143 Aššur-aḫu-iddina, RINAP 4, 61, 9–11.
144 For a discussion of the final formula see Lackenbacher 1982: 145–167.
145 SAA 13, 153.
146 SAA 19, 72.
147 See Lackenbacher (1982: 143) for locations where foundation documents were deposited.
148 Ellis 1968.

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Fig. 5: Foundation pegs (clay and bronze). Left: foundation peg with Sumerian cuneiform inscriptions, from the first dynasty of Lagaš ca. 2400 BCE (L. 26.67 cm; ø (base) 6.67 cm), ME 121208 (© Trustees of the British Museum); right: foundation peg from the reign of Gudea, ca. 2100–2000 BCE (H. 14.28 cm; weight 720 g), ME 102613 (© Trustees of the British Museum).

texts from the first millennium BCE by Ambos.[149] The *kalû* ritual is known as "When the wall of a temple collapses".[150] According to this text a diviner is to remove the *libittu maḫrītu* from the wall of a ruined temple and place it in a restricted place, an offering table is then to be placed in front of the brick and sacrifices are to be performed before a god.[151]

Earlier, in the late third milllennium, Gudea's rebuilding of the Eninnu also involved a special brick, the $\text{še}g_{12}$ nam-tar-ra ("fated brick")[152] described as pa-e_3 ("prominent")[153] and fashioned by Gudea. Clay is taken from the top of a clay pile in a clay pit (ka-al) and mixed with various precious substances (honey, ghee, oil, resin, essences). It is then placed in a mould, thereby becoming a brick. The brick is extracted from the mould and sun dried. The Sumerian ka-al is probably related to the Akkadian *kalakku*. It seems this term designates both the pit of clay and the (pile of) clay it yields. The meanings "excavation" as well as "mud/clay" are attested for *kalakku;* only the meaning "mud/clay" is found in our sources.

In the royal inscriptions *kalakku* designates a special type of clay used specifically in foundation rituals, presumably to make bricks. The term *šallaru* is more frequently attested than *kalakku.* It seems to refer to a type of mud plaster, most likely applied to walls. Whilst *kalakku* is mentioned only by Aššur-aḫu-iddina and Aššur-bāni-apli, *šallaru* occurs throughout the Assyrian royal inscriptions, starting with Šamšī-Adad I **RIMA 1, A.0.39.1, 47–48**. Aššur-aḫu-iddina and Aššur-bāni-apli describe mixing into the *kalakku* various precious ingredients (such as honey, ghee, oil, resin, milk, wine, beer, botanical essences) whilst sprinkling the *šallaru* with fine beer **RINAP 4, 1, vi 37**; **RINAP 5, 9, vi 46**. That the *šallaru* was sprinkled with a liquid speaks in favour of interpreting it as a mud plaster, perhaps an alis.

sikkatu

The term *sikkatu* refers to pegs (of clay, metal or stone) either buried vertically in foundations or driven horizontally in walls **[FIG. 5]**.[154] A connection between vertical and horizontal pegs is probable.[155] There is textual evidence suggesting the use of pegs

149 Ambos 2004: 171–193.

150 See O.174 and BagM Beih. 2, no. 11 in Ambos 2004: 178–179.

151 The identity of the god varies between copies of the text, one copy has the "god of foundation" (DINGIR UŠ_8), the other Belet-ili, goddess of birth, see O.174 and BagM Beih. 2, no. 11 in Ambos 2004: 178.

152 Gudea, Cyl. A, i 15.

153 Gudea, Cyl. A, xviii 26.

154 Note that in the Neo-Assyrian period the term is also used to refer to the bolt pin of the eponymous *sikkatu* lock due to a similarity in shape. Cf. Radner 2010.

155 For convenience, Ellis (1968) refers to these objects as "pegs" when vertical, "nail" when horizontal. Here, the term "peg" is used in both cases because this saves us from suggesting categories that may not have existed.

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during the Old Assyrian and Middle Assyrian periods, and of metal nails from the Old Assyrian to the Neo-Assyrian periods. For Assyria, only clay nails are evidenced archaeologically, in the Neo-Assyrian period, but they are likely to have been purely decorative.[156] Both secular[157] and sacred functions are attested for pegs: on the one hand they could be driven in walls or in the ground as legal markers of property (cf. economic texts from Lagash and Elam[158]) or for surveys (cf. Old Babylonian hymn[159]), on the other hand they could be treated as foundation deposits either thrust into the floors of temples or buried in caches around the lower parts of temples.

Royal inscriptions from the Old and Middle Assyrian periods mention an activity involving the "striking" (*maḫāṣu*) and "setting" (*šakānu*) of pegs. For example, Erišum asks that the peg he struck be not replaced by a future ruler (*sikkatam ša amḫaṣu lā urâb*) **RIMA 1, A.0.33.1, 21–22**. Since only one peg is involved in each case, Ellis believes the activity described is probably different from the old practice of driving foundation pegs in the ground derived from surveying, which would have involved more than one peg.[160] Ellis quite rightly establishes a distinction and legitimately suggests it may be significant. One must nevertheless also consider the possibility that the old practice could have evolved into a new activity with new purposes without necessarily loosing its original meaning or symbolism.

sikkatu-pegs were often inscribed and therefore also served as foundation documents. Foundation documents anchored the building in its place and guaranteed knowledge of its existence for the future. When old buildings were renovated, rulers were expected to deposit their foundation documents together with those of their predecessors if these were available.[161] For example, already in the Old Assyrian period Erīšum I asks that a future ruler wishing to rebuild the temple do not disturb the foundation document (*sikkatu*) he has struck into the ground but return it to its place.[162] Later in the Middle Assyrian period, Tukultī-Ninurta I after depositing his foundation document (*narû*) returns the foundation documents (*narê*) of previous kings to their place.[163] Libation rituals accompanied the depositing and recovery of foundation documents. In another inscription, Tūkūltī-Ninurta I asks that the future prince anoint his foundation document (*narû*), make sacrifices, and return the document to its place.[164] The mechanism of transmission through foundation deposits was still strong in the Neo-Assyrian period, having maintained a very fixed form. For example, Sîn-aḫḫē-erība requests that his descendant who finds an inscription (*musarû*) bearing his name anoint it with oil, make a sacrifice, and return it to its place.[165]

temennu, narû, ṭuppu, musarû/muššaru, šiṭir šumi/šumu šaṭru

Like the previously discussed *sikkatu, temennu*, *narû* and *ṭuppu* also functioned as foundation documents. Of all terms referring to inscribed monuments *temennu* (foundation document) is of particular interest due to its homophony and intrinsic semantic connection with *temennu* (foundation), same signifier, different signified. Assyrian royal inscriptions typically mention *narû* (NA_4.RU_2.A/^{na4}na-ru_2-a) and *temennu* together. *narû* must have referred primarily to tablets (usually stone or metal tablets as opposed to *ṭuppu* clay tablets) whilst *temennu* would have referred primarily to clay prisms and clay/stone cylinders.[166] The distinction may have been originally based on the materials used as suggested by the choice of the term *narû* which has an etymology related to stone. It is clear, however, that the distinction became more significant of the type of documents, as defined by shape, than of the materials used. It appears then that, unsurprisingly, *temennu* referred essentially to those document types that were specific to foundations, that is, prism and cylinder shaped inscriptions. Occasionally, *temennu* may nevertheless also have referred to tablet-type foundation documents as when Sîn-aḫḫē-erība addresses what is probably the foundation document itself, a stone tablet, with the vocative "You, foundation document!" (*temenna atta*). There is no evidence from the Assyrian royal inscriptions that *narû* could also refer to prisms and cylinders.[167]

musarû (MU.SAR) and *šiṭir šumi/šumu šaṭru* are general terms/expressions typically employed together to refer to the aforementioned foundation documents. *šiṭir šumi* and *šumu šaṭru* are in all likelihood Akkadian renderings of the original Sumerian mu-sar ("written name"), Akkadianised as *musarû.* It appears that *musarû* designates the inscriptions as document, whilst *šiṭir šumi* ("the writing of my name") and *šumu šaṭru* ("the written name") designate the inscriptions as writing.

The term *muššaru* is attested in two letters. In one, Issar-dūri asks Šarru-ukīn to send him an inscribed

156 ▸ **6.5.1**.
157 The secular function is only attested in Babylonia.
158 Ellis 1968: 86–87.
159 Ellis 1968: 82.
160 Ellis 1968: 78.
161 See Lackenbacher (1982: 143) for a discussion of the practice, including archaeological references.
162 Erīšum I, A.0.33.1, 20–23.
163 Tūkūltī-Ninurta I, A.0.78.18, 34–36.
164 Tūkūltī-Ninurta I, A.0.78.22, 55–58.
165 Sîn-aḫḫē-erība, RINAP 3/1, 4, 93–94.
166 See Ellis (1968: 145–150) for different contexts in which *narû* and *temennu* are found.
167 None of the extant documents designated as *narû* by their respective inscriptions happen to be prisms or cylinders.

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document (*muššaru*) so that it may be copied and deposited in the walls of the temple of Ištaran at ad-Dair, which is still without inscribed documents.[168] In another letter Mār-issar writes to Aššur-aḫu-iddina suggesting building up an embankment for Ezida the walls of which are affected by rising waters. Mār-issar remarks he would then deposit an inscribed document (*muššaru*) of the king in the embankment.[169] The king was intrinsically connected to foundation deposits and was therefore always kept informed about their locations.

One letter, unassigned, advises the king (Aššur-aḫu-iddina) to order that the chief scribe inscribe the name of the king (*šumu ša šarri*) on a foundation stele (*narû*) and at the same time look up a favourable day for the foundation stele to be deposited in the door jambs (*sippāni*) of the building in question.[170] The connection between the king and the foundation deposits was consolidated by writing the king's name on the foundation deposits. In that sense, the name of the king had quasi-magical properties. It was also sacred. When a certain Mār-Damkūru claims he will establish his own name in a temple by acting on his own accord, the king's officials take it as an offense towards the name of the king.[171]

Valuables and consumables were regularly deposited in the foundations. Precious stones and metals, beads, shells, aromatic plants, honey, ghee, oils, resin, wine, beer, milk are all deposits commonly attested in the texts and/or the archaeological record. The function of these deposits and admixtures is never made explicit. They are typically encountered in association with temples, which suggests divine symbolism.

Precious materials (esp. stones and metals) are known to have had special properties.[172] Postgate discusses this idea in the context of Mesopotamian petrology, studying notions of function, form, substance and nature against the textual and archaeological record. In view of the evidence he regards as plausible the hypothesis evoked by Ellis that the purpose of the foundation deposits described in the royal inscriptions was perhaps to transfer the materials' properties to the buildings, which seems to have been the purpose of foundation deposits in Anatolia according to one Hittite ritual text (see below).[173] Ellis also formulates the hypothesis that the precious materials may have been part of conspicuous consumption rituals.[174] He points to the Wadi Brisa text (Old Babylonian version) from the Neo-Babylonian king Nabû-kudurrī-uṣur II as evidence that deposits could be chosen for their intrinsic conspicuous value. Nabû-kudurrī-uṣur prides himself to have deposited in the foundations of Ezida "everything which is seen[175]" (*mimma ša innaṭṭalu aštakan qēreb uššīšu*).[176]

Materials are known to have been associated with gods.[177] Should this be the case here, the materials may have been deposited in the foundations to establish a divine presence in the building. It would provide a Mesopotamian parallel to the situation in Anatolia since the Hittites considered the materials they placed in the foundations of their buildings to be divine. A Hittite ritual text containing instructions for the laying of foundation deposits in a temple states: "They have just now laid the foundation stone of gold beneath the foundations, and as gold is eternal, as it is pure and strong, as it is the eternal (material) of the bodies of the gods, as it is dear to gods and men, may this temple likewise be dear to the eternal deity!"[178] This is an example of ritual analogy: the temple should be as desirable to the gods as gold is to gods and men. There is moreover a transfer of qualities from the foundation deposit to the temple.

One should not overlook the offertorial character of these deposits which were of the kind that is typically found in temples. In any case whatever their direct purpose, the ultimate aim of foundation rituals was to stay on good terms with the gods. Sîn-aḫḫē-erība reports that Karib-il, king of Saba, sent him precious stones and fine aromatics as audience gift. The products were used as foundation deposits for the *akītu*-temple **RINAP 3/2, 168, 50–51**. Royal gifts could become divine offerings by transfer.

An *āšipu* and a *kalû* priest are appointed by Sîn-aḫḫē-erība for the opening of the Jerwan canal.[179] Associated with their actions are offerings made to Ea "lord of the underground waters, mountain sources and plains", Enbilulu "irrigation controller of the rivers" and Eneimdu "lord of ditch and canal". These offerings include precious stones, a *raqqu*-turtle/tortoise and a *šeleppu*-turtle/tortoise cast in gold, aromatics and fine oil: materials similar to those typically deposited in temple and palace foundations. Here the text explicitly describes the materials as offerings. It is moreover clear that these offerings were selected to match the nature of the gods concerned, a nature which is itself related to the nature of the construction project. The element of water is inherent to the nature of a canal so Sîn-aḫḫē-erība invokes Ea, Enbilulu and Eneimdu, deities associated with water. The offerings include turtles/tortoises, symbols of Ea. Interestingly,

168 SAA 15, 4, o. 17 – r. 6.
169 SAA 10, 364, o. 12′ – o. 16′.
170 SAA 16, 125, r. 4 – r. 10.
171 SAA 13, 181.
172 See for example the myth Lugal-e which assigns characters to stones.
173 Postgate 1997: 211 and Ellis 1968: 139.
174 Ellis 1968: 135.
175 That is to say, everything that catches the eye.
176 See text (vi 14 – vi 15) in Weissbach 1906: 19.
177 ▸ **3.2.2**.
178 See text in Beckman 2010: 86.
179 Sîn-aḫḫē-erība, RINAP 3/2, 223, 27.

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god-specific figurative symbols are never explicitly mentioned as deposits for inhabitable buildings such as temples and palaces.

One can easily imagine deposits or admixtures of consumption goods serving as divine offerings since there is evidence from other contexts that such substances could be offered for divine consumption. Also, as with the stones and metals, there is a case to be made about the properties of these organic substances. Whilst the natural/supernatural properties of stones and metals were sought for buildings somewhat metaphysically, it seems the properties of organic substances were appreciated for having a direct tangible impact on the foundation of buildings, one that could be perceived through the senses. This may have been particularly true of certain substances' osphretic properties. Substances that were used and are likely to have been distinctively fragrant include aromatic plants (ŠIM.ḪI.A) in crushed pieces (*ḫibišti*)[180], cedar resin (UŠ$_2$ GIŠ.EREN)[181], cedar oil (I$_3$.GIŠ.EREN) **RIMA 1, A.0.39.1, 46**, *hašūru*-cypress oil (I$_3$.GIŠ GIŠ.ḪA.ŠUR)[182], sweet oil (I$_3$ DUG$_3$.GA)[183], *pūru*-oil (I$_3$.BUR)[184], *igulû*-oil (I$_3$.GU.LA)[185].

The fact that the aromatic plants were typically crushed indicates that they were appreciated for their aroma, since crushing them would have released their full fragrance. Šarru-ukīn's inscriptions give an indication of the kind of plants qualifying as ŠIM (Akk. *riqqu*) that may have been used in foundation rituals. As part of the offerings for the gods in the *bīt akīti,* Šarru-ukīn mentions "boxwood, cedar, cypress, all the aromatic plants produce of the Amana whose fragrance is sweet".[186] Boxwood, cedar and cypress are all distinctively fragrant woods. The great variety of oils[187] suggests that, in addition to all being fine and precious[188], each one would have had a special characteristic. Typical characteristics of oil are texture, scent and, to a lesser degree, colour. Texture and scent are likely to have been the most distinctive characteristics of the oils in this context: some oils may have been more fluid than others and each one would certainly have had its own fragrance. Should colour have mattered as distinctive property too one would expect colour specifications.

Although it is unlikely that the *primary* function of mixing precious liquids such as oils, ghee and honey into bricks and mortars/plasters would have been structural, it is possible that the structural properties of certain mixtures would not have gone unnoticed. As pointed out by Moorey, tannins, proteins, sugars or their decomposition products can stabilise mud bricks.[189] He notes moreover that since organic materials decompose inside ageing bricks they would not easily be identified by modern analyses. This suggests that archaeologists may be dealing more often than they think with "special" bricks/mortar/plaster.

The state archives corroborate the royal inscriptions regarding the types of substances used, such as aromatics, oils, *da'amātu*-paste, precious stones. A letter from the priest Urdu-aḫḫēšu requests that the king (Aššur-aḫu-iddina? Aššur-bāni-apli?) give the order that the aromatics, sweet oils, *da'amātu*-paste and precious stones that are to be laid in the foundations of Esagil be delivered to him **SAA 13, 166, r. 7 – r. 11**.

Animal sacrifices were also used to consecrate foundations. Two Middle Assyrian texts record the slaughtering of sheep for construction works under the regent Ninurta-tukul-Aššur in the mid-12th century.[190] In one text (VAT 9375), two sheep are slaughtered "on top of the foundations of new buildings" (*ana eli uššē ša bitāti eššūti epšu*) and in the other (VAT 9409) a perfumer slaughters one sheep before the goddess Šerua as sacrifice "for the roof of the palace" (*ana ūru ēkalli*).

Another case of animal sacrifice related to foundations suggests foundations were consecrated not only in the specific context of the building act but also in more general contexts, as objects symbolic of political firmness and durability. Analogies from legal rituals were used to bring out the political dimension of foundation rituals. For example, during the adjuration of officers for Babylon, rams were slaughtered on stones which, covered in blood, were then placed in the foundations of a temple as pledges for the officers' loyalty.[191] The first textual evi-

180 Salmānu-ašarēd I, RIMA 1, A.0.77.1, 141–142; Šarru-ukīn, Fuchs 1994, Prunk., 159–160; Aššur-bāni-apli, RINAP 5, 12, Frgm. 1, 17′.

181 Aššur-aḫu-iddina, RINAP 4, 57, iv 21.

182 Aššur-aḫu-iddina, RINAP 4, 58, iv 12.

183 Salmānu-ašarēd I, RIMA 1, A.0.77.1, 141–142; Aššur-aḫu-iddina, RINAP 4, 57, v 8.

184 Aššur-aḫu-iddina, RINAP 4, 57, v 7.

185 Sîn-aḫḫē-erība, RINAP 3/2, 168, 54. Read: *igulâ* I$_3$.GIŠ *rūšti*, "with *igulû*-oil, a premium oil — accusative understood as adverbial (cf. GAG §113b + §120j) and I$_3$.GIŠ taken as apposition describing *igulû*.

186 Šarru-ukīn, Fuchs 1994, Prunk., 142–143.

187 It seems likely that both vegetal and animal oils would be used. Whilst the oils designated with a compound containing the element GIŠ were clearly vegetal (e.g. I$_3$.GIŠ), it is conceivable that those designated by a compound bereft of the GIŠ element should have been animal (e.g. I$_3$ DUG$_3$.GA).

188 For example, the precious value of *igulû*-oil is clear when Sîn-aḫḫē-erība boasts he sprinkled *igulû*-oil on the foundations of his *bīt akīti* "like water from the river" (cf. Sîn-aḫḫē-erība, RINAP 3/2, 168, 54).

189 Moorey 1994: 305.

190 See Weidner 1935–1936: 31 (VAT 9375) and Ebeling 1933: 33 (VAT 9409).

191 SAA 10, 354. For a legal parallel see the treaty between Aššur-nērārī V and Mati'-ilu of Arpad where the fate of a sacrificed lamb serves as example to symbolise the potential fate of Mati'ilu should he break the treaty (SAA 2, 2 A the treaty fate ofo,t the fate of a sacrificed lamb e and occupant.ransfer the value of the animals to the occupiers of t).

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Fig. 6: Skeleton of a gazelle from Passage P of the North-West Palace, Kalḫu (Mallowan 1966: 113).

dence for a *Richtungsfest* in Mesopotamian sources was identified by Wolfgang Heimpel in a late third millennium Neo-Sumerian letter from the archives of Garšana.[192]

Archaeological evidence for the sacrifice of animals associated with foundations is rare. It is discussed by Ellis.[193] The earliest evidence comes from the distant Ǧamdat Naṣr period but should be mentioned here for the light it sheds on the symbolism of felines in relation to architecture: the bones of the forelimbs of a young lion and a young leopard were found covered in bitumen in the lower course of the brickwork from the eastern corner of the White Temple at Uruk. Ellis draws a parallel between the presence of felines in relation to foundations and in relation to doorways, thereby highlighting a very clear line of symbolism.[194]

Explicit references to lions and leopards in relation to foundations or door pivots are absent from the Assyrian inscriptions. Frankfort suggests that feline figures attached to doorways, as represented on Akkadian cylinder seals, could have been symbolising the roaring that doors make when they revolve on their pivot stones.[195] This is not inconceivable. It would mean that something is left of the association of lions/panthers with temples in the Assyrian inscriptions *implicitly,* namely the allusions to roaring contained in the terms for pivot.[196] Lions and leopards may have symbolised the uniting of royalty (lion) and divinity (leopard[197]). The doors to the temple were the point through which the king accessed the god's domain. That moment was marked by the roaring of the pivots that were controlled by the paws of the clasping felines. The paws were probably chosen as foundation deposits to highlight the connection between the function of the temple (place which one enters to access a divine presence) and its substance (place anchored into divinity through its foundations).

There is evidence of animal sacrifices associated with foundations for the Neo-Assyrian period: a gazelle was buried under the pavement of Passage P of Aššur-nāṣir-apli II's North-West Palace at Kalḫu **[FIG. 6]**. Ellis compares this gazelle to gazelles in an Old Babylonian memorandum from the reign of Ammisaduqa that states: "two gazelles (*ṣabītu*), to consecrate the house of Annabu, daughter of the king". One wonders whether these gazelles may not have been symbolic of the young woman[198], in the

192 Heimpel 2008: 113.

193 Ellis 1968: 42–45.

194 Cf. references to cylinder seal impressions (Frankfurt 1939: 19 and plate XVIII a) and Gudea cylinders (cf. Cyl. A, xxi 6, xxvi 21 + 26) given by Ellis. Regarding the presence of felines in an architectural context one should also mention the paintings of leopards on the walls of the Uruk/Ǧamdat Naṣr "Painted Temple" at Tall 'Uqair.

195 Frankfort 1939: 18.

196 ▸ **5.2.1.a**.

197 The Sumerian for leopard is nemurx (= |PIRIG.TUR| < pirig3 meaning both 'lion" and "bright"), which evokes divine radiance; compare with Akk. *nimru*, "leopard", from *namāru*, "to shine".

198 By their slenderness and gracefulness gazelles are evocative of feminine beauty. The most common term for gazelle in Akkadian (*ṣabītu*) is in fact feminine. The femininity of the gazelle made it a suitable incarnation for a goddess. A literary text from Uruk (LKU 45:4) indicates that Ištar was associated with the gazelle: "The gazelle is the Queen of Nippur". For comparison, gazelles are moreover "one of the major topoi of traditional Arabic

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same way that the lions and leopards may have been evocative of king and god. If this were the case, then the gazelle from Aššur-nāṣir-apli II's palace could have been used to consecrate female quarters. Interestingly, Passage P where the gazelle was found constituted the main entrance to the domestic wing of the North-West Palace. Based on the occupational debris, Mallowan assumes that this domestic wing "must have served as the Assyrian king's harem".[199] It may well be, then, that the gazelle was buried as foundation deposit symbolic of women to consecrate the female quarters.

In summary, the evidence suggests that foundation deposits were designed to reflect the natures of the buildings' occupiers, be they divine or human.[200]

2.2.2.b Ritual performances

Rituals were performed from the planning of the building to its inauguration, and each different stage of the process was marked by a different ritual. The rituals had mainly purifying and offertorial functions. Professionals specifically involved in these rituals include the *āšipu* (exorcist), the *kalû* (lamentation priest), the *bārû* (diviner) and the *nāru* (singer).[201]

The ritual process underlying building activities can be outlined broadly as follows[202]:

—seeking divine approval

—identifying the previous/original brick

—gathering the materials

—exposing the old foundations

—pacifying the underworld deities

—laying foundation deposits

—making the first brick

—purifying the foundations

—setting the door

—exorcising bad spirits and bringing good luck through offerings

—exorcising Kulla from the building

—inaugurating the new building with a feast

The Assyrian royal inscriptions occasionally evoke ritual *performances*. As seen in ▸ **1** the foundation act itself obeyed the ritual calendar. Foundation procedures were best performed on certain auspicious times, the month *Ayāru* (II) being frequently mentioned as auspicious.[203] Julian Reade points to the existence of four cylinders found by Hormuzd Rassam in the walls of Sîn-aḫḫē-erība's Southwest Palace ("Palace Without a Rival").[204] All four cylinders are dated in the month *Ayāru* (II), which provides evidence that foundation procedures were effectively carried out according to the ritual calendar.

The king was strongly involved in the foundation process. In order to rebuild Eanna in Uruk, Šarru-ukīn exposes the old foundations, and as the cities pray with fervour, he prostrates himself to lay the new foundation.[205] In order to receive blessings for the building of Dūr-Šarrukīn, Šarru-ukīn prays to Sigga, Lugaldingirra and Šauška. As the bricks are moulded he moreover performs sacrifices, offerings and a *šu'illaku* prayer for Kulla and Mušda.[206] It is also with "fervent prayers, dedication and gestures of humility" (*ina tēmīqī ikribu u labānu appi*) that Šarru-ukīn lays the foundations of the Eanna temple.[207] For Ešarra, Aššur-aḫu-iddina makes bricks with his own "pure hands" and states he carried the first/previous brick on his neck "for the preservation of my life and the lengthening of my days" (*ana balāṭ napšatīya arāk ūmēya*) **RINAP 4, 57, v 23 – v 24**. The king's performance was not gratuitous: it was an act of piety aimed to gain divine favour.

The rituals following completion of the building were more of the celebratory type, but they were still highly symbolic.[208] As he inaugurates his Palace Without a Rival, Sîn-aḫḫē-erība performs offerings for the gods, drenches the heads of his people with wine and irrigates their hearts with mead.[209] Incorporating the liquids into the foundations of the building and then pouring them onto the heads and "into the hearts" of the people created a link between the transcendence of divine/royal power (as symbolised by the architecture) and the daily real-

love poetry" (cf. Bürgel 1989). In modern Arabic "ghazal" (gazelle) is used as a term of endearment to qualify graceful persons.

199 Mallowan 1966, Vol. 2: 113.

200 The same could apply to evidence from outside of Mesopotamia proper such as the EBA donkey sacrifices in the Levant, for which see Greenfield/Shai/Maeir (2012: 45) where the authors argue that donkeys were respected economic, social, political and religious symbols, concluding that "being an ass did not have negative connotations". This suggests that the donkey sacrifices could have been symbolic of the occupants' values and would have been deposited in the foundations to reinforce the connection between house and occupant.

201 ▸ **7.4**.

202 For a detailed comprehensive account see Ambos 2004: 11.

203 ▸ **1.7**.

204 Reade 1986: 33–34.

205 See text YBC 2181 in Clay 1915: 50–55.

206 Šarru-ukīn, Fuchs 1994, Zyl., 53–60.

207 Šarru-ukīn, RIMB 2, B.6.22.3, i 37 – i 40.

208 For more on the inauguration of temples and palaces see Hurowitz 2014.

209 Sîn-aḫḫē-erība, RINAP 3/1, 15, viii 8′ – viii 17′.

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ity of the land (as symbolised by the people). The gods also enjoyed inauguration feasts. Following the completion of Ešarra, Aššur-aḫu-iddina held a celebration for three days with the nobles and peoples of his land in the courtyard of the temple. He describes the event as having appeased the heart and placated the mood of Aššur.[210]

The official Urdu-aḫḫēšu explains to the king (Aššur-aḫu-iddina? Aššur-bāni-apli?) that Esagil is complete and that they are waiting for the rituals (*parṣāte*).[211] Amongst other things, drainage pipes and battlemented parapets of bricks covered in bitumen have been put into place. Since the building has just been completed, it is probable that the rituals in question are foundation/inauguration rituals. Urdu-aḫḫēšu introduces the information with the statement *šarru bēlī lū udi*, "the king my lord should know", a phrase often encountered in the royal correspondence. This illustrates how information could be filtered before it reached the king. Unless explicitly requested by the king, only information deemed worthy of royal attention, such as the completion of a temple and associated foundation rituals, would be passed on.

Foundation rituals could involve more than the foundations themselves. In **SAA 16, 125** the king must choose the type of stone he would like to use for a stele (*narû*) which will be inscribed with his name and then laid in the foundations of a building. In parallel, a piece of wood is to be placed between the limestone layers, probably to reinforce the structure.[212] The chief scribe must write the king's name on the stele and at the same time look up a favourable day to set the stele in the doorjambs (*sippāni*) of the building. The staff of the king will be placed nearby in preparation for an event, presumably a ritual, which is to be held on a specific day. It seems the construction of a building is being finalised and is soon to be inaugurated through a ceremony involving the king.

In all likelihood this letter is referring to preparations for the *āšipu* and/or *kalû* rituals. A ritual named "when the doorjambs are established" (*enūma sippū kunnû*)[213] is mentioned as catch line in the *āšipu* ritual known as "Tonmännchen und Puppen"[214] from "Series C" [215] and in the *kalû* ritual "when you lay the foundations of a temple" (*enūma uššē bīt ili tanamdû*)[216]. As indicated by its name, the ritual *enūma sippū kunnû* was to be performed after the doorjambs were established. It involves a special diet for the performer, ablutions, libations and offerings of sorts, before a construction (*riksu*).

The king was closely connected to the foundation process not only as actor but also as symbol through his name. By associating their names to the foundations of buildings, which were to last forever, Assyrian kings sought eternal fame. In **SAA 16, 143, o. 6 – o. 8** the official Nabû-rā'im-nišēšu informs Aššur-bāni-apli that his name is to be inscribed on the foundation (*uššu*) of the city wall of Tarbiṣu and asks the king to tell him when this should be done:

> *pūlu ša ina libbi uššē ša dūri ša Tarbiṣi nikrurūni šumu ša šarri bēlīya ina muḫḫi nišṭur kī ša nišaṭṭarūni šarru bēlī lišpura*
>
> The limestone block which we laid in the foundations of the fortification wall of Tarbiṣu — we must write the name of the king my lord on it. May the king my lord write to me when we should write (it).

Previously the king had asked why the limestone layers of the wall are not set directly on top of each other, to which Nabû-rā'im-nišēšu seems to reply that it was the king's own idea (text fragmentary). The king also enquired about the crosses inscribed on the wall: Nabû-rā'im-nišēšu explains these crosses (symbolic of crown princes) were inscribed by order of Aššur-aḫu-iddina when Aššur-bāni-apli was crown prince, the stone slabs were taken to the *bīt kutalli* and inscribed there. In another letter, the walls of Ezida are to be elevated with bricks bearing the name of Aššur-aḫu-iddina.[217] The base of the wall was flooded due to the river rising, which suggests existing royal inscriptions have been submerged and damaged, hence the need to supply new ones, placing them higher to protect them from the water.

Finally, the sacred act of foundation transferred sacred properties to a building. A letter to Aššur-bāni-apli[218] reports that a tailor blocked the breached city wall of Kutha with bitumen and sweet-scented oil, praying to the god Nergal not to punish the Assyrians but rather Šamaš-šumu-ukīn who is responsible for the breach. The sweet-scented oil seems unnecessary from a practical point of view, symbolically however it is significant. The tailor's act echoes foundation rituals, as if to reaffirm the sacred character of the city walls and thereby please the gods.

A votive donation[219] through which Sîn-aḫḫē-erība dedicates personnel to his newly built *akītu* temple demonstrates that the ceremonial character of foundation rituals which transpires from the royal building inscriptions was also promoted in more mundane literary genres not directly connected to the building act. The first part of the text echoes the inscription on a foundation stele for Sîn-aḫḫē-erī-

210 Aššur-aḫu-iddina, RINAP 4, 57, vii 31– viii 34.
211 SAA 13, 168.
212 ▸ **4.1.3**.
213 Cf. Ambos 2004, II.C.3 (includes edition of text).
214 Cf. Ambos 2004, II.C.2.
215 Cf. Ambos 2004, II.C.3.
216 Cf. Ambos 2004, II.D.1.3.
217 SAA 10, 364.
218 SAA 18, 157.
219 SAA 12, 86.

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ba's *akītu* temple[220]: Sîn-aḫḫē-erība describes how he built a new temple from foundations to parapet.

2.2.3 Divine agency

Ea, Šamaš, Kulla, and Mušda(ma) are all invoked in the Assyrian royal inscriptions on different occasions as part of the foundation process.[221] Building ritual texts inform us that Asalluḫi and Kusu also formed part of the divine instance traditionally invoked for building enterprises and aptly named *Handwerkergötter* by Ambos.[222]

Kulla, the brick god, played the most notable role in foundation rituals.[223] He was at once solicited and rejected. On the one hand, it was important to find favour with Kulla during the foundation process through prayers; on the other hand, it was necessary that Kulla disengage with the new building in order to liberate it from liminal associations. As pointed out by Ambos, the building process was considered a dangerous liminal activity in Mesopotamia as in many traditional cultures, some of which were studied ethnographically. [224]

Purification rituals were performed to exorcise Kulla: Kulla was driven out of the house and sent off down a river on a boat; prayers could be addressed to the gods so that he be returned to his parents Ea and Damgalnunna.[225] The master-builder who effectively performed the work of Kulla (*šipir Kulla*) was subject to a similar treatment: after completion of the work he was forbidden access to the building for three days.[226] Requesting the presence of Kulla in a building supposed the building was inexistent, incomplete or damaged. The opposite had to be requested in order to establish the building's existence, completion and preservation. Master-builders were associated with problems rather than solutions for the same reasons.

220 See Sîn-aḫḫē-erība, RINAP 3/2, 168.
221 ▸ **7.1**.
222 Ambos 2004: 21.
223 For Kulla's role in building rituals see Ambos 2004, I.4.1.
224 Ambos 2004: 81. See article by Pecquet (1997: 557), as cited by Ambos 2004.
225 Cf. Ambos 2004: 81.
226 Cf. Ambos 2004: 81.

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3 MATERIALS

The materials used in construction are deciding factors in a building's architectural character. The physical and chemical properties of materials can impose conditions on the shape and size of a building, and they will also determine the building's sensorial impact.

The royal inscriptions provide extensive information about the types of materials used for the construction of temples and palaces. Whilst references to the origins of the materials are not unusual in the royal inscriptions, issues relating to the methods employed to extract and transport the materials are seldom indicated there: the impressive nature of such work was better mediated through accompanying iconographic representations. Mentions of materials do not serve any technological purpose, instead they are an integral part of the literary narrative, functioning as support for the most vivid architectural descriptions. Certain materials are mentioned with particular emphasis, often in association with distinctive aspects of buildings, which suggests the choice of building materials could be ideologically significant.

The bulk of data relating to building materials provided by the state archives comes from the correspondence about works at Dūr-Šarrukīn under Šarru-ukīn. These letters attest to the transit of materials from various corners of the empire to the new capital. Both primary and processed or composite materials are mentioned. It seems the state administration was essentially in charge of core materials, to be acquired in gross quantities, namely bricks, wood, stone, straw, reeds, bitumen. Finer materials, such as pigments for painting, would have been part of a different circuit, possibly managed directly between providers and professional artisans without intermediaries, if not readily available in the form of spoil. This may also have been the case with metals, which are practically not mentioned.

Bricks followed closely by wood for beams are the most commonly cited products. Bricks and wood formed the basis of Mesopotamian architecture. The small format of bricks meant any type of substantial construction required them in great quantities. Brick dimensions were standardized throughout Mesopotamia from the outset of the second millennium falling within the range 40/30 cm square, 8–10 cm deep.[1] Wood was a precious commodity because not readily available. It was used as beams for roofing, in wall structures and panelling, and to make door leaves and frames. The third most used building material was stone, mainly limestone. Limestone was used in the form of building blocks or slabs, in foundation courses, for retaining walls, for pavements and thresholds, or to carve decorative reliefs. Limestone also served in the composition of mortar and plaster. There is also ample evidence for basalt being employed in the manufacture of specific architectural elements

The less commonly cited materials are essentially binding and protective materials. Straw was used as temper for mud-bricks. Reeds served as matting between brick courses to facilitate drainage and hold bricks together, and sometimes they were also used as temper for mud- bricks. Bitumen was exploited for its adhesive and waterproofing properties.

The style of building enterprise reflected by Šarru-ukīn's correspondence appears to have been in no way unique to the Dūr-Šarrukīn project. The correspondence of Šarru-ukīn's successors suggests similar trends were operating in different periods and different places. This chapter will therefore also draw information from texts not connected to Dūr-Šarrukīn.

3.1 Bricks

3.1.1 Types of bricks, terminology and use

libittu (SIG_4), *agurru* (SIG_4.AL.UR_3.RA), *ebirtu* (SIG_4.AL.UR_3.RA)

"Let god and man be mixed in clay".[2] This injunction from the Epic of Atraḫasis sums up the Mesopotamians' relationship to clay. Clay was very much what bound their world together. Clay is in itself symbolic of ancient Mesopotamian architecture. Practically all temples, palaces and houses, from Babylonia to Assyria and across Mesopotamian history, were built either entirely or primarily out of clay, sun-dried[3] and/or kiln-fired[4]. The Assyrian royal inscriptions and state archives refer to clay mainly in terms of bricks. Traditionally, bricks were categorised according to format. Old Babylonian mathematical tablets distinguish between rectangular bricks (*libittu*), square bricks (*agurru*), half-square bricks (*arḫu*, litt. "cow") and ⅔-bricks.[5] The Assyrians appear to have used format-based categories for the textures they typically designated in practice, that is

1 Moorey 1994: 308.

2 Cf. Lambert 1960: The Epic of Atraḫasis I 212–213.

3 Sun-dried bricks are also known as mud bricks and libn.

4 Kiln-fired bricks are also known as baked bricks.

5 Cf. Friberg 2007: 170.

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to say either "sun-dried brick" or "kiln-fired brick". The terms most commonly employed in the royal inscriptions and state archives to designate bricks are *libittu* (traditionally thick sun-dried brick), *agurru* (flat, typically kiln-fired, brick) and *ebirtu* (likely synonym of *agurru*).

Bricks went through different stages of manufacture and use: from moulding, to distribution, to bricking. Bricks accounted for in the state archives were used for two distinct types of construction: defensive structures such as city walls and towers, and domestic structures, i.e. houses, palaces and temples (for commoners, kings and gods).[6] Bricks were standardised so more or less any brick could serve for any building. As a result, bricks were produced en masse and their usage did not necessarily have to be determined in advance of production. Mannu-kī-Ninūa informs Šarru-ukīn that he is bricking the main building of Kār-Šarrukīn with whatever bricks were left [7] and Šarru-ukīn's official Nabû-dūru-uṣur keeps leftover bricks soft with water for future use[8]. Two types of brickwork were distinguished, "work of sun-dried bricks" (*dullu libitti*) and "work of kiln-fired brick" (*dullu ebirti*), each suited for different parts of a building. The distinction is established by the official Urdu-aḫḫēšu in a letter to Aššur-aḫu-iddina/Aššur-bāni-apli(?).[9] Kiln-fired brickwork involves drainpipes, walls and enclosures. Damage on the tablet prevents us from knowing what parts of the building he associated sun-dried bricks with.

libittu (SIG_4), is one of the most commonly encountered building terms, reflecting the prevalence of bricks in the Mesopotamian world. In the royal inscriptions, references to *libittu* outnumber references to *agurru*, which could reflect the fact that sun-dried bricks were more prevalent than kiln-fired bricks[10]. In the state archives the most commonly used term to mean brick is the logogram SIG_4. Lexical lists equate SIG_4 with the Akkadian *libittu* (<Akk. *labānu*, "to mould")[11], (mud)brick. The syllabic writing *libittu* is only attested once in the state archives.[12] The existence of a brick god is a testimony to the ideological importance of bricks: Sîn-aḫḫē-erība completes Aššur's temple Eḫursag-galkurkurra "through the work" of the god Libittu (*ina šipir Libittu*).[13] *libittu* also made its way into the collective consciousness as something epitomising a small area, which is testified by expressions such as "may they make the ground as narrow as a brick for you" (*ammar libitti kaqquru lusiqqūnikkunu*)[14] and "may there be as much ground as a brick for him to stand upon" (*kaqqaru ammar libitti ina uzzuzīšu*)[15], both found in curse sections of treaties. The logogram SIG_4 is amply used in the states archives. It stands for *libittu* but also serves as the generic word for brick[16] and could therefore conceivably refer to all types of bricks at any stage of their manufacture and use. SIG_4 occurs in opposition to *ebirtu* and SIG_4.AL.UR_3.RA alternatively, which suggests an equivalence *ebirtu* ≈ SIG_4.AL.UR_3.RA.

agurru (SIG_4.AL.UR_3.RA) is usually translated as "kiln-fired brick" because this is what it appears to often have designated, but the original sense of the term would have been "flat brick".[17] In the Neo-Assyrian period, kiln-fired bricks happen to be much flatter than sun-dried bricks[18], which is no doubt why *agurru* was chosen to designate kiln-fired bricks. The meaning "kiln-fired" fits in many contexts. For example, Sîn-aḫḫē-erība rebuilds the *tikātu*-house of the Aššur temple with *agurrī* from a "pure kiln" (*utūni elleti*).[19] *agurru* is often found in conjunction with *kupru* (bitumen), the phrase *ištu*/*ina kupri u agurri* being standard. This is not surprising given that kiln-fired bricks and bitumen were regularly combined to provide resistance against moisture and wear.[20] For example, Aššur-bēl-kala raises the facing of the Tigris Gate of Aššur five feet above water level with bitumen and kiln-fired bricks.[21] For temples, kiln-fired bricks are usually mentioned in association with the foundations, whilst for palaces they could be used for decoration. Aššur-aḫu-iddina uses *agurru*'s for the lower courses of his temples, for a dais, for the processional way of Esagil and for what appears to be the substructure of Ehiliana, Nanāya's temple.[22] Sîn-aḫḫē-erība uses *agurru*'s in combination with (or glazed[23] with?) obsidian (*ṣurru*) and lapis lazuli (*uqnû*) to create the decora-

6 For defensive structures see: SAA 5, 56 (city-wall); SAA 11, 15 (city wall, towers, ramparts, terrace); SAA 11, 16 (towers); SAA 15, 94 (outer city-wall); SAA 15, 113 (outer wall of fort); SAA 15, 129 (towers).
For domestic structures see: SAA 5, 80 (house); SAA 13, 162 (temple); SAA 13, 168 (temple); SAA 15, 41 (house); SAA 15, 94 (palace); SAA 16, 111 (palace).

7 SAA 15, 94.

8 SAA 15, 129.

9 SAA 13, 162.

10 See Moorey 1994: 306.

11 CAD, L: *libittu.*

12 SAA 6, 21: If *libittu* and SIG_4 are synonyms, could there be a specific reason why the term *libittu* was preferred to SIG_4 in contract SAA 6, 21, considering it contains more syllables and therefore takes longer to write? Glossing the Akkadian form could have been induced by the oral (dictated?) aspect of a contract.

13 Sîn-aḫḫē-erība, RINAP 3/2, 167, 28–29.

14 SAA 2, 6, o. 527.

15 SAA 2, 2, o. i 5′.

16 This is suggested by the exclusive use of SIG_4 to mean brick in the imagery and metaphors occasionally employed in their correspondence by scholars familiar with the literary language.

17 See Heimpel 2009: 193–194.

18 See Sauvage 1998: 147.

19 Sîn-aḫḫē-erība, RINAP 3/2, 196, 2–3.

20 See Moorey 1994: 306.

21 Aššur-bēl-kala, RIMA 2, A.0.89.7, v 26 – v 27.

22 Aššur-aḫu-iddina, RINAP 4, 105: v 28; 60; 121; 119; 136.

23 For glazed bricks see Moorey 1994: 312–322.

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tive friezes of his Palace Without a Rival.[24] Also to be mentioned here is Marduk's Etemenanki ziqqurrat in Babylon, for the rebuilding of which kings at least as old as Aššur-aḫu-iddina used kiln-fired bricks.[25] Since kiln-fired bricks can look as hard as stone, *agurru* also designated blocks of stone. Tukultī-apil-Ešarra I surrounds his *bīt šaḫūrī* with blocks of basalt (*agurrī ša atbari*)[26] and Aššur-aḫu-iddina has the kings he subjects carry blocks (*agurrī*) of *gišnugallu*-limestone, *pindû*-stone, *turminû*-breccia, *turminabandû*-breccia, *allalu*-stone and *girimhillibû*-stone.[27] The term *agurri*, prevalent in the royal inscriptions, is, in syllabic form, absent from the state archives, SIG_4.AL.UR_3.RA figures instead. SIG_4.AL.UR_3.RA clearly designates kiln-fired brick in a fragmentary passage of SAA 13, 162 where it is used in contrast with the simple SIG_4: as mentioned previously, a distinction is made between *dullu ša* SIG_4 (maybe referring to general brickwork) and *dullu ša* SIG_4.AL.UR_3.RA (involving drainpipes, walls, enclosures). There seems to be some overlap in the usage of the terms SIG_4.AL.UR_3.RA/*agurru* and *ebirtu,* which, as we have seen, raises the question whether SIG_4.AL.UR_3.RA could ever have stood for *ebirtu.*

ebirtu, like *agurru,* came to designate kiln-fired bricks, even though its likely etymology points to an original meaning based on format.[28] *ebirtu* was also employed in a generic sense to mean "slab" or "block"[29]: letter **SAA 1, 58, o. 5 – o. 7** reports an order to cut out a 150 *ebirtu* of basalt (*ebirtu ša adbaru*) for the bathroom of a god, which suggests some form of basalt slabs for paving. With the meaning "kiln-fired brick", *ebirtu* is attested in the inscriptions of Adad-nērārī I where it occurs interchangeably with *agurru*[30]*.* In the state archives, the meaning "kiln-fired brick" is clear from letter **SAA 15, 41, o. 8′ – o. 14′** where *ebirtu* is distinguished from *libittu*: an official points out to Šarru-ukīn that there are no more snow-resistant *ebirtu* bricks to build houses for deportees, so his men have used *libbitu*'s instead:

šarru bēlu ūda kī kuppû qarḫāte anna[*ka*]
ida''inūni laš[*šu*] *ebirtu lā tarī*[*ḫat*] *tašaḫḫuḫu*
bētāti ša libbitāti ina muḫḫīšu [*ni*]*rteṣībi* (…)

The king, lord, knows that the snow and ice here is severe. There is no kiln-fired brick, it ran out. The houses which we have built out of mud bricks have disintegrated.

As mentioned previously, it cannot be ruled out that SIG_4.AL.UR_3.RA could have potentially stood for *ebirtu* in the state archives. In a letter to Aššur-bāni-apli, Urdu-aḫḫēšu uses the terms SIG_4.AL.UR_3.RA and *ebirtu* concurrently.[31] It is reported that SIG_4.AL.UR_3.RA bricks have been used with bitumen for the battlements of Esagil, and that the king of Babylon has asked that *ebirtu* bricks be moulded for the enclosure[32] wall of Esagil. The fact that both terms are employed simultaneously does not necessarily imply that they signify two different things. It could be that the term *ebirtu,* reported from the speech of the king of Babylon, was the actual pronunciation of the logogram SIG_4.AL.UR_3.RA — a phonetic transcription of what the king of Babylon actually said. That the more complicated spelling SIG_4.AL.UR_3.RA would have been preferred over the simple syllabic spelling *e-bir-tu*$_2$ could be explained by tradition and by the fact that SIG_4.AL.UR_3.RA could be used in opposition to SIG_4 as a way of stressing the type of brick used. Moreover, had the spelling SIG_4.AL.UR_3.RA been considered unnecessarily complicated, we would also expect to find the simpler spelling *a-gur-ru* in the state archives, but it is absent from the available evidence. It could be that the spelling SIG_4.AL.UR_3.RA came in handy because semantically it could stand for both *agurru* and *ebirtu*.

As pointed out by Ellis, archaeological evidence suggests that sun-dried brick gradually came to be regarded as the only suitable material for religious buildings.[33] Ellis gives as example the buildings of the Neo-Babylonian kings: whilst the palaces were of kiln-fired bricks, the temples were of sun-dried bricks. For temples, the traditional sun-dried brick, characteristically brittle and ephemeral, was preferred to the stronger more time-resistant kiln-fired brick. Kiln-fired bricks, which require wood for combustion, would have been more expensive than sun-dried bricks. Their manufacture would also have been more time-consuming, meaning less could be built in a given amount of time. The Neo-Babylonian kings nevertheless found kiln-fired brick to be suitable to their royal prestige as evidenced from its use in palaces. Kiln-fired bricks were perceived as very robust, although even they could not withstand the

24 Sîn-aḫḫē-erība, RINAP 3/1, 17, vi 42 – vi 44 ▸ **6.2**.
25 For attribution of the kiln-fired brick rebuilding of Etemenanki to a king at least as old as Aššur-aḫu-iddina see George 2005, review article of Schmid 1995.
26 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.4, 63.
27 Aššur-aḫu-iddina, RINAP 4, 1, v 78 – v 80.
28 The term *ebirtu* figures in CAD under *epertu* (< *eperu*, "earth") but is more likely from *ebēru* "to cross" and may have to be assimilated with CAD *ebertu* "step", since flat bricks resembled steps. *epertu* (brickwork) should be distinguished from *ebirtu*/*ebertu* (step/slab/kiln-fired brick).
29 Notice *agurru* also carries the secondary meaning of building "block" (▸ **3.1.1**).
30 Compare Adad-nērārī I, RIMA 1, A.0.76.8, 29 and A.0.76.9, 10.
31 SAA 13, 168.
32 Note *ebirtu* bricks are also used for enclosures in SAA 13, 162.
33 Ellis 1968: 17.

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strength of a hungry man as pointed out by a Babylonian proverb: "The hungry man breaks through the building of kiln-fired brick".[34] Choosing sun-dried bricks over kiln-fired bricks for the temples may then have been not only a statement of religious conservatism but also a pragmatic move: why bother trying to please the gods with kiln-fired bricks if such bricks are neither traditional nor truly eternal?

3.1.2 Stages of manufacture and distribution

tikpu/tikbu/tibku, pilku[35]

Mud-bricks are composed of mud (soil[36] + water) and a temper. The state archives suggest the temper was usually straw but it could sometimes be complemented by reeds: in one letter from works at Dūr-Šarrukīn straw is needed to mould bricks[37], in another 300 bales of straw and reed are to be used[38]. We know from other sources that minerals could also have been added for strength.[39] Good soil and large quantities of water being a requirement, brick production usually took place on sites where these primary materials were plentiful, that is, mainly in areas adjacent to canals or rivers, usually on the outskirts of the cities: Mannu-kī-Ninūa informs Šarru-ukīn that the magnates fetched whatever bricks had been left outside of Kār-Šarrukīn, and delivered them to him[40].

Bricks were produced on a local scale. Often entire populations of villages or selections of inhabitants from towns and cities were assigned to the task. Labour force for the production of bricks in Dūr-Šarrukīn was brought out by villages from the local population (*ālāni ša nišē māti nussēṣi libittu uqarrubu*).[41] Under Aššur-aḫu-iddina, the scholar Mār-Issar reports that the inhabitants of Akkad are moulding and firing bricks[42]: it is possible these bricks would serve to rebuild the Eulmaš temple of Akkad[43], which, according to an inscription from Nabû-na'id, was one of the projects undertaken by Aššur-aḫu-iddina as part of the construction programme he developed in Babylonia to make up for the destruction of Babylon by his father Sîn-aḫḫē-erība. Brickmaking is relatively straightforward, so in all likelihood most of the personnel employed would not have been specialized[44].

Because brickmaking was a basic widespread skill and brick ingredients were so profusely available everywhere, it was seldom necessary to import/export bricks between locations, meaning the transport and circulation of bricks was minimal. This is reflected in our sources by the absence of any specific references to brick transport over long distances. Short-distance transport on the contrary would have been quite frequent, if only to bring the bricks from their site of production, usually in the suburbs, into the city where the building works would be taking place. For example, the official Nabû-dūru-uṣur informs the governor of ad-Dair that he will transport bricks from their site of production into ad-Dair to build towers in case the king visits[45].

A letter from the royal archives of Kalḫu possibly relating to works at Dūr-Šarrukīn mentions the delivery of 2'654'000 bricks over two years.[46] This gives an idea of the scale on which bricks were produced and managed. Distributing bricks amongst personnel and workmen in charge of building projects across Assyria was a hefty task, and most information relating to bricks from our sources derives from that context. Bricks had to be allocated, and brick courses (*tikpu*) assigned for each individual building sector (*pilku*). The bricks were distributed amongst magnates, mainly governors, who were in charge of managing brickwork. A letter from Šarru-ukīn's official Ṭāb-ṣill-Ešarra reports 150'000 bricks have been given out to magnates from different areas: the governors of Arpad, Samaria and Megiddo have received 40'000 bricks each, and the remaining 30'000 bricks were allocated to royal village managers.[47]

Work assignments were calculated in numbers of *tikpu* and in units of bricks per *pilku*. A series of building reports[48] from Dūr-Šarrukīn suggest numbers of *tikpu*'s (completed and remaining for completion at different stages of the works)6 were recorded to keep track of progress. Often, complementing or independent[49] from the *tikpu* recordings, information relating to tasks such as scaffolding or

34 Proverb from tablet K 4207, text in Lambert 1960: 235.
35 For *tikpu* and *pilku* see also ▸ **1.4.2.b**.
36 Soil from the Mesopotamian plains is a mixture of sand (2.4%-4.1%), silt (71.1%-45.75%) and clay (26.5%-50.15%). See Sauvage (1998:19) for this and more details.
37 SAA 1, 143.
38 SAA 1, 236.
39 Moorey 1994: 305; Sauvage 1998: 20.
40 SAA 15, 94.
41 SAA 5, 296.
42 SAA 10, 368.
43 It has been suggested that references to the city Akkad in later cuneiform sources could be a learned usage to signify Babylon or Sippar, but the question remains unsolved.
44 Cf. Sauvage (1998: 153–154) for a summary of how brick making would have been organised based on ancient and modern evidence.
45 SAA 15, 129; See also SAA 15, 94 where it is reported that the magnates must fetch whatever bricks have been moulded outside of Kar-Šarrukīn and bring them to the officer Mannu-kī-Ninūa to build the main building (*bētu dannu*).
46 See Saggs 1952: 214.
47 SAA 5, 291.
48 SAA 11, 15 + 16 + 17 + 18 + 19 + 20 (food rations allocated to workers according to *tikpu* progress) + 21.
49 Cf. SAA 11, 16.

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beaming was specified. The most comprehensive report lists assignments per manager, recording *tikpu* progress with mention of the architectural features concerned, and briefly describing the advance in other aspects of the construction in the following way **SAA 11, 15, o. ii 1 – o. ii 5**:

08 *isitāte*
32 29 27
25 15 12 *tikpī*
07 06 05 04 *šalḫiu*
105 *dūru Arrapḫa*

8 towers
32 29 27
25 15 12 brick courss
07 06 05 04 the outer wall
105 the inner wall — (Governor of) Arrapḫa

A *pilku* assignment usually consisted of more than one task. One such task could be bricking part of a city-wall, which could require as much as 850 bricks[50]. An average of 30 *tikpu*'s per *pilku* could be laid in a day, as evidenced from a report regarding the bricking of the *akītu* temple in Isana.[51] A *pilku* consisting of only 30 *tikpu*'s was considered insignificant, and it seems there was an element of prestige associated with the *pilku* — the greater and more royal the *pilku*, the more prestigious: in a letter to Šarru-ukīn, the governor of Kar-Šarrukīn Nabû-bēlu-kā''in expresses his surprise that some individual should brag about a *pilku* of only 30 *tikpu*'s which is not even "of the palace", presumably meaning it was not related to royal infrastructures.[52]

3.2 Stone

3.2.1 Types of stone, terminology and use

pīlu/pūlu[53]*, aban šadê, gišnugallu*, *parūtu, gaṣṣu, pendû, alallu/elallu*, *engisû*, *girimḫilibû, ḫaltu*, *ašpu*, *turminû, turminabandû*, *adbaru*, *kašuru*, *sāndu, uqnû, ḫulalu*, *mušgarru*, *pappardilû*, *papparminû*, *ṣalamtu*

The stone most mentioned in the Assyrian royal inscriptions is *pīlu* (translated here as "limestone"), often equated with mountain rock (*aban šadê*)[54], which is also widely referenced. This kind of limestone is typically qualified as white (*pīlu peṣû*), an emphasis that suggests this colour was particularly prized.[55] Limestone was considered precious by the Assyrians. Sīn-aḫḫē-erība takes great pride in presenting himself as "the one who replaces brickwork — from the work of the living to the tombs symbolic of the dead — with mountain limestone (*ina pīli šadî*), which none of the kings before me had done in Aššur".[56]

Two other stones are attested in our sources, which have been archaeologically identified as limestone (calcite): *gišnugallu* (white) and *parūtu* (yellowish-brown).[57] The term alabaster[58] is nevertheless often employed when translating these terms for it is likely that they sometimes also referred to gypsum, although gypsum has been identified as *gaṣṣu*, also mentioned as a building material in the Assyrians royal inscriptions, albeit more often as a plaster than a solid stone[59]. Moorey remarks on the possibility that *pīlu* could also at times be referencing gypsum, more specifically "Mosul Marble".[60] Mosul Marble is evidenced archaeologically as the primary medium for Assyrian sculpture.[61] Based on the scientific analysis of a limited sample of stones used for Assyrian sculptures, Terence Mitchell and Andrew Middleton argue that *pīlu* probably designates gypsum, opposing it to NA_4.^{d}ŠE.TIR (*pendû*-stone) which they believe is likely to be limestone.[62] The question remains open. It is possible that the Assyrians themselves would not always have made the difference between stones of similar appearance. What is clear is that they appreciated stones according to their colours and textures. One can comfortably abide by such descriptive categories. For example, whilst *pīlu peṣû* is used to refer to a stone characteristically white, Sīn-aḫḫē-erība describes *pendû* (NA_4.

50 SAA 1, 64.
51 SAA 1, 264; This quantity matches the bricking rate suggested by building reports (cf. SAA 11, 15 + 17) indicating these building reports probably referred to a day's work.
52 SAA 15, 84.
53 For *pīlu* in relation to the foundation structure see ▸ **2.2.1.b**.
54 Whilst references to mountain rock will not necessarily mean limestone since many rocks were perceived as coming from the mountains (cf. Aššur-aḫu-iddina, RINAP 4, 2, v 3 – v 9), the recurrent designation of limestone as mountain rock suggests quality limestone came from the mountains. On the edges of limestone slabs from the time of Nabû-kudurrī-uṣur II in Babylon, was the inscription "*šadû"* (Moorey 1999: 344), qualifying the limestone as "mountain rock", which may have certified it was quality limestone.
55 ▸ **2.2.1.b**.
56 Sîn-aḫḫē-erība, RINAP 3/2, 168, 17–20 ▸ **4.7**.
57 See summary of stone identifications in Bjorkman 1999: 288.
58 Conveniently this English term is used to refer to varieties of two distinct minerals, gypsum and calcite. It is not always clear from the Akkadian texts which mineral is meant, hence the convenience of the English term.
59 Tukultī-apil-Ešarra III refers to it as a solid stone used as decorative slabs for his palaces, see RINAP 1, 47, 30′.
60 Moorey 1999: 343.
61 Moorey 1999: 336.
62 Mitchell/Middleton 2002.

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^{d}ŠE.TIR) as a stone "whose appearance (*šikinšu*) is fine like cucumber seed (*zēr qiššê*)".[63]

Calcium-based stones such as limestone were typical building stones, used for structure and in architectural sculpture (colossi). Also used in sculpture were breccia (two sorts: *turminû* and *turminabandû*[64]), basalt (*adbaru*; *kašuru*?[65]), *pendû*-stone (calcite + gypsum mix), and *sāndu* (carnelian). *pendû* (NA_4 ^{d}ŠE.TIR) refers to a grainy red stone. The logogram NA_4 ^{d}ŠE.TIR emphasises the grainy aspect of the stone, since ŠE.TIR = *ašnan* (grain). A speckled aspect is moreover contained in the term *pendû* itself which also means "mole". The fact that its logogram NA_4 ^{d}ŠE.TIR is deified could point to the supernatural properties of *pendû*-stone.

Also to be noted is the use of dolomite (*alallu*/*elallu*)[66], *engisû*, *girimḫilibû, ḫaltu* (alumnite?), jasper (*ašpu*). In a text inscribed on horse-troughs, Sîn-aḫḫē-erība mentions filling the ground where his horses train with chippings (*nusâti*) from the slabs of his palace (the *ēkal māšarti*), an action which, as pointed out by John MacGinnis, must have had magic properties and may also have served to reinforce the mudflats.[67] The stone chippings include jasper, breccia (*turminû,* and *turminabandu*), *pendû*-stone, dolomite*, girimḫilibu, engisû, gišnugallu*-limestone, *sābu*-stone*, ḫaltu.* Sîn-aḫḫē-erība also uses *sābu*-stone, together with *pendû*-stone and *turminabandû*, to carve a platform (*kigallu*) in the great courtyard below his limestone palace in Nīnawā, as seat for his kingship (*rimīt šarrūtīya*).[68] The platform is mounted with four bronze pillars which are to serve as support for a roof of silver-plated cedar beams. This space was no doubt designed to provide shelter for the king when he attended activities carried out in the courtyard. As for Aššur-aḫu-iddina, he lists slabs of *gišnugallu*-limestone, *pendû*-stone, breccia (*turminû* and *turminabandû*), dolomite and *girimhilibû*-stone as requirements for his palace (*ana ḫišiḫti ekallīya*) **RINAP 4, 1, v 82**.

Solid rocks such as limestone were mainly used for architectural sculpture. Moorey observes that architectural sculpture in the true meaning of the term (as opposed to decorative reliefs and orthostats) starts with Tukultī-apil-Ešarra I.[69] As of this king's reign, sculptures (colossi) were used as building blocks: they had a tectonic function and were not simply decoration. The evidence suggests that colossi were in fact treated like materials. Not only are they commonly mentioned in the state correspondence together with stone slabs and beams, the other most basic materials, but they are also listed together with all the various building materials ordered as tribute from vassals in an inscription from Aššur-aḫu-iddina **RINAP 4, 1, v 77**. Also used for sculpture is the stone *pendû.* For example, Sîn-aḫḫē-erība fashioned sphinxes out of *pendû* stone.[70]

Another stone mentioned by the Assyrian royal inscriptions but which appears to have been used somewhat more sparsely in construction no doubt due to its expensiveness is lapis lazuli (*uqnû*). It was used as decorative slabs and also as pigment to colour the glazing of bricks.[71] Precious and semi-precious stones mentioned as foundation deposits in various forms include lapis lazuli, *sābu*-stone, *ḫulalu*-stone, *mušgarru*-stone (malachite?), *pappardilû*-stone, *papparminû*[72]-stone, *pendû*-stone*,* basalt (*ṣalamtu*).[73] The expression *nisiqti abnī* (the choicest of stones) is occasionally employed to refer to precious stones. These could be used as inlays, a technique known as *šipir tamlê* (lit. "the work of filling"). Tukultī-apil-Ešarra III sets up a "sun chamber" (*atman šašši*) inlaid with precious stones (*nisiqti abnī šipir tam*[*lê*]) for his royal abode in the palatial halls of Kalḫu.[74]

Not much information is provided regarding types of stone in the state archives. As with wood (see below), the terminology seems to reflect an overlap between the nature and purpose of the material: raw stone is identified in terms of its future use (e.g. threshold stone). Whilst with wood the types of trees involved are often specified, with stone such identifications are practically always omitted as if not important. It seems that in the context of construction no ideological significance was attached to stone, so the types of stone chosen would have mattered little and there would have been no need to specify them: any type of stone would be satisfactory as long as it met practical and possibly aesthetic needs. This of course contrasts with the treatment received by wood, which as we have seen fitted into an ideological system based on a hierarchy of sacredness, and was therefore appreciated for its variety. The only cases where types of stone are clearly specified is when an *ebirtu* slab is said to be of basalt (NA_4.AD.BAR/*adbaru*) **SAA 1, 58, o. 6**, and the multiple mentions of *pūlu* (Bab. *pīlu*)

63 Sîn-aḫḫē-erība, RINAP 3/1, 34, 72 ▸ **3.2.2**.

64 Aššur-aḫu-iddina lists *turminû* and *turminabandû* together suggesting the two terms do not designate exactly the same thing, cf. Esharhaddon, RINAP 4, 1, v 79 – v 80.

65 Sîn-aḫḫē-erība uses *kašurru* stone to support the pivots of the door leaves at the gates of his palace in Nīnawā (Sîn-aḫḫē-erība, RINAP 3/2, 87).

66 See Dole/Moran 1991 for the identification of *alallu* as dolomite.

67 See MacGinnis 1989 for text.

68 Sîn-aḫḫē-erība, RINAP 3/1, 34, 82–85.

69 Moorey 1994: 342.

70 Sîn-aḫḫē-erība, RINAP 3/2, 51 ▸ **3.2.2**.

71 ▸ **6.2**.

72 Transcribed *parpardildilu* in MacGinnis 1989 and Moorey 1994.

73 See for example Sîn-aḫḫē-erība, RINAP 3/2, 168, 52–53; Aššur-aḫu-iddina, RINAP 4, 104, vii 4 – vii 12.

74 Tukultī-apil-Ešarra III, RINAP 1, 47, r. 33′.

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stone (e.g. **SAA 16, 125, o. 5′ – o. 7′**), referring to either limestone or gypsum[75].

askuppu(*tu*) [(NA_4.)I.DIB][76], *mēl'āni*[77], *ebirtu ša adbari, pūlu*

The state archives testify to stone being used for various architectural features such as (threshold) slabs, bull colossi, steps for a watchtower[78], the pavement in the bathroom of a god[79] and foundation stones.

The term NA_4.I.DIB is the most commonly attested reference to stone. It designates threshold stones. The determinative NA_4 could originally have been used to distinguish stone thresholds from wooden ones.[80] The number of doorways in Assyrian palaces and temples meant great quantities of thresholds could be needed. A letter from Nasḫir-Bēl to Šarru-ukīn reveals that as much as 200 *askuppu*'s could be necessary for just one provincial palace, in this case probably a residence in Amedi, modern Diyarbakir, where Nasḫir-Bēl was governor.[81]

Bull colossi (*šēdī*, wr. NA_4.^{d}ALAD.MEŠ)[82] also figure among those worked pieces of stone treated en masse like bulk raw material. Reliefs from room VI of Sîn-aḫḫē-erība's palace in Nīnawā indicate that bull colossi were roughed out at the quarry as they were hewn[83], which explains how they so promptly appeared on the circuit of raw materials. This technique was probably also used for thresholds. As shall be seen, thresholds and bull colossi were essential to Assyrian royal architecture mainly for their apotropaic and decorative values. It should also be noted that bull colossi were not only apotropaic and decorative, they also had a tectonic function[84]. It is possible that *askuppu* should also have come to designate simple slabs by analogy with threshold slabs.

mēl'āni etymologically clearly refers to steps of a staircase. This translation makes perfect sense in the context of SAA 1, 56 where the *mēl'āni* are used for watchtowers. The term *ebirtu* has been translated as steps (of as staircase) in SAA 1, 58 but this translation can legitimately be questioned, considering the great quantity of *ebirtu* required for this one bathroom[85]. Moreover, the translation step of a staircase for *ebirtu* given by CAD is based on insufficient and unconvincing evidence, just two texts including SAA 1, 58. The other text ABL 1049:5 (NA) is a ritual passage which gives instructions to assemble up to three *ebirtu* features one after another, effectively these would be steps, but etymologically it would be referring to what were originally superimposed stone slabs. If the context is not clear it is therefore best to translate *ebirtu* as slab rather than step. *ebirtu* (< Akk. *ebēru*, "to cross over") and NA_4.I.DIB (< Sum. dib, "to cross over") share similar etymologies, so both terms could have conveyed the same idea.[86]

Due to the wide use of limestone, *pūlu* also came to designate slabs or blocks (of limestone), as opposed to just the stone 'limestone'. For example, a letter from the reign of Šarru-ukīn provides instructions for laying four hundred limestone blocks (*pūlāni*) of three to four cubits long in the centre of a city.[87]

3.2.2 Provenances

Stone for construction was acquired mainly from the Zagros region. There is evidence for stone being hauled from Labdudu, Yasubu and Šimu[88].

3.2.3 Acquisition

Stone was hewn out of the mountain bedrock[89], hauled[90] to the river on carts or sledges **[FIG. 7]**[91] and loaded on boats/rafts[92]. Like wood it was centralised on the riverbanks for inspection and accounting, before and after transport[93]. Due to its weight, stone was more difficult to transport than wood. One letter from Aššur-bani to Šarru-ukīn reports that a boat carrying bull colossi was not strong enough to carry the load.[94] In his inscriptions, Sîn-aḫḫē-erība narrates the difficulties encountered by his ancestors to transport bull colossi from Tastiate to Nīnawā: "with might and struggle they painfully carried (them) and installed (them) at their gates" (*ina danāni u šupšuqi marṣiš ubilūnimma ušaṣbitū bābānīšin*).[95]

3.2.4 Value and symbolism

The value of materials could be based on their appearance, rarity, or history of procurement. This is especially true of stones since there was much ty-

75 Cf. Mitchell/Middleton (2002: 94–97) for an up-to-date discussion of the term *pūlu* based on Neo-Assyrian reliefs.
76 See also ▸ **5.2.1.a**.
77 Read here NA_4 me-el_2-[a-ni] based on SAA 1, 56, b.e. 16.
78 SAA 1, 56.
79 **SAA 1, 58, o. 12**
80 There is archaeological evidence for wooden thresholds. See Moorey (1994: 358) quoting Woolley about Kalḫu.
81 SAA 5, 15.
82 See also ▸ **6.2.3.a.**
83 Cf. Russell 1987: 522.
84 Cf. Moorey 1994: 342; ▸ **6.2.3.a**.
85 Cf. Postgate citation in Parpola/Reade (1987: 54): 150 steps "would make a long staircase for a bath".
86 For a discussion of *ebirtu* see ▸ **3.1.1** (above).
87 SAA 19, 156, 9′–12′.
88 SAA 15, 122 (Labdudu) + 123 (Yasubu); 5, 290 (Šimu).
89 SAA 1, 58 + 110 + 150; 5, 29 + 297; SAA 15, 283.
90 SAA V, 17; SAA 15, 122 + 123.
91 Cf. Nīnawā reliefs reproduced in SAA 1: 53 and 57.
92 SAA 1, 56 + 119 + 139; SAA 5, 290 + 299.
93 SAA 5, 290.
94 SAA 1, 119.
95 Sîn-aḫḫē-erība, RINAP 3/1, 17, v 75 – v 78.

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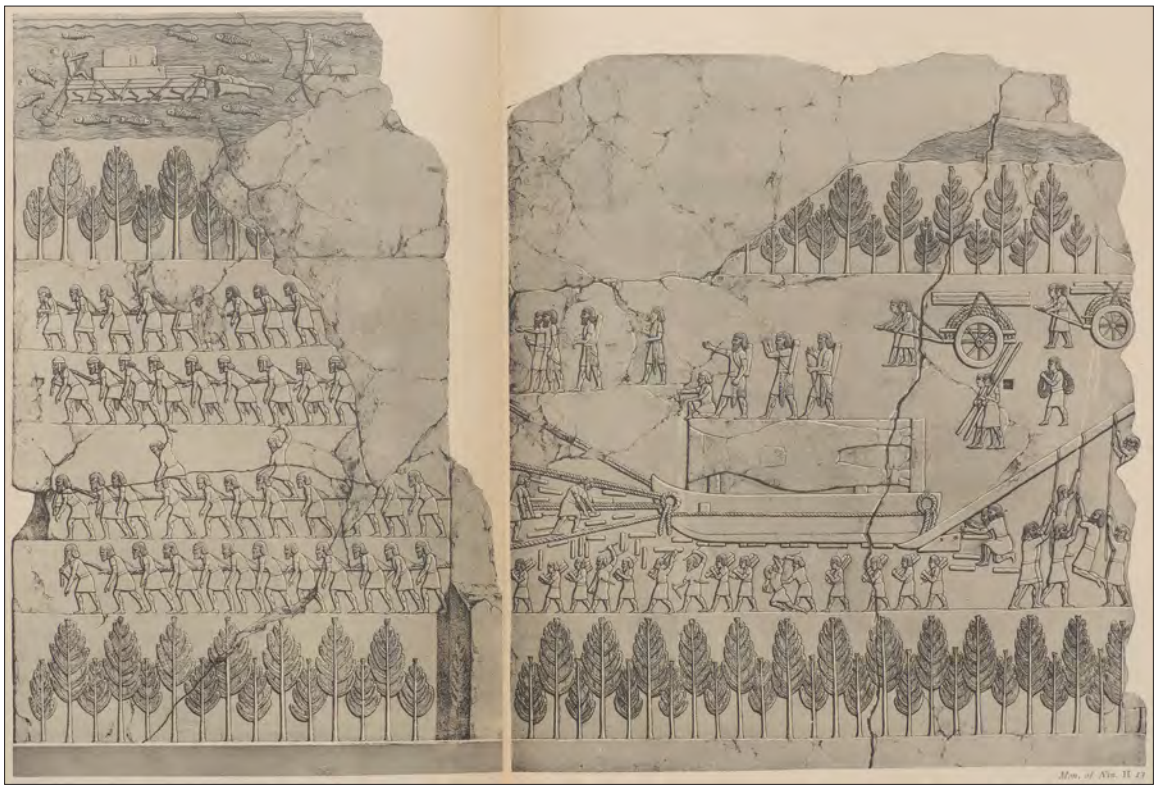

Fig. 7: Hauling a *lamassu* on a sledge. Copy of a relief from the South-West palace at Nīnawā (Paterson 1912–1913: Plates 27–28).

pological variation within that category. Sîn-aḫḫē-erība describes stones in a way that stresses their value. He qualifies the *pendû*-stone used to make *apsasītu* colossi as a stone "whose structure (*šikinšu*) is like cucumber seed (*kīma zēr qiššê*), which was highly valued as a necklace stone, as a stone for commanding favour or bringing on flooding, and to prevent that disease reach a man", a stone "whose structure (*šikinšu*) is like granulated barley (*kīma še'im ṣaḫḫari*), which in the time of the kings my fathers, was valued only as a necklace stone".[96] Sîn-aḫḫē-erība says of the stones *turminabandû* and *allalu*, both used for his palatial halls at Nīnawā, that they are respectively "like the wings of a dragonfly" and "like the bark of the date palm".[97] The value of *parūtu*-limestone is also described by Sîn-aḫḫē-erība in terms of its rarity, the king remarks: "in the days of the kings my fathers, it was precious enough (*šūquru*) for the pommel of a sword (*ana karri namṣāri*)."[98] The geographical origins of the stones are typically specified in very precise terms as if to emphasise their uniqueness. As remarked by Frahm[99], some of these descriptions are taken directly from the lexical list *abnu šikinšu.*[100] Through such acts of scribal erudition, imperial architecture was integrated further into the ideological fabric of the Mesopotamian culture heralded by the Assyrians.

The role of the gods in facilitating the procurement of materials, one of the most difficult stages of the building process, is significant. In the aforementioned examples, the *pendû*-stone is said to have "made itself known" (*ramānuš uddanni*) at the foot of Mount Nipur, whilst it is Aššur and Ištar who disclosed to Sîn-aḫḫē-erība the location of the *parūtu*-limestone in the interior of Mount Amana. That these locations should have been secrets of the gods, accessible only through revelations, increases the ideological value of the materials. *turminabandû*-breccia used for colossi, "such as had never been seen before", is said to have "revealed itself (*ukallim ramānuš*) in Kapridargila which is on the border of Til Barsip", whilst white limestone (*pīlu peṣû*) also used for colossi "was found (*innamir*) in great quantities near Nīnawā in the land of Balaṭaya according to the counsel of the god (*kī ṭēm ilīma*)"[101]. In the same text, Sîn-aḫḫē-erība also

96 Sîn-aḫḫē-erība, RINAP 3/1, 72; Sîn-aḫḫē-erība, RINAP 3/2, 51, 5.
97 Sîn-aḫḫē-erība, RINAP 3/2, 49, 8′ –12′.
98 Sîn-aḫḫē-erība, RINAP 3/2, 39, 41–43.
99 Frahm 1997: 258.
100 For more on *abnu šikinšu* and the nature of stones, especially in relation to Neo-Assyrian rulers, see Reiner 1995: 119 –132.
101 Sîn-aḫḫē-erība, RINAP 3/2, 39, 45–46.

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claims that Aššur and Ištar showed him "how to bring out the great cedar logs which, since distant days, had grown very tall and thick, standing concealed in the midst of the Sirara mountains".

The stones are not only precious due to their exotic nature, but also because they have a cosmological meaning. Both values (exotic and cosmological) are implied in the observation that Sîn-aḫḫē-erība brings "precious basalt (*kašurru*) from a distant land", through the "power of the sceptre" given to him by Aššur.[102] The basalt is then placed under the door pivots sockets (*ṣerru*) of Sîn-aḫḫē-erība's palace gates. The unreachable limits of the empire are tamed and folded into the core.[103] The otherworldly basalt is given a function to serve the needs of the empire. In as much as function implies subordination, it is clear here that symbols of the outside are made subordinate to the inside.

We know from Babylonian explanatory texts that materials could be equated with deities.[104] It is possible that the Assyrians should have also taken such parameters into consideration when choosing their building materials.

3.3 Wood

3.3.1 Types of wood, terminology and use

erēnu, šurmēnu, burāšu, daprānu, taškarinnu, ašūḫu, musukkannu, liāru, sindu, buṭnu, meḫru, elammaku, šaššugu, ḫaluppu

The most prevalent category of materials in the Assyrian royal inscriptions is wood.[105] According to the inscriptions, wood served essentially for roofing and doors, as beams or panels, and for pillars/columns. It appears wood panelling was also used to decorate walls, since palaces are often described as made of different woods. Equally probable, although not obvious archaeologically, is the possibility that the Assyrians would have used wood as transverse timbers to reinforce mud brick, a practice evidenced archaeologically for other periods of Mesopotamian history.[106]

The choice wood for roofing was cedar (*erēnu*)[107] for it provided strong, resistant, long, wide beams ideal to cover large areas. Cypress (*šurmēnu*) was also frequently employed for roofing, although it is mentioned in this context less often than cedar. It is possible that as evergreens, cedar and cypress should have been appreciated as symbolic of longevity/eternity. As structural woods par excellence, cedar and cypress were also the preferred woods for the manufacture of doors, especially appreciated for their sweet fragrance. Starting with the inscriptions of Tukultī-apil-Ešarra III, cedar and cypress are commonly described as sweet scented.[108] Also attested as woods for doors are juniper (*burāšu*; *daprānu*), boxwood (*taškarinnu*), *ašūḫu* (Aleppo pine?), *musukkannu* (dalbergia sissoo)[109], *liāru* (a conifer)[110], *sindu* (Indian timber).

Pillars and columns were typically of cedar, as this tree provided the largest most solid and stable beams. For example, both Šarru-ukīn and Sîn-aḫḫē-erība make ample use of cedar for the columns at the entrances of their *bīt appāti* palaces. Šarru-ukīn specifies he fixed four columns of cedar of a circumference of 1 *nindanu* (± 6 m) each on top of eight copper lions weighing 576.25 talents each (± 18 tonnes) **Fuchs (1994), Stier 70**, whilst Sîn-aḫḫē-erība also describes fixing four cedar columns on top of twelve bronze *pirigallu*-lions, albeit with

102 Sîn-aḫḫē-erība, RINAP 3/2, 86.

103 ▸ **1.2.2**; ▸ **8.2.1.c**.

104 The compendium CBS 6060 (see edition in Livingstone 1986: 176–179) establishes the following equations: silver = Angal; gold = Enmešarra; red gold = Annunaki; copper = Ea; carnelian = Ninlil; lapis lazuli = DIL.BAT (Ištar); cedar = Lady of Nippur; cypress = Kišar; juniper = Adad. An earlier tradition (Livingstone 1986: 182) known from *An* has the equations: divine silver = Anu; divine gold = Enlil; divine copper = Ea; divine tin = Ninazal.

105 See Postgate (1992a: 187–190) for attestations of trees and their usages across the Assyrian royal inscriptions.

106 This practice seems to be described in a fragmentary passage of Aššur-aḫu-iddina's inscriptions **RINAP 4, 105, v 16 – v 19** ▸ **4.1.3**.

107 *erēnu* is translated here as cedar, because not only does cedar correspond well to the majestic type of wood described but also because still today cedar evokes the idea of greatness which the Assyrian kings no doubt wished to convey; it has been noted by some scholars (Mallowan 1966, Moorey 1994), in view of the extensive archaeological evidence for the use of pine in Assyrian architecture, that *erēnu* could be referring to either cedar or pine for it is possible that the Assyrians themselves did not make a distinction between both woods, what is nevertheless clear is that through the term *erēnu* the Assyrians were expressing the concept of a strong stately wood.

108 ▸ **6.3.1**.

109 *musukkannu* (aka *mesû*-tree of Magan), is commonly accepted as the sissoo-tree, it is described in Mesopotamian sources as typical of Magan, although texts suggest it was also grown in Mesopotamia, for example in the myth of Nergal and Ereškigal (SB version, STT1, 028) Ea asks Nergal to cut down a *mesû*-tree. The *mesû*-tree had a religious significance, it is described as flesh of the gods in Erra I. For a discussion of the sissoo tree in the Mesopotamian context see Maxwell-Hyslop 1983.

110 Contenders for the exact meaning of *liāru* include *Juniperus excelsa* (Greek juniper) and *Abies cilicica* (Syrian fir), cf. Postgate 1992b. Like cedar and cypress, *liāru* is used for doors and described as sweet scented (cf. Aššur-bāni-apli, RINAP 5, 10, iii 27 – iii 28) suggesting a similar type of tree, probably a conifer.

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less technical detail **RINAP 3/1, 16, vi 74 – vi 81**. It appears that Šarru-ukīn used the tree trunks as they came although presumably not to full height. The average circumference of a *cedrus libani* is 6 metres which would give 2 metres diameter; the average height is 30 metres. Here the situation seems to be that eight cedars beams were used in pairs to form four columns and each column (composed of two cedars) was placed on top of a lion pair so that each lion supported one column. This formed two entrances with two lions supporting two columns on either side of each entrance. A crossbeam spanned the arrangement.

Šarru-ukīn uses about eight different woods for his palace at Dūr-Šarrukīn, namely ebony, boxwood, cedar, cypress, *duprānu*-juniper, *burāšu*-juniper and pistaccio **Fuchs (1994), Prunk. 158–159**. Different woods may have been used to symbolise different parts of the world conquered by the Assyrians. Some of these woods are mentioned by Tukultī-apil-Ešarra III amongst the tribute from the kings of Ḫatti (cypress, *duprānu*-juniper, *ṣindu*-wood)[111] and by Aššur-aḫu-iddina regarding the spoil from the palace of the king of Sidon (ebony)[112].

Other woods cited in the royal inscription in the context of building but without specified applications are terebinth (*buṭnu*), tamarisk (*ṭarpu'u*), *meḫru* (a conifer) and *elammaku*(?)[113]. These woods are listed as constitutive of palaces but without further indications. At Kalḫu, Aššur-nāṣir-apli II reported founding a palace composed of eight areas[114] and each area was characterised by a different wood. Three separate inscriptions refer to this palace and its woods.[115] Although each inscription lists only seven woods, these woods are not always the same: overall eight woods are mentioned, namely boxwood, sissoo, cedar, cypress, terebinth, tamarisk, juniper and *meḫru*. *meḫru* is mentioned in only one of the texts, replacing juniper. It is possible that juniper and *meḫru* were alternatively omitted from the lists, by mistake. It is fair to assume that eight woods should have been listed each time to match the eight palace areas mentioned. Should the palace areas have been characterised by these woods, it is conceivable that the woods were used as panels for the internal and/or external walls of the structures in question. The woods which can be identified have distinctive characteristics, in terms of fragrances (cf. cedar, cypress, juniper[116]) and/or colours (cf. ebony, sissoo, terebinth[117]).

Special woods were used for brick moulds, at least on special occasions. It seems the woods were chosen for their different colours. The materials used for brick moulds appear to always be the same, namely ivory, ebony, boxwood, sissoo, cedar and cypress. The colour range is very clear, it would have been roughly: white, black, red, maroon, beige. Aššur-bāni-apli uses ebony and sissoo brick moulds to renovate Nergal's Emešlam temple in Kutha.[118] Aššur-aḫu-iddina uses brick moulds of ivory, ebony, boxwood and sissoo for Esagil.[119] He uses the same combination of materials in addition to cedar and cypress for the brick moulds of Ešarra[120] Salmānu-ašarēd III uses cedar moulds to make bricks for the ancient wall of Aššur.[121]

It is clear that the different materials and colours were significant to the rituals. The same was observed by Braun-Holzinger with respect to deposits of apotropaic figurines (and associated objects) in Mesopotamian temples during the third and second millennia BCE. Braun-Holzinger posits magical functions for the different combinations of materials noting: "the combination of wood and metal for figurines, of stone and metal (dark and light) for tablets, of frit and gold for beads, shows that different materials had different magical functions."[122]

The types of wood dealt with in the correspondence are not always specified, but those cases in which they are amount to enough evidence for general assumptions to be formulated. Conifers produced the most appropriate woods for construction and are therefore the type of tree most mentioned in our sources. Explicit references to cedar (GIŠ.EREN, *erēnu*) are by far the most numerous[123]. Next in terms of frequency are mentions of cypress (GIŠ.ŠUR.MIN$_3$, *šurmēnu*)[124] and *meḫru*-wood (a conifer too). Other woods mentioned in the con-

111 Tukultī-apil-Ešarra III, RINAP 3/2, 47, 23′–27′.

112 Aššur-aḫu-iddina, RINAP 4, 1, ii 76.

113 The Hebrew equivalent is '*almuggim*/'*algummim*, it is mentioned in the Bible, described as imported from Ophis (location unknown) and also said to be found in Lebanon, which may be referring to the existence of such wood there not as an endemic species but as imported timber. *elammaku*/'*almuggim* has often been translated as sandalwood, a precious wood from India that fits neatly the description. This translation has nevertheless been challenged on the grounds that sandalwood does not grow in Lebanon even though the Bible does not say that the '*almuggim* wood was actually growing in Lebanon.

114 The term employed is E$_2$.GAL (*ekallu*) but here it most likely refers to distinct areas/structures/buildings within the royal precinct. Only the royal precinct as a whole would qualify today as "palace", hence the translation "area".

115 Aššur-nāṣir-apli II, RIMA 2, A.0.101.2, 52–62; A.0.101.23 and A.0.101.30, 20b–36a.

116 These woods disperse strong pleasant fragrances.

117 Ebony is typically dark brown verging on black, sissoo ranges from golden brown to maroon, terebinth is red or reddish brown.

118 Aššur-bāni-apli, RINAP 5, 12, Frgm. 1 16′–17′.

119 Aššur-aḫu-iddina, RINAP 4, 48, r. 97.

120 Aššur-aḫu-iddina, RINAP 4, 57, iv 23 – iv 26.

121 Salmānu-ašarēd III, RIMA 3, A.0.102.10, iv 54.

122 Braun-Holzinger 1999: 154.

123 SAA 1, 227; SAA 10, 174; SAA 5, 295; SAA 13, 7; SAA 13, 162; SAA 13, 163; SAA 13, 166; SAA 3, 14.

124 SAA 1, 227; SAA 3, 14; SAA 13, 164; SAA 5, 295; SAA 13, 164; SAA 5, 253.

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text of building are sissoo (GIŠ.MEŠ.MA$_2$.GAN.NA, *musukkannu*)[125], boxwood (GIŠ.KU, *taskarinnu*)[126], *šaššūgu*-wood (GIŠ.ŠA.AŠ$_2$.ŠU.GI)[127], *ḫaluppu*-wood (GIŠ.HA.LU.UB)[128] and juniper (GIŠ.LI, *burāšu*)[129].

The state archives do not always specify what aspects of construction the wood was used for. The only purpose which is ever explicitly mentioned is roofing, although the roofing style (flat or pitched) is never specified. Cedar, cypress and *meḫru*-wood are attested as roofing woods for temples. Cedar is used for temples in Babylon, Sippar and Kutha **SAA 13, 166, o. 3 – o. 4**, whilst cypress and *meḫru*-wood are used to roof Ea's Eengurra temple in Eridu[130]. Temples are the most frequently attested final destination for wood[131], although beams and other wood products are known to have been used in all sorts of buildings[132]. Some woods seem to have served a more decorative purpose. This may have been the case of the *musukkanu, haluppu*, boxwood and šaššugu woods used in the temple of Bel together with gold, and worked by craftsmen.[133] Wood could also be incorporated into buildings for structural purposes **SAA 16, 125, r. 1 – r. 3**.[134] Wood could moreover be used for pipes (*butiqēte*, *raṭēte*) serving in ritual contexts[135]. From a practical point of view water-resistant fired bricks would have been a more appropriate material than wood to carry liquids, which suggests wood may have been chosen on ideological or superstitious grounds. In a letter to the king (Aššur-aḫu-iddina or Aššur-bāni-apli), Urdu-aḫḫēšu remarks that work involving drainage openings (*bibāni*) is the type of work that requires kiln-fired bricks.[136]

eṣṣē (GIŠ.MEŠ), *gušūru* (GIŠ.UR$_3$), GIŠ.ŠU$_2$.A[137], *šipšatu*[138]

The term GIŠ is never encountered on its own in the singular. Whilst in the plural GIŠ.MEŠ could be used to refer to gross quantities of wood, terms specifying the function of the wood were always preferred for single units and also more widely used in both singular and plural when it came to construction. In the context of construction, it seems trees and wood were accounted for only in terms of the objects they would serve to make: the concept of raw tree/wood appears replaced by the idea of the finished product (e.g. beam) even before the trees were felled. GIŠ.UR$_3$.MEŠ (Akk. *gušūrū*) is the most widely used lexeme designating wood. Its etymological meaning is "(processed) beam", originally "roof beam", but in practice it could be used to refer to (raw) logs too.

Other terms referring to wooden materials for construction are GIŠ.ŠU$_2$.A.MEŠ and *šipšatu*. These words have been treated as synonymous through the translation "door beams", but this idea should be revised. Available evidence suggests GIŠ.ŠU$_2$.A.MEŠ may be referring to wood planks (conveying an idea similar to the "cover/plank" meaning of *adappu* ▸ **4.2.2**) and *šipšatu* to wood trunks/logs. One letter records the dimensions for a series of GIŠ.ŠU$_2$.A.MEŠ to be used for doors.[139] The measurements suggest the objects are flat like planks and more likely angular than round: 6 cm long, 32 cm wide, 8 cm thick. Measurements are given for length, width and thickness. No mention is made of circumference, which would be expected for beams as in another letter where a *musukkannu* tree is described as 3 m long, 50 cm in circumference.[140] As for *šipšatu*, a letter from Nabû-dammiq to Šarru-ukīn reports that a man is being sent to select the *šipšāte* and trim them[141], which indicates the material was raw.

3.3.2 Provenances

A number of different provenances are attested for timber[142], most of which were located in and around the Assyrian heartland, mainly towards the Zagros mountains where wood, especially oak, was most abundant. There is ample evidence however that wood was equally sought from more distant regions, mainly from the cedar-rich Tauros and Amana mountains in the west, but also from Babylonian cities in the south, where a few odd species grew. The types and qualities of wood varied from region to re-

125 SAA 5, 253; SAA 15, 248.
126 SAA 5, 253.
127 SAA 5, 294.
128 SAA 5, 294.
129 SAA 3, 14.
130 SAA 13, 164.
131 SAA 5, 294; SAA 13, 40 + 30 + 33 + 164 + 166; SAA 16, 125.
132 Other explicit references to the use of beams in specific types of buildings are to be found in the building reports (XI, 15; XI, 16; XI, 18) where beams are recorded as construction material for towers and gates.
133 SAA 5, 94, 9′–16′.
134 ▸ **4.1.3**.
135 SAA 13, 40; SAA 13, 30 (possibly ritual context) ▸ **4.6**.
136 SAA 13, 162: r. 8 – r. 11.
137 See also ▸ **4.2.2** and **5.2.1.a**.
138 See also ▸ **4.2.2** and **5.2.1.a**.
139 SAA 5, 295.
140 SAA 5, 294.
141 SAA 1, 229.
142 Attested provenances: Nēmed-Ištar (north of Nīnawā) SAA 1, 227; Sapirrutu opposite Zahe (in Babylonia, on Euphratēs, north of Ītu close to Birati) SAA 1, 63; Lurisite (south of Aššur) SAA 1, 98; Eziat (in Urarṭu, on the Tigris) SAA 5, 3; Šubria (in Urarṭu, around the Tigris) SAA 5, 25 + 34; Kurbail and surroundings (east of Nīnawā, where Zagros begins) SAA 5, 127; Arrapḫa (east of Aššur, north of Lubda, near Zamua, towards where Zagros starts) SAA 5, 253; Yasubu (north of ad-Dair, beginning of Zagros) SAA 15, 123; Birati (in Babylonia, on Euphratēs south of Sapirrutu towards Ītu) and Kissik (in Babylonia, on Euphratēs, south of Eridu) SAA 15, 248; Argada (?) SAA 15, 123; Karkamiš (on Euphratēs near Isana towards where Tauros/Amana begin) SAA 13, 162.

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gion, so did their appreciation. For example, timber from Lurisite was considered strong and good-looking (*dannūte damqūte*)[143], whilst sissoo-wood from Birati was considered too moist (*gabbu raṭbu*)[144].

3.3.3 Acquisition

Acquiring the wood was not an easy task, both from technical and political points of view. First, transport was heavily dependent on geography and climate. Due to its bulkiness, and because, conveniently, it could be floated, wood was best carried by river, so it was important that the coveted tree groves be located close to river systems. Moreover, river transport would have been most practicable in dry weather during the months when the river waters were neither too high nor too low and the river flow regular, that is from late May to late August[145]. It seems, however, that these criteria were not given much importance: there is evidence for river transportation occurring outside this margin. Grain harvest was in May-June, sowing in October, and in between was the time traditionally favoured by the Assyrians to lead their military campaigns (July-August), although in the Neo-Assyrian period military campaigns were not limited to this time anymore. The most suitable months for making bricks and laying foundations would have been May-June, when chaff was readily available, the weather dry, the temperatures hot. May-June would therefore also be ideal for carrying out building projects. To have the materials at hand by then it would have been necessary to arrange transport in the preceding months. Most of the flood season (April-June) was probably ruled out, but the rainy season prior to that could be dealt with. The months leading to the rainy season (September-October) when the water levels were at their lowest could also have permitted river transportation, mainly for light materials, it may have been more restrictive for the heaviest materials.

In an undated letter to Šarru-ukīn, Ṭāb-šar-Aššur discusses the difficulties of towing beams[146] to Nīnawā.[147] The text describes a previous case of beams arriving in Nīnawā from Babylonia in the month of *Adāru* (XII), and also the current situation: since the month of *Tašrītu* (VII) beams have been waiting in Ariawate ready for transport to Nīnawā. This indicates that beams could be towed when water levels were at their lowest and during the rainy season, albeit painstakingly. Issues relating to the level of the water are specifically recorded in two letters[148], but in both cases the texts are damaged on the crucial lines, so it is not clear whether the waters are high or low. There is also evidence for beam transportation occurring around harvest time when the conditions would have been most favourable. In another letter Našir-Bel reports to Šarru-ukīn that beams have been secured from Urarṭu and that the harvests are soon to be collected.[149] A letter from Aššur-bēlu-uda'in to Šarru-ukīn equally testifies to harvests happening around the same period as log towing.[150] Attention will also be drawn to a contract for the supply of wood, which suggests the wood was felled in *Ṭebētu* (X) and states it is due to reach destination on day 20 of the month *Abu* (V).[151]

The Assyrians had to deal with hostile locals who strove to protect the natural resources in their lands. Military protection was required. Urarṭu and Šubria are depicted as dangerous areas. The governor of Tušḫan Ša-Aššur-dubbu asks Šarru-ukīn that prefects be sent to stand guard with him whilst beams are being brought out from Šubria.[152] In another letter he expresses his fear that an insurrection may arise in Urarṭu as the Assyrians start to float downstream the timber they have felled in that country.[153]. It was best to keep the manoeuvres of wood transport quick and swift to meet with as little resistance as possible. Processing the wood was a long and labour intensive enterprise. Once the tree groves had been selected[154], the trees were felled[155], then the logs had to be hauled and piled up along the riverbank[156] where they were accounted for[157], after which they were tied together with ropes[158] and

143 SAA 1, 98.
144 SAA 15, 248.
145 Times to avoid would have been the rainy season (between November and April), the flood season (around March-May), and when the river levels were at their lowest (around September-October). On this note, it is interesting to observe that in 1929 when the Oriental Institute of Chicago had to arrange the transport of bull colossi down the river Tigris it was pointed out by Edward Chiera in a letter to James Breasted that the pieces could only be floated whilst the river was at high water which would be in May (Wilson 1995: 110). Effective planning would also imply taking the winds into account. The south/southeasterly *sharqa* prevails during April-early June and again late September-November, whilst the north/northwesterly *shamal* prevails from mid-June to mid- September: given the general configuration of river systems in Mesopotamia, the *shamal* period should be avoided for upstream travel, the *sharqa* period for downstream travel.
146 In the context of transport, the lexeme used indistinctively to mean beam/log is GIŠ.UR$_3$.MEŠ. For terminology see ▸ **3.3.1**.
147 SAA 1, 63.
148 SAA 5, 117 + 298.
149 SAA 5, 3.
150 SAA 5, 127.
151 SAA 15, 324.
152 SAA 5, 32.
153 SAA 5, 33; See also SAA 5, 3 + 34.
154 SAA 1, 98 + 248; SAA 5, 25 + 33.
155 SAA 5, 25.
156 SAA 5, 6 + 34 + 111 + 117 + 254; SAA 15, 123.
157 SAA 5, 6 + 7 + 111 + 254.
158 SAA 5, 117.

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thrown into the river[159], finally ready to be towed[160] to destination.[161] Upon arrival the logs were inspected at the riverbank for selection and trimming. On land, wagons could be used for transport.[162]

Great quantities of wood were processed. In a letter to Šarru-ukīn the treasurer Ṭāb-šar-Aššur says he has been with Kiṣir-Aššur governor of Dūr-Šarrukīn to the river Zab to inspect the logs and concluded there were many, more than they could possibly desire.[163] Attested quantities of logs felled for one consignment range from fifty[164] to three thousand[165]. One letter from the governor of Aššur Ṭāb-ṣill-Ešarra to Šarru-ukīn informs us that a fire has occurred in what seems to have been something along the lines of a storehouse or station storing thousands of beams of all sizes.[166] The number of beams rescued either sound or burnt/damaged amounts to 28447, which gives an indication of the impressive scale on which wood was being stored. In another letter Ṭāb-ṣill-Ešarra is pleased to tell Šarru-ukīn that the beams the king has enquired about are so numerous they are impossible to count[167], suggesting the quantity may have substantially exceeded 28447 beams, an amount Ṭāb-ṣill-Ešarra had no difficulty counting.

Quality was as important as quantity. A letter from the official Nabû-de'iq informs Šarru-ukīn that a man will be sent (to the river bank) to select and trim logs, and he notes that the logs must be drained (from the water they have accumulated during transport) before they can be lifted and used.[168] Depending on their quality and format, logs would be appropriate for different usages, so they had to be selected with great care. A letter to Šarru-ukīn from an official explains that the planks he was supplied are of *meḫru*-wood which is much too thin (*ša meḫri šina raqqaqa adanniš*), cedar would have been better.[169]

3.3.4 Value and symbolism

Special values were attached to wood and derived products, sometimes reaching sacredness. A tablet by the scribe Budi-ilu containing love lyrics of Nabû and Tašmētu describes the shades (*ṣillu*) of cedar, cypress and juniper as appropriate for kings, magnates and gods respectively.[170] This hierarchy suggests woods could be chosen according to their social significance, and it also gives an indication of the comparative values of different woods: here it seems juniper was the most divine/sacred, cedar presumably the most precious, cypress the most accessible. Beams, which counted amongst the most valuable parts of a building both economically and structurally, also gave way to much symbolism. For example, the concept of beam was used metaphorically to represent the inner fabric of a human being: an oracle pronounced for Aššur-aḫu-iddina speaks in the name of Bēl reassuring the king that he should not be afraid because the god is watching over the beams of the king's heart:

> *lā tapallaḫ Aššur-bāni-apli anāku Bēl issīka*
> *adabbūbu gušūrī ša libbīka aḫarrīdi*
>
> Fear not Aššur-bāni-apli! I am Bēl. As I talk with you I watch over the beams of your heart.[171]

3.4 Metal

3.4.1 Types of metal, terminology and use

kaspu (KU_3.BABBAR), *ḫurāṣu* (KU_3.GI), *erû* (URUDU), *annaku*, *abāru, parzillu* (AN.BAR), *ešmaru,* GU.AN.NA, KI.SAG, *pašallu*

There is less variety in the metals mentioned by the Assyrian royal inscriptions, than in the woods or stones. Metals mentioned include: silver (*kaspu,* KU_3.BABBAR), gold (*hurāṣu,* KU_3.GI), copper/(bronze) (*erû*, URUDU), tin/(lead) (*annaku*, AN.NA), lead/(tin) (*abāru,* $A.BAR_2$), iron (*parzillu,* AN.BAR?), *ešmaru* (a silver alloy, probably equivalent to GU.AN.NA, unless GU.AN.NA means lead), KI.SAG (a silver alloy), *pašallu* (a gold alloy).[172] Identifying the metals meant is not always obvious. For a start, confusions are perceptible in the ancients' identification of metals such as copper/bronze, tin/lead.[173] Then, the components of alloys such as *ešmaru, pašallu* or KI.SAG are simply never specified by the available ancient sources.

Little is said about the procurement of metals, apart from their occasional mention in tribute and spoil lists, for propaganda. Few metals could be mined in Mesopotamia.

Metals were used mainly for decoration: to cast statues and gates, as ornaments for doors, as plating for walls, as sheathing for roof beams and columns

159 SAA 5, 4 + 25.
160 SAA 1, 63 + 102; SAA 5, 127.
161 See Albenda (1986) for Assyrian reliefs with vivid depictions of the whole process.
162 SAA 5, 295.
163 SAA 1, 62.
164 SAA 5, 127.
165 SAA 5, 26.
166 SAA 1, 100.
167 SAA 1, 101.
168 SAA 1, 229.
169 SAA 5, 295, b.e 27 – b.e. 28.
170 SAA 3, 14.
171 SAA 9, 1, o. ii 16′ – o. ii 20′.
172 For the complex technological issues undermining the philological identification of these metals, see Moorey 1994.
173 Cf. Moorey 1994: 254, 295 ff.

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RINAP 3/1, 16. Metals are scarcely mentioned in the state archives. The available evidence suggests they were essentially used for decoration[174], particularly doors. A letter from Ṭab-šar-Aššur to Šarru-ukīn reports that some doors of the temples of Sin, Šamaš and Nikkal are to be coated with silver sheets, others with bronze sheets **SAA 1, 66, r. 5 – r. 9**. Silver is also used for doorjambs (*sippī*).[175] A memorandum tablet by the official Urdu-aḫḫēšu concerning affairs to be discussed with the king notes that the doors of Esagil are to be inlaid, presumably with precious metals and stones **SAA 13, 166, o. 1 – o. 2**. It should be pointed out that metals could equally be used for the imagery and statues incorporated into a building, such as the image of cherubim (*kurībī*) and winds of silver for the temple of Sin[176], or the lion statues of bronze for the column bases of *ḫilānu* palaces **SAA 1, 66, o. 13 – b.e.17**. A list of precious items also records that 108 silver bricks were kept in a wooden chest: it is not inconceivable that these silver bricks would be used for decoration or as support for foundation inscriptions.[177] Other metals mentioned are gold and steel/iron (?). These were required by an official of Šarru-ukīn for the work of the goldsmiths and artisans in the temple of Bel, but no specifications are given **SAA 5, 294, o. 18′ – r. 3**.

For the use of the metals see ▸ **6**.

3.4.2 Provenances

Not much is said about the original provenance of metals, suggesting the metals came via trade routes rather than being mined by the state. The provenance of the metals is typically given bluntly as the treasury (*nakamtu*). The treasury consisted mainly of tribute and spoil[178]. A letter from Šarru-emuranni informs Šarru-ukīn that a treasury of metal scraps has been opened and inspected and that scraps as well as objects of bronze have been weighed.[179]

3.4.3 Value and symbolism

Precious metals were prized and they were used to emphasize the value of whatever they adorned. It is significant that they should have been used to enhance doors, in the same way that stone thresholds were used to mark entrances. Materials were essential to bring out the symbolic value of architectural features such as entrances. The reminder to inlay the doors of Esagil (*ina muḫḫi dalāte ša Esagil ana uḫḫuzi*) testifies to the importance of embellishing doors **SAA 13, 166, o.1**. The differentiated usage of silver and bronze sheets for doors in letter **SAA 1, 66** suggests these metals were used symbolically, possibly to indicate a hierarchy with the more precious metal, silver, indicating a more sacred entrance than the bronze. Silver used for doorjambs[180] is another case where precious metals highlight doors and entrances.

3.5 Straw

tibnu (ŠE.IN.NU)

Great quantities of straw (*tibnu*) were necessary for the manufacture of bricks: it has been calculated that a hundred (average size) bricks require about 60kg of straw.[181] It seems straw was imported to Dūr-Šarrukīn from all corners of the empire[182], which could even lead to complaints from officials. Gabbu-ana-Aššur, Palace Herald (?), reports to Šarru-ukīn that all the straw in Kurba'il is reserved to be sent to Dūr-Šarrukīn so there is no more straw for pack animals.[183] Sometimes workmen were expected to contribute personally to straw supplies. Šarru-ukīn's official Ilu-iqbi is perplexed when his workmen fail to bring straw, whether from Ḫalaḫḫu or from their own reserves: this will prevent them from fulfilling their brick moulding duties the following day.[184] It was not uncommon for individuals to experience difficulties meeting their straw quotas or to simply not be able to cope with the demand. Ilu-pija-uṣur, cohort commander of the shepherds, was reprimanded by Šarru-ukīn's officer Taklak-ana-Bēl, governor of Naṣibīna, for supplying neither straw nor reeds to make bricks.[185] Ilu-pija-uṣur's men were equally unable to supply straw and reeds for the work.[186]

Straw was transported by river on old boats[187], it was sometimes ferried together with reeds or fodder[188]. One letter from Šarru-ukīn to the governor of Kalḫu suggests that the dimensions and weight of reed bundle units which were circulating could be so substantial as to rule out donkey transport.[189] The same letter also highlights the essential role of straw and reeds in mud brick construction. Šarru-ukīn

174 SAA 1, 52 + 66; SAA 5, 294; SAA 7, 78; SAA 13, 28.
175 SAA 13, 28.
176 SAA 13, 28.
177 SAA 7, 78.
178 SAA 7, 59; SAA 8, 418.
179 SAA 5, 206.
180 SAA 13, 28, o. 14′.
181 Moorey 1994: 305, citing Oates 1990.
182 Attested provenances: Ḫalaḫḫu (north east of Dūr-Šarrukīn) SAA 1, 143, Kurbail (east of Nīnawā) SAA 5, 119, Diqarate village (in the steppe around Aššur) SAA 1, 105, Alu-ša-tamkari and Šitabni (location unknown) SAA 1, 114, Guzāna and/or Naṣibina (between the Euphratēs and Ḫabur) SAA 1, 235–237.
183 SAA 5, 119.
184 SAA 1, 143.
185 SAA 1, 236.
186 SAA 5, 235.
187 SAA 5, 233.
188 SAA 1, 94 + 26.
189 SAA 1, 26.

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is determined to carry out building works in the shortest delays. He makes it clear to the governor of Kalḫu that 700 bales of straw and 700 bundles of reeds, each bundle more than a donkey can carry, must be at hand in Dūr-Šarrukīn by the 1st of *Kislīmu* (IX), should one day pass by the governor will die.

3.6 Reeds

apparu (GI.AMBAR)

Reeds could be obtained from any fluvial locality.[190] They were transported by river, sometimes together with straw (see above) or with wood consignments[191]. One mode of transport attested specifically for reeds is the wineskin raft: an official of Šarru-ukīn requests from the governor of Kalḫu to provide him with a wineskin raft loaded with reeds.[192]

Reeds were used mainly as brick temper and for matting between brick courses. Possibly because reeds were so readily available, their acquisition did not have to be standardised or regularised. This easily led to deficits in reed stocks. In a letter to Šarru-ukīn, the high official Gabbu-ana-Aššur points out that reeds have to be made available for his tower, so the bodyguards are busy plucking out whatever reeds there is in the country, and he asks for permission to use the booty from the depot tower.[193] Another official complains to Šarru-ukīn that he has no more reeds to accomplish the king's work.[194]

Reeds would have been important as mats in the construction of towers, to increase stability. Gabbu-ana-Aššur refers to the construction of a tower for which he is missing reeds, no doubt to be used as matting.[195] A different usage of reeds is attested in a letter by Šarru-ukīn in which he discusses military moves including instructions regarding housing for deportees. Šarru-ukīn orders that the deportees be accommodated at the foot of a fortress in reed huts surrounded by a moat on each side.[196] Clearly living in huts surrounded by moats was considered a punishment. Šarru-ukīn concludes:

u kapru ḫanniu šumma lā šamruṣ šamrissu
And if (after that) this village does not suffer, make it suffer![197]

3.7 Bitumen and plaster

ittû (ESIR), *kupru/kupīru* (ESIR.ḪAD$_2$.A), *qīru*, *sīru*

Bitumen (*ittû, kupru/kupīru, qīru*) was mainly sourced from Ītu in Babylonia[198]. Evidence available from the state archives indicates that bitumen was used as coating for the houses of deportees **SAA 15, 41, o. 6′ – o. 7′**, in the course of construction work as signalled in a building report[199], to block a breached wall[200], with kiln-fired bricks for Esagil[201], and as coating for wood pieces which are likely to have been used for the production of what seem to be stockades[202]. *ittû,* the etymology of which points to Ītu refers to crude bitumen, and is usually encountered in contexts related to the procurement of materials. *kupru/kupīru* is the most commonly encountered term, no doubt because it designated bitumen in its processed form ready for use in building activities. As pointed out by Bradley Parker, *kupru* (*kupīru*) typically consisted of bitumen mixed with gravel and other additives so that it may be better translated as asphalt; the etymology of *kupru/kupīru* from *kapāru* ("to smear, to rub") also suggests it referred to a material which was being spread onto surfaces.[203] Based on the attestations listed in the CAD[204], *qīru* seems to refer to hot bitumen before it dries up.

Plaster (*sīru*) was easily obtained by mixing limestone oxide or gypsum oxide with water. Evidence available from the state archives indicates it was used to cover brick walls and flat brick rooftops[205] for protection. A letter from Mannu-kī-Ninūa informs Šarru-ukīn that the outer city wall of Kār-Šarrukīn is being plastered from boats: the wall would have been on the edge of a river with the risk of dampness or water seeping in.[206] A series of texts by Urdu-aḫḫēšu also attest to the use of plaster for the construction work of Esagil[207].

190 Attested provenances: Wadi Ubase (on the Tigris north of Aššur) SAA 1, 144; Šubria (in Urarṭu on the Tigris) SAA 5, 34; Kurbail (east of Nīnawā on the Tigris) SAA 5, 120; Kalḫu (south of Nīnawā on the Tigris) SAA 1, 26.
191 SAA 5, 34.
192 SAA 1, 144.
193 SAA 5, 120.
194 SAA 1, 144.
195 SAA 5, 120; See also SAA 1, 67 from the treasurer Ṭāb-šar-Aššur to Šarru-ukīn where the use of reeds is mention in relation to a tower.
196 SAA 1, 18.
197 SAA 1, 18, r. 8 – r. 9.
198 SAA 10, 368.
199 SAA 11, 16.
200 SAA 18, 157.
201 SAA 13, 168.
202 SAA 19, 60, o. 7.
203 Parker 1997: 1984.
204 CAD: *qīru.*
205 SAA 1,77.
206 SAA 15, 94.
207 SAA 13, 163 + 168 + 170.

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3.8 Water

mê (A.MEŠ)

Water was in many ways essential to Mesopotamian architecture. It was necessary to make bricks and keep them soft[208], in the rivers to carry wood and stone, mixed with limestone to make plaster, as rain it made the wood, straw and reeds grow. Dūr-Šarrukīn was not the most convenient construction site as it was not well provided with water, which may be the reason why Sīn-aḫḫē-erība chose to relocate to Nīnawā. Bad water infrastructures also made cities vulnerable from a military point of view. A letter from an official to Šarru-ukīn reports that Marduk-Šarrāni is conspiring with Marduk-apla-iddina informing him that there is no water in Dūr-Šarruku so the city could be taken "in a matter of days" (*ammar ūmēka taṣabbassu*).[209]

208 For keeping bricks soft with water see SAA 15, 129.

209 SAA 15, 189.

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4 STRUCTURE

Walls, roofs and floors delimit three-dimensional space. More specific structural elements independent from the buildings themselves such as terraces, towers, drains and tombs, make the buildings viable.

4.1 Walls

Walls are a major marker of the transition from nomadic to settled lifestyle. They would have been a salient feature of the first Mesopotamian cities, dominating the urban landscape on both the horizontal and vertical axes. When buildings collapsed, wall foundations were also the only features likely to survive. Naturally, walls became fundamental to the Mesopotamian concept of city. A testimony to their symbolic significance is that walls were a favoured location for the placement of building inscriptions: they served as a depository of history. One needs only remember the opening lines of the Gilgameš Epic (standard version). The narrator first recounts how Gilgameš returned from his travels and set down his labours on a stele. Then he describes the walls (*dūru*) of "Uruk-the-Sheepfold"[1], starting with their foundation by the Seven Sages.[2] Finally, he invites his audience to find the tablet-box of cedar and read out the lapis lazuli tablet that is inside recording the difficulties experienced by Gilgameš. This lapis lazuli tablet appears to be the stele mentioned at the beginning. The audience understands that the lapis lazuli stele narrating the exploits of Gilgameš was buried in the foundation walls of the city, to be found and read by future generations.

4.1.1 Wall types

dūru (BAD_3), *šalḫû* (BAD_3.ŠUL.ḪI), *kirḫu*, *igāru* (E_2.GAR_8), *kisirtu*[3], *pitiqtu*

Walls are typically described as made of bricks and/or stones. Stone was usually reserved for the lower courses, platforms, quays and revetments. Bricks (sun-dried and kiln-fired) were the main medium. The concept of *tikpu* (brick layers)[4] was specific to walls. For example, Šarru-ukīn mentions building the walls of his palace 180 brick layers high[5], which suggests a height of some 18 metres since, according to Loud, the standard dimensions of mud bricks at Dūr-Šarrukīn was 40 × 40 × 10 cm.[6] Loud remarks that "since excavation has proved the truth of his (Šarru-ukīn's) horizontal dimension, there is little reason to doubt his statement of the vertical (…)".[7]

Because they partition space on different levels, walls can have a variety of architectural meanings. Whilst this multiplicity of meanings is not explicit in English where the generic term "wall" prevails almost exclusively, it is very much emphasised in the Akkadian terminology. The Akkadian language distinguishes between at least: a) the free-standing (inner) fortification wall, *dūru* (BAD_3), associated with the outer protective/retaining wall, *šalḫû* (BAD_3.ŠUL.ḪI; Bab. *šulḫû*); and b) the basic wall used to define both the external and internal structure of buildings, *igāru* (E_2.GAR_8).[8] *dūru, šalḫû* and *igāru* are the terms most commonly used to refer to walls in the royal inscriptions and state archives.

dūru generally designated the fortification walls of cities but could also refer to walls of buildings if these were imposing.[9] Amar-ili, an official probably working in Arbēla, informs Šarru-ukīn that he and others had cleared away the wall (*dūru*) of the palace which had fallen in and were starting to dig the foundations when the granary between the storehouse of the superintendent and the city wall (*dūru*) fell down.[10] The *dūru* could be surrounded by a *šalḫu.* As pointed out by Fuchs who quotes Reade, the *šalḫu* is probably not to be understood as a secondary ringwall (no such wall was recovered at Dūr-Šarrukīn) but rather as a fortified terrace which ran along the front of the main fortification wall.[11] A metaphor describing the fortifications of the "peo-

1 In addition to conveying the idea of the king as shepherd of his people, the imagery of Uruk as sheepfold hints at what would have been one of the earliest functions of walls and barriers as sedentary life took off, namely keeping animals enclosed.
2 ▸ **2.2.1.a** sub *uššu* vs. *temennu*.
3 See also ▸ **5.2.1.a**.
4 ▸ **1.4.2.b**.
5 Šarru-ukīn, Fuchs 1994, Si 34–39.
6 Loud 1936b: 13.
7 Loud 1936b: 20.
8 For comparison, parallels may be drawn with Latin, which also employs a rich terminology to refer to walls. The concept of "city wall" is expressed most commonly by *dūru* in Akkadian and "moenia" (< "munire", to protect) in Latin, suggesting the two terms have a very similar function. It is tempting to imagine that Akkadian *šalḫû* (equated in Malku I with *mandû*, "picket, pole") could be closer in meaning to Latin "vallum" (< "vallus", stake) which designated palisades, since both terms are associated with wooden posts. As for the Akkadian *igāru*, it encompasses both the meanings of Latin "murus" (basic free standing wall) and Latin "paries" (internal wall/wall face).
9 See ▸ **4.1.1.b** for the use of *dūru* to refer to important walls in general (not necessarily city walls).
10 SAA 1, 137.
11 See Fuchs 1994: 296, fn. 96 and Reade 1978.

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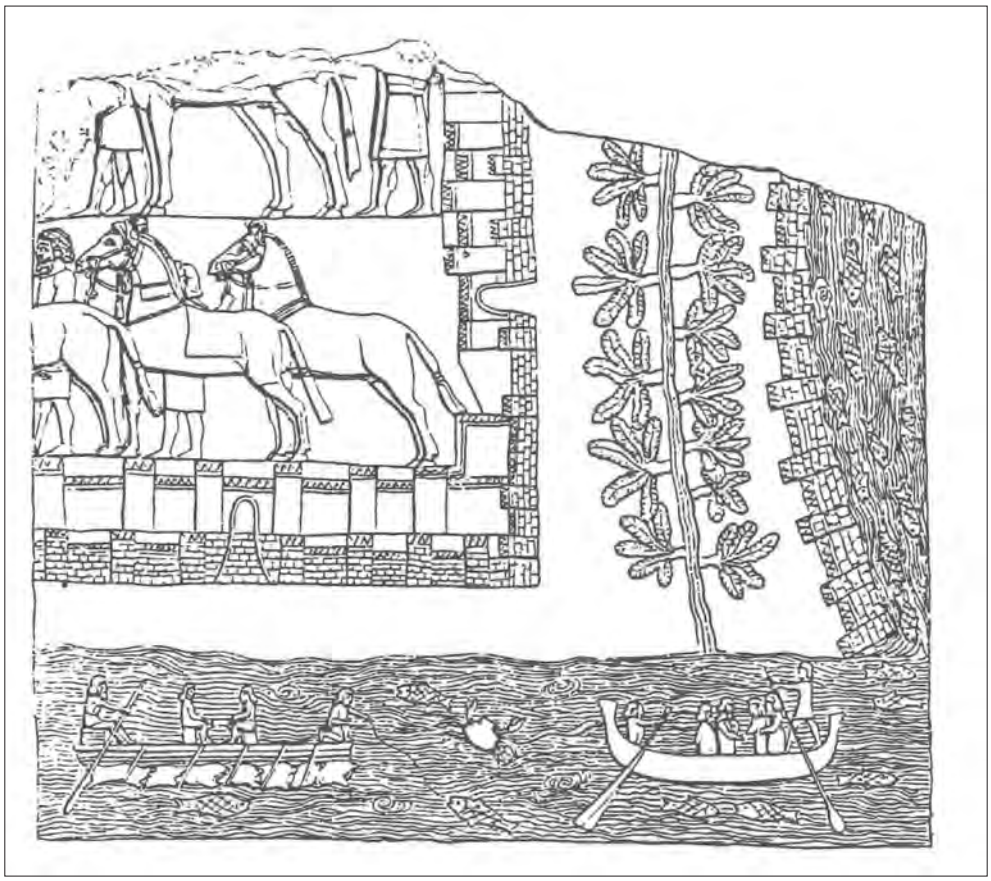

Fig. 8: Outer and inner city walls of Nīnawā(?). Relief from Room XXII of Sîn-aḫḫē-erība's palace (Frahm 1997: 99).

ple in the sea" from Aššur-aḫu-iddina's inscriptions suggests that *dūru* and *šalḫu* were part of the same "body" or structure: their inner fortification walls are the sea, their outer fortification walls are the waves (*dūrānīšunu tâmtimma edû šalḫûšun*).[12]

In Šarru-ukīn's Dūr-Šarrukīn inscriptions, the *šalḫu* appears to be listed as a pendant to the *dūru.* According to inscriptions visible on bull colossi, the *dūru* is called "Aššur is the one who gives length to the reign of the king who built it (the city), and the protector of his army (*ummānu*)", whilst the outer wall (*šalḫû*) is called "Ninurta is the one who makes firm the foundation (*temennu*) of his city (*ālu*) for a duration till far off days".[13] Inscriptions which would have been less visible because they were on a foundation cylinder provide slightly different versions of these names: the *dūru* is called "Aššur is the one who gives length to the reign of the king who created it (the city) and the protector of his offspring (*per'u*)", whilst the *šalḫu* is called "Ninurta is the one who makes firm the foundation (*temennu*) of the lower town (*aduššu*)[14] for a duration till far off days".[15] Based on the hierarchic parallelism with Aššur and

12 RINAP 4, 1, iv 83 – iv 85.

13 Šarru-ukīn, Fuchs 1994, Stier 90–92.

14 For *aduššu/adaššu* meaning "lower town" in the Māri texts see Dossin 1972. Although *aduššu* is equated with *dūru* in the lexical list Malku I, 239, the meaning "lower/outer wall", also proposed by Dossin, ist not at all clear from the Māri letters he cites. It emerges from the Māri letters that the pendent to *aduššu* is *kirḫu*. Here again, whilst the meaning "inner town/citadell" proposed by Dossin seems indubitable, the meaning "inner/upper wall", also proposed by Dossin, is difficult to substantiate based on the Māri letters alone. Note that a fortification plan found at Māri clearly marks the citadel as *kirḫu* (cf. Charpin 1993: 194–195). Like *aduššu*, *kirḫu* is equated with *dūru* in Malku I, 236. Of course, it is to be expected that, through synecdoche, both *aduššu* and *kirḫu* could have been used to denote the walls of the areas they designated, but this meaning does not transpire from the available texts. For the Hurrian origins of both terms see Haas/Wegner 1995. *kirḫu* is attested in the annals of Šarru-ukīn II (cf. Šarru-ukīn II, Fuchs 1994, Annalen, 333–335). Marduk-apla-iddina is said to have strengthened the *kirḫu* of Dur-Yākin (*udannina kerḫīšu*) by digging a ditch (100 metres wide and 9 metres deep) sixty metres off from the city's "great fortification wall" (*dūrīšu rabî*). Here the *kirḫu* appears to designate the city's inner sanctum, i.e. the citadel and citadel wall together.

15 Šarru-ukīn, Fuchs 1994, Zyl. 71.

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Fig. 9: Left: bronze model of a city wall of the type depicted on Assyrian reliefs, Urartian, late 8th century (H. 28 cm; W. 36 cm), ME 91177 + ME 91250 (© Trustees of the British Museum); right: a Mede presenting a model of his city to king Šarru-ukīn as sign of his submission. Detail from wall slab, room 10, palace of Dur-Šarrukīn, AO 19887 (© Musée du Louvre).

Ninurta it is made clear in both versions of the inscription that the *šalḫu* was subordinate to the *dūru.* If the role of the *šalḫu* was to make firm the lower wall (in effect, the *dūru*), then it must have had a protective or retaining function.

A relief from the South-West palace of Nīnawā dating from the reign of Aššur-bāni-apli depicts the city wall of Nīnawā as a structure on two levels: the upper interior level appears to be made entirely of bricks presumably with a revetment, whilst the lower external level along the river is of stone **[FIG. 8]**. Frahm argues that the internal level could be the *dūru* whilst the external level would be the *šalḫû*.[16] In any case it is clear from the illustration that, based at least on the materials used, a distinction was made between different parts of the same fortification structure. If the *šalḫu* is indeed a lower retaining wall or fortified terrace as is maintained here, then this depiction from Nīnawā could very well represent a *šalḫu* made out of stones, which would have protected it from the rising waters along the riverbank.[17]

Since they protected fortification walls, *šalḫû*'s would have played an important role in the defence of cities. In any case, their construction was of interest to the king. Šamaš-bēlu-uṣur, governor of ad-Dair, informs Šarru-ukīn that he is building the *šalḫû* of ad-Dair.[18] He has demolished the southern and eastern directions and bricked them up again, making each one fifty layers high, and although he has not yet finished that work he is now bricking the northern and western directions; Balassu a prefect active on the Elamite border is aware of the matter. The circumference of fortification walls was a matter of importance, which is also clear from the royal inscriptions (e.g. Šarru-ukīn's wall of 16280 cubits). Nasḫir-Bēl informs Šarru-ukīn that the circumference of the new fort he has established is [...] cubits **SAA 5, 15, r. 7**.

Moving away from fortification walls, the *igāru* pertained more to the private sphere of the home (be it the home of a human or a god). A letter from Amar-ili informs Šarru-ukīn that the wall (*igāru*) behind (the image) of Ištar (of Arbēla?) caved in by itself.[19] A letter from the official Marduk-apla-iddina to Šarru-ukīn testifies to the sacredness of temple walls (*igāru*): the king complained to the officer that the latter's men were unable to protect the wall of a temple which was then covered with arrows during an attack, but the officer refutes the alleged report asserting that no arrow hit the wall of the temple since it was appropriately guarded by fear of the gods.[20]

4.1.1.a Walls and cities

Walls are an essential aspect of cities. Cities could be named after their fortifications. Examples of this are Dūr-Katlimmu and Dūr-Šarrukīn. Walls and their constitutive gates are typically used as symbols of cities. Assyrian reliefs reveal that rulers of conquered cities would sometimes present to the Assyrian king models of their cities representing the walls and gates as symbol of their submission **[FIG. 9].**

16 Frahm 1997: 98–99.
17 It would make sense to designate a wall exposed to water as *šalḫû* should this term be a verbal adjective meaning "damp/wet" from the verb *š/salāḫum*, "to moisten". This possibility remains highly speculative, however.
18 SAA 15, 113.
19 SAA 1, 138.
20 SAA 17, 158.

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When walls and gates get named their symbolic nature becomes apparent. Šarru-ukīn names the gates and fortification walls of Dūr-Šarrukīn after the properties of deities. The gates are named after the pairs Šamaš and Adad, Enlil and Mulissu, Anu and Ištar, Ea and Bēlet-ili, whilst the walls are named after the head of the Assyrian pantheon Aššur and his son Ninurta. This suggests that the walls were considered the most important feature.[21] It is clear from all variants of the walls' names (as mentioned above, the names vary slightly between sources) that the function of these walls was to ensure the longevity of the king, his city and descendants.

Sîn-aḫḫē-erība names the walls and gates of his city in the same way as Šarru-ukīn. However, the walls are not named after deities. The inner wall is "the wall whose awe-inspiring radiance overwhelms the enemy" (BAD_3.NIGAL.BI.LU_2.KUR.RA.$ŠU_2$.$ŠU_2$) and the outer wall "the wall which wards off evil" (BAD_3.NIG_2.$ERIM_2$.ḪU.LUḪ.HA).[22] This suggests the walls were perceived as having apotropaic properties. Salmānu-ašarēd III's inscriptions could have served as inspiration to Sîn-aḫḫē-erība. Salmānu-ašarēd extensively rebuilt the walls and gates of Aššur. An inscription from a statue depicting the wall's protective deity Kidudu, which was found near the ruins of the Tabīra Gate, gives as epithets for the inner wall "Whose radiance covers the land" (*ša melammūšu māta katmu*) and for the outer wall "Who shakes the regions" (*munarriṭi kibrāte*); the Tabīra Gate is also named, "Strong wall, entrance of all the lands" (*dūru danni nērab kal mātāti*).[23] The walls are extoled by their names. The gate is made subordinate to the walls. Here the imagery focuses on the impressive and intimidating function of walls more than on their protective function. It appears that the protectiveness of the inner-wall was guaranteed by magic since, according to the text, it was itself protected by Kidudu whose statue was integrated into the inner-wall and renovated at the same time.

Also to be mentioned here for comparative purposes is the naming of gates on courtyards (*kisallu*). One notable example is to be found in Sîn-aḫḫē-erība's inscriptions on a prism recording the renovation of the Ešarra temple in Aššur: Sîn-aḫḫē-erība names the gates and the courtyard of the *bīt šaḫūru*. The names of these temple gates reflect cosmological principles, more so than the names of the city gates and walls of Nīnawā.[24]

A fortification wall (*dūru*) that deserves special attention is the fortification wall of Dūr-Šarrukīn. This wall is presented as an important feature of Šarru-ukīn's new city. Šarru-ukīn describes it in great detail. The length of the wall, which can be verified archaeologically, is 16280[25] cubits, a value which Šarru-ukīn gives as "the spelling of my name" (*nibīt šumīya*).[26] This suggests the number 16280 encrypts the concepts and/or terms *Šarru-ukīn*/*Šarru-kēn*(*u*), LUGAL.GIN/LUGAL.GI.NA.[27] Different interpretations of this riddle have been attempted, but to this date none has been accepted on consensus as satisfactory.[28]

4.1.1.b Walls and buildings

Walls of temples and palaces are usually designated by the term *igāru* (E_2.GAR_8) but there are instances when *dūru* (BAD_3) is used instead. For example, on the one hand Aššur-nāṣir-apli II depicts his conquests on the walls (E_2.GAR_8.MEŠ) of his palace[29], Sîn-aḫḫē-erība opens a new door in the walls (E_2.GAR_8.MEŠ) of Aššur's temple Eḫursagkurkurra[30]. On the other hand, Adad-nērārī I, in the Middle Assyrian period, repairs the drainage opening (*bību*) of the wall (BAD_3) of Aššur's temple.[31] Also to be pointed out is that Šarru-ukīn makes the height of the palace walls (BAD_3.MEŠ) of Dūr-Šarrukīn 10 cubits thick, bringing them to a height of 180 bricklayers, although this could be referring to the enclosure walls of the palace.[32]

The term *dūru* was used to designate strong, thick walls. *Igāru* typically referred to more refined walls: it could designate, for example, the wall of a palace on which conquests were depicted or the sacred wall of a temple into which a new door was opened. Note that fortification walls of cities are always designated by the term *dūru,* never by *igāru*.[33] *dūru* could also be used metaphorically to reference the king's strength. In a letter seeking the favour of Šarru-ukīn, the official Nabû-zēr-ketti-lēšir describes the king as the "fortification wall of the destitute" (*dūr makî*).[34]

The term *kisirtu*, which usually designates plastering[35], should be mentioned here. It is employed by

21 Naming these walls after the heads of the Assyrian pantheon may have been a statement of religious authority, usurping Babylonian traditions. Note that the inner and outer walls of Babylon ("Imgur-Enlil" and "Nemed-Enlil", respectively) were named after the head of the Sumerian pantheon, Enlil.

22 Sîn-aḫḫē-erība, RINAP 3/1, 15, vii 20 – vii 22 + vii 24′.

23 Salmānu-ašarēd III, RIMA 3, A.0.102.25.

24 ▸ **5.2.2.a**.

25 The number is written: $ŠAR_2$ $ŠAR_2$ $ŠAR_2$ $ŠAR_2$ $GEŠ_2$+U $GEŠ_2$+U $GEŠ_2$+U $GEŠ_2$+U 1 UŠ 3 *qa-ni* (one version has "1 ½ NINDA" instead) 2 $KUŠ_3$.

26 Šarru-ukīn, Fuchs 1994, Zyl. 65 + Bro. 47–49.

27 See Frahm 2005 for discussion of possible readings of Šarru-ukīn's cuneiform name(s).

28 For literature on this topic see Fuchs 1993: 294, fn. 88 and Frahm 2005. Martin Worthington is soon to propose a new solution (personal communication).

29 Aššur-nāṣir-apli II, RIMA 2, A.0.101.30, 30–31.

30 Sîn-aḫḫē-erība, RINAP 3/2, 166, 15–17.

31 Adad-nērārī I, RIMA 1, A.0.76.42.

32 Šarru-ukīn, Fuchs 1994, Silber, 34–39.

33 Cf. CAD: *igāru.*

34 SAA 16, 32, r. 15.

35 See for example Salmānu-ašarēd III, RIMA 3, A.0.102.102

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Adad-nērārī I to designate the facing used to protect the base of the fortification walls of Aššur against the water of the Tigris.[36] This "4.5 brick thick"[37] facing, constituted of bricks, limestone and an asphalt mortar, which de facto could also be described as a side-wall, appears to have equally designated the fortification walls as *pars pro toto.*[38] Adad-nērārī I explains that a wadi had broken through the *kisirtu*/ fortification wall warranting its renovation.[39]

Finally, a term used by Aššur-bāni-apli to refer to brickwork, and indirectly to brick walls, is *pitiqtu*. Aššur-bāni-apli makes the structure of the *bīt redûti* 50 layers of bricks high.[40]

4.1.2 Wall components

asurrû[41]*, kisû*

As demonstrated by Andrew George, the primary meaning of *asurrû* (from Sumerian a-sur-ra, "water discharger") is "sewer".[42] However, it evolved semantically to designate the lower damp course of walls and more generally wall footings. In the Assyrian inscriptions it typically means "base course" or "wall footing". Šarru-ukīn depicts the lands conquered by his hands on great limestone slabs which he then uses to surround the base course (*asurrû*) of his palace in order to make it a wonder.[43] As he renovated the city wall of Nīnawā built by Sîn-aḫḫē-erība, Aššur-bāni-apli cleared away the rubble (*miqittu*) to reach what remained of the wall, its lower courses (*asurrû*).[44] The *asurrû* was perceived as serving decorative and/or functional purposes. It is used interchangeably with *kisû* in the inscriptions of Sîn-aḫḫē-erība. For example, text K.1680, known as the Bellino cylinder, dated in the *līmu* of Nabû-li'u (702 BCE) reads **RINAP 3/1, 3, 52:**

> *labāriš ūmē ina mīl kiššati temmenšu lā enēše askuppāt pīli rabâti asurrūšu ušasḫira udannin šupukšu*
>
> So that in far off days its foundation would not be weakened by the high water, I surrounded its[45] lower course with great slabs of limestone, I strengthened its structure.

A later text, BM 103000, dated in the *līmu* of Ilu-ittia (694 BCE), reads:

> *labāriš ūmē ina mīl kišsati temmen tamlî lā enēše pīlī rabâti kisūšu ušasḫira udannin šupukšu*
>
> So that in far off days the foundation of the terrace would not be weakened by the high water, with great limestone blocks I surrounded its[46] plinth course, I strengthened its structure.[47]

kisû designates plinth courses and, by extension, retaining walls found on the exterior of buildings.[48] These plinth courses could have a protective as well as a decorative function. Sîn-aḫḫē-erība has a retaining wall (*kisû*) built against the fortification wall (*dūru*) of Nīnawā.[49] Note this retaining wall may also have potentially qualified as *salḫû* wall (see previous paragraphs). The only other Assyrian king who refers to what is probably also to be understood as a *kisû* (although he spells it *kišû*[50]) is Tukultī-apil-Ešarra III: he fashions statues of *apsû* creatures to guard the great gods and sets them around the retaining walls of his palaces to endow the palaces with fearsomeness.[51] The term *kisû* is more prevalent in the inscriptions of Neo-Babylonian kings.[52]

A foundation document commemorating the building of Sîn-aḫḫē-erība's *akītu* temple suggests Sîn-aḫḫē-erība was the first ruler to consciously use limestone slabs to cover and reinforce brick structures. Sîn-aḫḫē-erība prides himself to be "the one who reinforces (*mušaršid*) the work of the brick god — from the work of life (*šipir balṭūti*) to the tomb, emblem of death (*kimmaḫu simat mitūtu*) — with limestone from the mountains", which (according to him) none of the kings before him had done.[53] We know from archaeological evidence, however, that stone was already used at Tall Birāk in the late Chalcolithic period to buttress the external mud brick walls of the Eye Temple.[54]

nēbeḫu, pašqu, sellu, mat?/kur?-gi-qu?/gu$_8$*?*[55]

These terms are often found together.

36 See Bagg 2000: 31–32 and Pedde/Lundström 2008: 153–154.
37 Adad-nērārī I, RIMA 1, A.0.76.9.
38 Bagg 2000: 31.
39 Adad-Nērārī I, RIMA 1, A.0.76.11.
40 Aššur-bāni-apli, RINAP 5, 9, 42–43.
41 For *asurrû* in relation to the foundation structure see ▸ **2.2.1.b**.
42 For a discussion of *asurrû* and its semantic evolution in the broader Mesopotamian context see George 2015.
43 Šarru-ukīn, Fuchs 1994, Stier, 77–79.
44 Aššur-bāni-apli, RINAP 5, 4, viii 64.
45 "Its" presumably refers to the terrace.
46 Here too "its" appears to refer to the terrace.
47 Sîn-aḫḫē-erība, RINAP 3/1, 17, vi 7– vi 10.
48 For archaeological attestations of retaining walls interpreted as *kisû* see Sauvage 1998: 56–57.
49 Sîn-aḫḫē-erība, RINAP 3/2, 136, i 4′– i 5′.
50 See Tadmor (1994: 174, fn. 31′) for arguments in favour of considering *kišû* as alloform of *kisû*.
51 Tukultī-apil-Ešarra III, RINAP 1, 47, 31′.
52 See for example Castel 1990: 174–175; Da Riva 2013: 134.
53 Sîn-aḫḫē-erība, RINAP 3/2, 168, 17–20.
54 See Moorey 1994: 341.
55 CAD has *matgiqu** but *kurgiku** will be preferred here, in line with Dalley (2017). Dalley (2017: 128) suggests the reconstruction (*u*)*kur*$_5$-(*i*)*gi-ku*$_3$, pointing out that SIG$_7$ also has the reading UKUR$_5$ which would speak for a phonetic word *kurgiku* or *kurgiqu* with a pseudologographic spelling. Dalley (2017: 129) suggests that

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Sîn-aḫḫē-erība makes appropriate the vaults (*sellu*), friezes (*nēbeḫu*) and ledges (*pašqu*) of his palace with bricks glazed the colour of obsidian and lapis lazuli.[56] Similarly, Aššur-aḫu-iddina surrounds his palace with friezes (*nēbeḫu*) and ledges (*pašqu*) in bricks glazed the colour of obsidian and lapis lazuli, like a wreath. He then besets all the gates with a vault (*sellu*) and an archivolt (*kurgiku**) **RINAP 4, 1, vi 25**. As for Aššur-bāni-apli, after roofing the temple of Nabû, he makes appropriate all of its ledges (*ussima gimir pašqīšu*).[57]

nēbeḫu, identical to *nēbeḫu* "belt" is clearly the decorative frieze, typically made of colourful glazed bricks.

pašqu, occasionally made of colourful glazed bricks but also attested in purely technical non decorative contexts[58], is most likely the (corbelled) cornice/ledge. It is often translated as "coping" but this interpretation should be revised since, strictly speaking, the term coping only applies to the capping of walls that are non-bearing and freestanding.[59] *pašqu* is typically associated with the friezes of roofed buildings. The first meaning of *pašqu* is "narrow", which would justify the choice of this term to signify a ledge.

Aššur-aḫu-iddina compares *sellu* and *kurgiku** to a rainbow **RINAP 4, 1, vi 25 – vi 26** which suggests these features must have been arched in some way. *Sellu* which is identical to *sellu* "basket" is probably the basket-arched vault. *kurgiku**, if a variant spelling of SIG_7.IGI.KU_3 as suggested by the CAD[60], could conceivably mean "archivolt", considering SIG_7.IGI (*šūr īni*) means "eyebrows"[61], a typically arched feature of the face. The *kurgiku** may then have been perceived as the "eyebrow" of an entrance. However, should no distinction have been made between the very similar features of vault and archivolt, it is possible that *sellu* would have designated both these features. In this case, the meaning of *kurgiku** would have to be sought elsewhere. Keeping in mind the potential connection of *kurgiku** with the concept of "eyebrow" one would like to imagine that the term may have applied to the arched glazed-brick panels which are known to have surmounted the entrances of Assyrian palaces.

The bricks for one such panel were recovered from Salmānu-ašarēd III's Review Palace in Kalḫu and the panel was reconstructed by Reade.[62] Reade notes that such panels must have been invented during the reign of Aššur-nāṣir-apli II for his North-West palace in Kalḫu, although none have been preserved from that time so far.[63] He points to Austen Layard's remark regarding the North-West palace that "between the bulls and lions, forming the entrances in different parts of the palace, were invariably found a large collection of baked bricks elaborately painted, with figures and animals, and flowers, and with cuneiform characters". He gives as further evidence a passage in Aššur-nāṣir-apli II's inscriptions where the king states he set blue-glazed bricks above entrances.

samītu, *gabadibbû*, *naburru*

These three terms are similar in meaning. Nuances may be distinguished however.

samītu is the battlemented parapet. Unlike *gabadibbû* and *naburru,* it is never used in the formula "from the foundations to the battlements/crenellations (*gabadibbû*/*naburru*)" suggesting it was not perceived as the highest point of a wall: parapets are indeed typically topped by battlements and crenellations. Whilst *gabadibbû* and *naburru* are usually mentioned en passant as aspects of a building which are more significant as symbolic imagery than actual architectural structures, *samītu* receives some attention as an architectural feature in its own right. When describing the ruins of Eanna, Šarru-ukīn focuses on the wall that collapsed, the (brick) bindings that disintegrated, the parapet that became ruined (*samīssu ussarriḫu*) and the collapsed foundations.[64] On a nail inscription, Šarru-ukīn is also said to have made friezes (*nēbeḫu*), parapets (*samītu*) and nails (*sikkatu*) for the towers/engaged-columns (*nāmaru*) of Eḫursaggalkurkurra.[65] As for Sîn-aḫḫē-erība, he makes very appropriate the friezes (*nēbeḫu*) of Ešarra's parapet (*samītu*) with glazed bricks and stones.[66] The significance of *samītu* as an elaborate architectural feature is moreover made clear in the literature. Again we turn to the Epic of Gilgameš where the narrator calls upon the listener to look at the fortification wall of Uruk, which is made like a strand of wool, and see its parapet (*samētu*), which no one could reproduce.[67]

gabadibbû and *naburru* are very much synonyms, typically used in the plural to mean crenellations/battlements. They are used interchangeably in the expression *ultu uššīšu adi gabadibbîšu*/*naburrīšu*. Only *naburru* is used in a non-formulaic context, once. Sîn-aḫḫē-erība has *lamassatu*'s of lustrous

the use of the sign SIG_7 could be an oblique reference to the colour *arqu* "green-yellow". This is not impossible given that blue/green/yellow were popular colours for decoration (▸ **6.2.1**): SIG_7 could be hinting at what would have been the predominantly blue/green/yellow aspect of the friezes decorating the archivolts.

56 Sîn-aḫḫē-erība, RINAP 3/1, 17, 42–44.

57 Aššur-bāni-apli, RINAP 5, 7, x 64′.

58 CAD: *pašqu.*

59 For definition of a coping see Aurenche 1977: 49, sub 'chaperon'.

60 CAD: *sillu* A.

61 CAD: *šu'ru.*

62 Reade 1963.

63 Reade 1963: 47.

64 Šarru-ukīn, RIMB, B.6.22.3, 20–23.

65 KAH 1, nos. 40–42 + 71.

66 Sîn-aḫḫē-erība, RINAP 3/2, 195.

67 The Standard Babylonian Epic of Gilgameš I, 13–14.

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Fig. 10: Sketch by Layard of entrance to Aššur-aḫu-iddina's South-West Palace (Barnett/Falkner 1962: 160, Plate 108).

copper support slabs of *ašnan* stone and he sets them between *apsasītu*'s, making them like battlements (*naburriš ušēmēma*).[68] The arrangement suggested by this description is the following: pairs of copper *lamassatu* supporting *ašnan* slabs forming an entrance, flanked on either side by taller *apsasītu*'s. This arrangement would be repeated at least once. In other words, the resulting arrangement would present the alternation: one tall *apsasītu* – pair of smaller *lamassatu* supporting slab – tall *apsasītu* - pair of smaller *lamassatu* supporting slab – tall *apsasītu*. The outline of the alternating heights would create a crenellated impression. Alternating heights for colossi at entrances of palaces are evidenced in a drawing by Layard of an entrance to Aššur-aḫu-iddina's Southwest Palace at Kalḫu **[FIG. 10].**

Layard's excavation reports from Nīnawā inform us that "winged sphinxes/lions" were found in Room XXXIII of Sîn-aḫḫē-erība's palace; no illustrations of this room have been published. The female *apsasītu*'s and *lamassatu*'s most probably had the appearance of female sphinxes of some sort, since such creatures, evidenced in other forms of Assyrian iconography, most notably ivories, would be convincing female counterparts to the male colossi.[69] It is therefore very probable that Sîn-aḫḫē-erība's inscription should be referring to the "winged sphinxes/lions" from room XXXIII. An inscription found "behind the winged lions" from "Door *p*" in room XXXIII refers to them as *apsasītu*'s and describes them as made of *ašnan* stone.[70] It could then be that these tall *apsasītu*'s were made of the same stone as the lintel slabs supported by the copper *lamassu*'s they may once have flanked and which would have by now disappeared.

nāmaru

nāmaru designates towers or engaged-columns typical of temple or palace architecture. For example, Tukultī-apil-Ešarra I raises high the walls (*igāru*) and towers (*nāmaru*) of his palace.[71]

▸ **4.5.**

4.1.3 Materials for walls

4.1.3.a Bricks, stone and wood

Assyrian temples and palaces were traditionally built of bricks, often with stone foundations and revetments.[72] Textual evidence suggests that the structure of palaces could also be an arrangement of stone and wood. As he discusses Sîn-aḫḫē-erība's

68 Sîn-aḫḫē-erība, RINAP 3/1, 34, 81.

69 ▸ **6.2.3.a**.

70 See text in Russell 1991: 276.

71 Tukultī-apil-Ešarra I, RIMA 1, A.0.87.10, 65. For difference with *isītu* see ▸ **4.4**.

72 ▸ **2.2**.

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ēkal māšarti in Nīnawā, Geoffrey Turner expresses the hypothesis that the "palace (-hall) of limestone and cedar" (*ēkal pīli u erēni*) described by Sīn-aḫḫē-erība as "in Ḫatti style" may have qualified as such for being built entirely of stone and wood after the Anatolian and North Syrian practice of incorporating wood beams in a stone structure as a precaution against earthquake damage.[73] This interpretation happens to tie in very well with information provided by Aššur-aḫu-iddina in his inscriptions relating to the same building from the time when he had it enlarged. Aššur-aḫu-iddina states that he had the *ēkal māšarti* arsenal in Nīnawā skilfully built with "superimposed" (*šutēmudu*) limestone and cedar **RINAP 4, 2, v 32**.

Aššur-aḫu-iddina appears to have also used wood to reinforce brick structures, possibly a reinterpretation of the Anatolian/Syrian practice originally designed for stone architecture. He builds into the brick structure of Esagil *musukkannu*-wood, cedar and terebinth **RINAP 4, 105, v 16–22**:

> *mussukannu erēnu buṭni iṣṣū ellūti ana puttunni bīti markas igāri lā paṭāri simat Esagil lā mašê itti libitti arṣip*
>
> I built into the bricks *musukkannu*-wood, cedar and terebinth, pure woods, for the strengthening of the building, so that the wall's binding would not loosen up, so that the appearance of Esagil would not fall into oblivion

A letter from the reign of Aššur-aḫu-iddina moreover mentions a piece of wood that was "trampled between limestone layers" (*iṣṣū ša ina birte pūli nikabbasūni*) **SAA 16, 125, r. 2 – r. 3**, presumably to strengthen the structure. Archaeologically, this practice is attested in Babylonia.[74] Archaeological evidence is still missing for Assyria and the Neo-Assyrian period at large.

4.1.3.b Plaster and bitumen

Mannu-kī-Ninua informs Šarru-ukīn that the outer city wall (*dūru ša gidāni*) of Kār-Šarrukīn has been plastered from boats.[75] It is possible that an outer wall located so close to a surface of water would have qualified as *šalḫû* (see previous paragraphs). Plaster is also applied to Esagil as reported by Urdu-aḫḫēšu to Aššur-aḫu-iddina(?).[76] A report from Kutha informs Aššur-aḫu-iddina that the chief tailor has blocked the breach in the city wall with bitumen and sweet oil.[77]

4.2 Roofs and ceilings

Roof and ceiling are respectively the external and interior aspects of a building's covering. It is never specified whether the roofs are flat or pitched.

4.2.1 Roof/ceiling types

tarānu, ṣulūlu/ṣallulu; ermi anim; kippatu; ūru (UR_3)

The terms typically employed in the Assyrian royal inscriptions to mean covering/roof/ceiling are *tarānu* and *ṣulūlu*[78]. It appears the concept of *tarānu* was associated with protection since the term can also mean "divine aegis".[79] The concept *ṣulūlu* is likely to also have protective connotations in addition to conveying notions of shade: the noun *ṣulūlu* is derived from the factitive verb *ṣullulu* which is itself probably denominative from *ṣillu* meaning both "shade" and "divine protection".[80] The verb most commonly used to denote the action of roofing is *tarāṣu*, literally "to spread (the roof/beams)".

It appears *tarānu* is more often employed in a general or abstract sense than *ṣulūlu* which usually designates specifically the physical covering or canopy that brings shade. For example, Aššur-bāni-apli stretches out the covering of Esagil, thus making firm its roof (*ṣulūlšu atruṣma ukīn tarānšu*).[81] Here *ṣulūlu* is treated as an aspect of *tarānu*, which suggests again that *tarānu* is a more generic concept. In one occurrence *ṣulūlu* seems to mean "ceiling", that is, the roof as seen from below. Sīn-aḫḫē-erība makes "shine like the day" the *ṣulūl tarāni* (lit. "canopy of the roof", i.e. ceiling) in the corridors of his "Palace without a Rival" **RINAP 3/2, 43, 27–28**.

> *ṣulūl tarāni ša qereb barakkāni eṭûssun ušaḫlâ ūmiš ušnammir*
>
> The ceiling (lit. "canopy of the roof"), which is within the corridors whose darkness I brightened[82], I had make shine like the day.

An expression that typically means "ceiling", by derivation from its metaphoric meaning of "sky", is *ermi anim* (Ass. *ermi anu*), literally "the cover of Anu/the sky"; the term for ceiling is preceded by the deter-

73 Turner 1970: 77. See also references provided by Turner, namely Naumann 1955: 83–104, Lloyd 1963: 167–173. For more on timber framework in the Middle East see Aurenche 1977: 47, sub "chaînage".

74 It is attested as of the Ur III period in the form of reed matting; in the form of timber framework it is attested sporadically as of the Isin-Larsa/Old Babylonian period at Mari, Ur, Nippur, and with more prevalence, as a proper "innovation", in the Neo-Babylonian period, for temples, palaces and even private dwellings (see Sauvage 1998: 136, 150–151).

75 SAA 15, 94.

76 SAA 13, 163, r. 6 – r. 7.

77 SAA 18, 157.

78 Typically *ṣalūlu* in Assyrian dialect, but *ṣulūlu* in the Assyrian royal inscriptions.

79 Cf. CAD: *tarānu* 2.

80 The denominative nature of *ṣallulu* is suggested by the fact that it exists only in the D-Stem (cf. GAG §88 g).

81 Aššur-bāni-apli, RINAP 5, 6, i 31′– i 32′.

82 Latticed windows were used to brighten the corridor.

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minative for wood thus reading *ermi anim*. The association of ceiling with sky is, of course, not surprising. The English term "ceiling" is a very appropriate translation of *ermi anim* since it derives from the Latin *caelus,* "sky".

Aššur-bāni-apli covers in gold the ceiling (giš*ermi anu*) of Esagil.[83] The ceiling is made of sissoo wood, "an eternal wood" (*iṣṣu darû*), and "rivals the skies" (*šitnunu šamāmeš*). The sky is recurrently taken as referent for architectural beauty in the royal inscriptions.[84] For example, in one version of the aforementioned passage, the ceiling is compared to the sky just after Esagil is described as having been made as beautiful as the writing of heaven (*šiṭir šamê*). The sky was a source of powerful imagery because not only was it aesthetically appealing, but also fundamentally associated with notions of order/destiny and eternity. The eternal aspect of the sky is echoed in the choice of an "eternal wood". The association of giš*ermi anu* with *kippatu* indicates it could apply to spherical surfaces, which comes as no surprise for a term inspired by the sky.

kippatu (< *kapāpu,* "to curve") is mentioned once by Aššur-bāni-apli in relation to his roofing of Esagil, which is described in the previous section. He had "clothed" (*ušalbiš*) with 34 talents, 20 minas (±1.0402 tons) of red gold the *kippatu* of Esagil's giš*ermi anu*. The term *kippatu* is often employed to refer to circumferences but in this context it seems a surface is meant. The great quantity of gold used (over a ton) and the choice of the verb "to clothe" suggests an entire surface was covered in gold, not just a circumference. It may be that the ceiling in question was domed in which case *kippatu* could denote the cupola, i.e. the internal side of the dome.[85] To give an idea of proportions, one ton of gold was used to coat the 68 m circumference dome of the Al-Askari mosque in Samarra, Iraq.

ūru (UR_3) is employed by the Middle Assyrian king Aššur-rēša-iši I to refer to the top of the gate towers he renovated in the temple of Ištar in Nīnawā.[86] The towers were weakened by an earthquake so Aššur-rēša-iši restores the section of the towers sticking out of the building (from the parapet of the building to its top) by removing the uppermost fifteen layers of bricks and replacing them by fifty layers of bricks, thereby making the towers thirty-five layers of bricks higher than before.

It should be kept in mind that in Mesopotamia rooftops qualified as living space. The typical Mesopotamian rooftop was just like the standard Middle Eastern rooftop today — a flat elevated open-air surface accessible from inside the building. Safe from intrusions, warm during the day, fresh at night, it was (and still is!) the ideal place to dry and store provisions as well as to sleep on a hot summer night. As if to mark the significance of the lieu, rooftops were assigned a demon, *bēl ūri,* "the lord of the roof" also known as Antašubba. Like doors, windows and corners of rooms, roofs were ritually critical.

Occasionally the actions reported in our correspondence take place on rooftops. For example we learn from a diviner's letter to a Neo-Assyrian king that a haruspex was to be stationed on the rooftop (*ūru*) of Marduk's temple to watch out for more signs after an ominal bird was first sighted. The letter, in Babylonian script, demonstrates that extispicy rituals could be performed on rooftops and that this was considered a propitious location:

> [*ina*] *eli ūri ša bīt Marduk ša šarru bēlī iqbûni*
> [*ina*] *libbi ṭāb ana epāše elulu ṭāb u* UD.2.KAM
> *ana bērûti ṭābma ina pitti linnepiš*
>
> Regarding the rooftop of the temple of Marduk about which my lord enquired: it is good to perform (the ritual) there, the month of Elul is good, and the second day (of the month) is good for divination. Let it be performed accordingly.[87]

In the same spirit, a letter from Marduk-šākin-šumi to the king (Aššur-aḫu-iddina or Aššur-bāni-apli) suggests rooftops (*ūrāte*) were choice locations for rituals. It seems the same prayers and incantations to stars and planets were recited by daylight from the riverbank, and in the evening from the palace rooftop:

> *napḫar 21 ṭuppāni ina eli nāri ūmu annî ētapaš*
> *ina nubatti Urad Ea ina ūr ekalli eppaš*
>
> A total of 21 tablets I have performed today on the riverbank, this evening Urad-Ea will perform (them) on the palace rooftop.[88]

The thematic of rooftops is commonly encountered in the cultic literature of the time. For example, a commentary to the Assyrian cultic calendar *inbu bēl arḫi,* explains that the 18th day of *Šabāṭu* (XI) is when Qingu and his forty sons were cast off the roof and remarks that on that day oil and honey are poured into the gutters[89] (of the relevant temple) as a representation of the blood.[90] The mythological scene is re-enacted in the cultic space via symbolic simulations of the physical phenomena involved: pouring liquids into the gutters would evoke the fall from the roof. Also noteworthy is the "Righteous Sufferer's Prayer to Nabû", a literary text in the same vein as the Babylonian *ludlul bēl nēmeqi* found in the archives of a scribe, probably a certain Qurdi-Nergal, who lived in Ḫuzirīna during the Late Assyrian peri-

83 Aššur-bāni-apli, RINAP 5, 6, i 27 – i 28.
84 ▸ **6.2**.
85 Note *kippatu* is cognate with Hebrew כיפה, which originally means "dome".
86 Aššur-reša-iši I, RIMA 1, A.0.86.1, 10–11.
87 SAA 10, 143.
88 SAA 10, 240.
89 The term used here for what in all likelihood refers to gutters is $GIŠ.GA_2$.
90 SAA 3, 40.

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od. The protagonist, whose identity is not revealed in the extant lines, laments:

> *eli uttara ana maqāti ūri aqqarat napištī tutaranni*
>
> I repeatedly ascend to fall from the roof but my life is precious, it turns me back.[91]

The roof appears easily accessible. It offers a simple solution to a desperate man. Note that evidence from two Old Babylonian[92] letters suggests that the idea of throwing oneself from roofs was popular imagery, typically used to express distress: in two different instances individuals threaten to throw themselves from the roof (*ištu ūrim amaqqut,* "I shall throw myself from the roof!) if their pleas are not answered. Although the expression seems to be used in a figurative sense, indicating it was probably an idiom, the intention may well have been real, or at least the meaning literal! Given the limited technologies available in Ancient Mesopotamia, throwing oneself from the roof was no doubt one of the most efficient forms of suicide.

After collecting and comparing allusions to "roof jumping" from different Akkadian sources, Stol takes the interpretation of this imagery a bit further arguing that "to jump from the roof" could in some cases be an Akkadian idiom for "to commit suicide": he equates *miqitti ūri* with suicide, understanding the specificity of roof jumping as representative of the special kind of death that is suicide.[93] Now, if one assumes that the specific meaning of throwing oneself from the roof was originally literal, then the more general meaning of committing suicide would be a later development. It is possible that, rather than *symbolising* suicide, *miqitti ūri* should simply be denoting a common type of suicide. It cannot be excluded that suicide through roof jumping may have had a special connotation setting it apart from other forms of suicide, which could preclude interpreting the expression as a general reference to any form of suicide. Note roofs (*tarāni*) could also be synonymous with wellbeing. An Assyrian prescription for headaches instructs the healer as follows:

> *šamni ana qaqqadīšu tašappak ina bīti ša tarānam išû tušeššibšu šalāšat ūmū annâm teppuš*
>
> You will pour oil on his head, you will sit him in a house that has a roof: you will have to do this for three days.[94]

91 SAA 3, 12, r. 1.
92 See ARM 10, 33 and AbB 14, 149.
93 Stol 2007.
94 See Tablet I, Col. 2, l. 9 of series *enūma amēlu muḫḫušu išāta ukāl* published in Thompson 1907.

4.2.2 Roof/ceiling parts

The most popular woods for roofing were cedar and cypress, which were not only solid and long lasting but also cherished for their sweet scent. Like doors, roofs were preferred fragrant.[95] This is evidenced, for example, in one passage from Sîn-aḫḫē-erība's inscriptions where, for the roofing of his palace's *bīt hilāni*, the king chooses cedar and cypress beams from the Amana and Sirara mountains *ša erissun ṭābu* ("the fragrance of which is sweet") **RINAP 3/2, 43, 23.**

gušūru (GIŠ.UR$_3$), *adappu/dappu*, *timmu, ḫittu* (GIŠ.GAN.DU$_7$), *kulūlu, šipšatu*[96]*, napdû,* GIŠ.ŠU$_2$.A[97], *pisannu/bisannu*

gušūru is typically the beam used for roofing. On top of the *gušūru* are laid the *šipšatu*'s (joists) on to which are then applied the *napdû*'s (battens). The entire structure can then be mounted with the roof cover (*ṣūlulu*). The translation "joist" for *šipšatu* and "batten" for *napdû* is suggested by comparing three documents. In one inscription, the Old-Assyrian king Adad-nērārī I states that he removed the weakened *gušūru*'s, *šipšatu*'s and *napdû*'s from the dilapidated *bīt šahūru* of Ištar's temple in Aššur.[98] Grouping *gušūrī*, *šipšāte* and *napdê* together suggests they belong to the same structure, in all likelihood the truss. We know that *šipšatu* refers to timber, typically unprocessed.[99] Whilst the main apparent beams (*gušūru*) would have to be neatly finished, the joists, invisible to the public, could be left somewhat more raw, so it would make sense to refer to them as *šipšatu*. The meaning of *napdû* is less obvious. The term *napdû* appears in the context of drum making. Two documents from Hellenistic Uruk (TCL 6, 44 and 47) provide information about the making and appearance of the *lilissu*-drum, mentioning a *napdû*. In his discussion of these documents, Sam Mirelman identifies the *napdû* as the "bundle of existing fastening devices" upon which a linen rope is finally placed in order to tighten the hide on to the drum along its circumference.[100] This idea of *napdû* as an underlying structural fastening fits appropriately in the context of construction, especially roofing, since this is exactly how battens would appear under a roof cover.

timmu clearly designates columns or pillars, usually created from wood beams, they could also be of metal. Šarru-ukīn sets at the entrance of his *bīt appāti* four columns (*timmu*) of cedar 1 *nindanu* circumference each (about 6 metres[101]), matched in pairs,

95 ▸ **6.3.1**.
96 See also ▸ **3.3.1**.
97 See also ▸ **3.3.1** and **5.2.1.a**.
98 Adad-nērārī I, RIMA 1, A.0.76.15, 27–30.
99 ▸ **3.3.1**.
100 Mirelman 2010.
101 This is the average circumference of a *cedrus libani*,

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on top of eight copper lions also grouped in pairs; architraves (*dappī*) are laid across the columns to form the "crowns of their entrances" (*kulūl bābīšin*) **Fuchs (1994), Stier 74**, A similar arrangement was adopted by Sîn-aḫḫē-erība for his *bīt-ḫilāni*. On two separate occasions Sîn-aḫḫē-erība sets columns (*timmē*) of both cedar and bronze on top of copper lions and has them support crossbeams ((*a*)*dappī*) **RINAP 3/1, 1, 83; RINAP 3/1, 16, vi 74 – vi 81**.

adappu/*dappu* (probably a loanword from Sumerian dib, "crossbeam") designates wooden boards (of varying thickness), generally beams cut in rectangular cross-section. It appears similar in meaning to the GIŠ.ŠU$_2$.A encountered in the state archives[102]. The *adappu*'s are typically used as door and roof panels or as reinforcements in the brickwork, often functioning as lintels, in which case the term can also be translated as "crossbeam" or more specifically "architrave"[103]. The synonymous yet less specific translation "lintel" might however at times better reflect the meaning of *dappu* than the term "architrave" which could, due to its classical origins, bring to mind overly precise aesthetic functions. Sîn-aḫḫē-erība roofs the pedestal in the courtyard of his limestone palace with crossbeams clad in a silver KI.SAG alloy (*ina dappī erēni ša* KI.SAG *litbušu*).[104] Aššur-aḫu-iddina has two copper bison statues carry a lintel at the Gate of the Path of Enlil in Aššur's temple **RINAP 4, 60, 29 – 31**. Another term which may at times have designated crossbeams but appears to mean more specifically "architrave" or even "entablature" is *ḫittu* (GIŠ.GAN.DU$_7$); it is very close in meaning to *adappu* and used in similar ways. The Sumerian geš ḫe-du$_7$ is derived from the verb du$_7$ ("to be appropriate") and means "ornament". The meaning "architrave" appears clear in as much as the *ḫittu* are described as resting on columns. The translation "entablature", a complex ornate lintel between posts or columns, fits well with the apparent ornamental nature of the *ḫittu*. The texts suggest that palatial structures were associated with a specific type of *ḫittu*. Sîn-aḫḫē-erība describes the *ḫittu* as belonging specifically to "the chambers of my lordship's residence" (*kummē mušab bēlūtīya*) **RINAP 3/1, 17, vii 39 – vii 40** and "the palaces of my lordship" (*ekallāte bēlūtīya*) **RINAP 3/1, 16, vii 2 – vii 3**. For the towers at the Kalkal Gate of Ehursagkurkurra, Salmānu-ašarēd I sets up a bronze entranceway with large steps and installs therein what is probably to be understood as "entablatures of bosses" (*ḫittāni nipḫī*), divine emblems and a bronze door.[105] If *nipḫī* indeed belongs with *ḫittāni*, as is it understood here, then we may be dealing with a rare description of *ḫittāni.* It would moreover come as no surprise that the popular motif of bosses was used to decorate entablatures, should *nipḫī* indeed be used here in the sense of "bosses". Also designating entablatures in the context of entrances is *kulūlu,* which literally means "crown" and is often translated as "cornice". The translation "cornice" is too restrictive, however, since, in the context of entrances, the term "cornice" designates the uppermost part of an entablature yet the Akkadian texts are never that specific. *kulūlu* is used very broadly to designate the crowning part of an entrance. As seen previously in **Fuchs (1994), Stier**, the *dappu*'s alone could be described as constituting the *kulūlu* of entrances.

In summary, the terms *adappu*, *ḫittu* and *kulūlu* coincide in the objects they designate but diverge in their range of meaning and potential of abstractness. Whilst *adappu's* basic meaning is "crossbeam", the object it designated functionally acted as an architrave so that the term can come to designate entablatures. *ḫittu* designates architraves but often means "entablature" more generally. *kulūlu* essentially designates entablatures. All three terms have in common that they designate lintels broadly speaking.

The information connected to roofing yielded by the archives converges with that provided by the royal inscriptions. As is to be expected, wood appears as the main roofing material. Roof beams (GIŠ.UR$_3$.MEŠ/*gušūrū*) are the topic of many letters exchanged between Šarru-ukīn and his officials during the construction of Dūr-Šarrukīn[106]. It seems that the term GIŠ.UR$_3$ was used to designate the largest beams because these were typically used for roofing. A term which occasionally appears alongside GIŠ.UR$_3$ is GIŠ.ŠU$_2$.A[107], often translated as "door beam" to account for the other important usage of wood. It is conceivable that the GIŠ.UR$_3$.MEŠ beams would not be exclusively used for roofing but could also serve to make doors and strengthen walls, whilst the GIŠ.ŠU$_2$.A.MEŠ probably referred to smaller beams or planks used essentially for doors and furnishings. [108]

Gutters were an important part of roofs, which should also be mentioned here briefly. The term most commonly used was *pisannu*/*bisannu*. Dūri-Aššur, governor of Tušḫan, informs Tukultī-apil-Ešarra III that his men are plastering the roofs, installing the gutters (*bisannāte*) and paving the yards of a garrison on the Tigris.[109]

which suggests the full circumference of trunks was used.

102 See also ▸ **3.3.1** and **4.2.2**.

103 CAD gives "architrave" as the meaning of *ḫittu*, but as we shall see further down this is arguable.

104 Sîn-aḫḫē-erība, RINAP 3/1, 34, 84–85.

105 Salmānu-ašarēd I, RIMA 1, A.0.77.4, 23–26.

106 See for example SAA 1, 62 + 93 + 98; SAA 5, 34.

107 GIŠ.ŠU$_2$.A is sometimes equated with *šipšatu*, but this interpretation should be revised ▸ **3.3.1.**

108 For wood usages see ▸ **3.3.1**.

109 SAA 19, 60, r. 1 – r. 3.

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Fig. 11: Pebbled mosaic pavement with flight of steps still in place, Ziyaret Tepe (photograph courtesy of Timothy Matney).

Fig. 12: Brick pavement covered in plaster painted with stripes, Ziyaret Tepe (photograph courtesy of Timothy Matney).

4.2.3 Types of wood used for roofs and ceilings

The types of woods chosen were critical, from a technical point of view but also a symbolic one, it was therefore useful to specify such details in the correspondence. Urdu-aḫḫēšu reports that shrines of the Esagil have been roofed with cypress and *meḫru*-wood (*ina libbi šurmēni meḫri nuṣallil*).[110] Cedar was also commonly used "for roofing" (*ana šalluli*) as stated in the memorandum of matters to be discussed with the king (either Aššur-aḫu-iddina or Aššur-bāni-apli) **SAA 13, 166, o. 3 – o. 5**. Once the roof beams were set in place they would typically have been plastered. References to roof plastering are rare however. One reference is provided by Ṭab-ṣill-Ešarra who informs Šarru-ukīn that the roof (*ūru*) of the wood store in the palace of Aššur is to be plastered by the sons of the palace maids.[111]

4.3 Floors

There is practically no mention of floors as an architectural feature in Assyrian royal inscriptions. Archaeological evidence from Assyrian temples and palaces proves nevertheless that floors were treated as architectural features in their own right, since they were usually neatly paved, typically with limestone slabs and/or square (sun-dried or kiln-fired)

110 SAA 13, 164.

111 SAA 1, 77.

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brick tiles, some of which could be inscribed with royal names as property markers. Floors could also be elaborately paved with pebbles forming mosaics. Such floors were discovered in elite residences from sites on the northern frontier of the Neo-Assyrian empire such as Ziyaret Tepe, Til Barsip, Arslān Ṭāš, Tille Höyük **[FIG. 11]**.

Brick floors were occasionally plastered, and the plaster could be painted with decorative motifs, as was the case in a room at Ziyaret Tepe **FIG. 12]**.

The reason why the Assyrian royal inscriptions are so silent about floors is probably because floors were not a traditionally salient feature of Assyrian architecture, at least on the royal level, no doubt because floors would have been typically covered with luxurious tapestry itself intended as the focus of attention. Floors were not symbolically powerful enough to figure in building accounts designed to convey royal ideology. The decorative potential of floor surfaces was not however ignored. Odd floor surfaces which were not easily covered with tapestry such as doorways and passageways were typically paved with elaborate stone thresholds carved with inscriptions and motifs, sometimes skeuomorphic, imitating tapestry, which testifies to the importance of this artistic expression and its bearing on architecture as an inherent component of space.

The elaborate pebbled mosaic floors found at Ziyaret Tepe, Til Barsip, Arslān Ṭāš and Tille Höyük, are likely to have been inspired by foreign influence.[112] Pebbled mosaic floors would have been a less expensive and yet elegant alternative to the tapestries found in the great royal buildings of the Assyrian capitals — a convenient local solution to decorate what were probably the residences of Assyrians officials.

kigallu

Ground surfaces can be described when they apply to specific features. Sîn-aḫḫē-erība had built in the courtyard below his royal residence a platform (*kigallu*) of *ašnan*-stone, breccia and *sābu*-stone, which he then roofed with silver coated crossbeams of cedar resting on pillars of bronze, thereby forming a porch.[113] Sîn-aḫḫē-erība's description of the *kigallu* gives some indication as to the type of materials that were deemed appropriate for royal feet to tread on — all very fine stones. Aššur-aḫu-iddina too provides enlightening information. He remarks that his ancestors previously made the dais of Aššur's temple out of bricks covered with *zaḫalû*-silver whereas he has it cast in its entirety out of a 180 talents of *ešmarû*-silver instead.[114] This suggests that his ancestors may have attempted to create an illusion of solid metal, caring less about the underlying brick structure than the coating of *zaḫalû*-silver.

adru, *kaqqiri*

There is virtually no mention of floors as specific architectural features in the state archives. One letter to Aššur-aḫu-iddina regarding the sacred marriage of Nabû states that Nabû will set out from the threshing floor (*adru*) of the palace of Kalḫu into the garden where a sacrifice will be performed. Another letter, also to Aššur-aḫu-iddina, informs the king that a chariot damaged the rim of the table of Šamaš and the front side of the image because the ground (*kaqqiri*) where it was driving was too narrow.[115] That the table could have been damaged by a chariot seems to confirm the fact that it was stationed outside, as suggested by its depiction on the "Tablet of Šamaš" from the reign of Nabû-apla-iddina.

(NA$_4$.)*melû*

Although stairs are an architectural feature of primordial functional importance, they are rarely mentioned in our sources. As we have seen, Salmānu-ašarēd I provides the bronze entrance way of the Kalkal Gate towers of the Ehursagkurkurra in Aššur with large steps (*nēreb siparri melê rabûti*).[116] Whether the steps were of bronze or bronze coated is not clear. We know from the later inscriptions of the Neo-Babylonian king Nabû-kudurrī-uṣur II that he coated beams with gold as stairs for a temple.[117] It is also in the context of towers that the state archives mention stairs. Ṭāb-šar-Aššur, Šarru-ukīn's treasurer, informs Šarru-ukīn that he is using boats to transport stone steps (*mēlâni*) and thresholds for towers.[118]

4.4 Terraces

tamlû

Terraces were not only built to increase the prominence of important buildings but also to protect the

112 An extremely fine polychrome pebbled mosaic floor broadly contemporary with the Neo-Assyrian pebbled mosaic floors (9th century BCE) was discovered at Gordion. Young 1956 suggested this artistic form may have been invented by the Phrygians, which is not inconceivable since up to date no finer example of a pebbled mosaic floor has been uncovered which would antedate the Phrygian one. Note moreover the assumption in Albenda (2005: 32) that during the seventh century BCE the black and white ornamental style of the Neo-Assyrian pebbled mosaic floors was a North-Syrian phenomenon.

113 Sîn-aḫḫē-erība, RINAP 3/1, 34, 83–85.

114 Aššur-aḫu-iddina, RINAP 4, 60, r. 26′ – r. 28′.

115 SAA 13, 44.

116 Salmānu-ašarēd I, RIMA 1, A.0.77.4, 23–24.

117 Cf. CAD: *mēlû* 3.

118 SAA 1, 56 ▸ **3.2.1**.

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foundations of buildings from rising waters. Sīn-aḫḫē-erība increases the span and height of the terrace for his palace above the Ḫusur river in Nīnawā **RINAP 3/1, 17, v 91 – vi 6**. It appears that the term *tamlû* could designate not only the terrace itself but also the various surfaces that constituted it.[119]

For more on terraces see ▸ **2.2**.

4.5 Towers

isītu, nāmaru

Towers (*isītu*) are often mentioned in relation to (layers of) bricks, which is not surprising since they would have been the architectural feature requiring the greatest number of brick layers.[120] The term *isītu* (Bab. *asa'ītu*) refers to the fortification towers of cities, whilst *nāmaru,* never encountered in the state archives but common in the royal inscriptions, typically refers to temple towers and is closely associated with walls.[121] Aššur-rēša-iši surrounds the towers of the great gate of Ištar of Nīnawā's temple with stone rosettes.[122]

For *nāmaru* see ▸ **4.1.2**.

4.6 Drains

nanṣabu/naṣṣabu, nāḫiru, bību, bāb zīni, rāṭu, butiqtu

Drainage is rarely evoked in the Assyrian royal inscriptions, probably because it provided little for the imagination. In the context of construction, drainpipes (and equivalent) were nevertheless worthy of mention because symbolic of a certain level of order.

In the Middle Assyrian period, Adad-nērārī I mentions refacing the drain pipes (*naṣṣabu*) of the New City's wall at Aššur with limestone, kiln-fired bricks and bitumen[123], he also installs three spouts (*nāḫiru*) to carry off the water that irrupted into the Inner City of Aššur through the quay wall opposite the Tigris[124], and he paves the drainage openings (*bībāni*) of the Aššur temple wall[125]. Through this maintenance work, Adad-nērārī I brings order into his city. Building works provided a human-size canvas onto which the ruling principles of the empire could be enacted in a condensed visible manner. For this purpose, even drainpipes acquired a symbolic meaning. In a diplomatic exchange with the king of Šubria quoted in a letter to the god Aššur, Aššur-aḫu-iddina accuses the king of Šubria of untimely obedience: the Šubrian should have obeyed immediately to Aššur-aḫu-iddina and not waited for things to get bad in order to take action. Aššur-aḫu-iddina employs a metaphor involving drainpipes to illustrate the Šubrian's lack of efficiency:

> KI ⌜ TA ⌝ [...]-*šu arki zanān šamê tašakkan nanṣabu*
>
> Like [...] you put in the drainpipe after the rain![126]

Drainpipes symbolised a certain order. In a list of actions which are not to be performed on his palace of Kalḫu by a future ruler, Aššur-nāṣir-apli II remarks "he must not remove the doors, roof beams, cornices of bronze, and put them in another city; he must not smash its roof beams; he must not tear out its drainpipes (*naṣṣabāte*), he must not block the outlets of its rain spouts (*mūṣi bāb zīnīša*); he must not shut up its gate."[127] The symbolic value of drainpipes also granted them magical properties. In this respect, a *Šurpu* passage treats drainpipes like roofs, doors and parts thereof, mentioning the oath "of roof, drainpipe (*naṣṣabu*), door jamb, bolt, door, lock, door-post"[128]. Drains are an access point and were hence supernaturally dangerous. Drainpipes also appear frequently in omens, as ominously sensitive loci.[129]

Drainage **[FIG. 13]** occasionally figures amongst the matters discussed in the state archives. It was a critical aspect of the architecture, for practical purposes, and also because it played an important part in rituals involving liquids. Four letters are concerned with (drain-)pipes in temples. Two are from Urdu-aḫḫešu (reigns of Aššur-aḫu-iddina/Aššur-bāni-apli): one informs the king that the drainage openings (*bibāni*) of Esagil have been completed;[130] the other mentions drainage openings as part of building work which requires kiln-fired bricks[131]. Another letter is from Taqiša the priest of Aššur to a temple steward Aššur-šarru-uṣur, and concerns work to be performed by carpenters for the offering pipes (*rāṭēte*) of the temple of Adad and Babu.[132] The third letter is from Aššur-na'di, deputy priest of the Aššur temple, to the king (possibly Aššur-aḫu-iddina), and concerns water conduits (*butiqēte*) made of *musukkannu*-wood, which must have served for ritual purpose in the temple.[133]

119 For this idea see Pedde/Lundström 2008: 175–176.
120 See for example the building progress report SAA 11, 15, and SAA 15, 1 relating to the city wall of Meturna.
121 ▸ **4.1.2**.
122 Aššur-rēša-iši, RINAP 1, A.0.86.2.
123 Adad-nērārī I, RIMA 1, A.0.76.10.
124 Adad-nērārī I, RIMA 1, A.0.76.11.
125 Adad-nērārī I, RIMA 1, A.0.76.42.
126 Aššur-aḫu-iddina, RINAP 4, 33, ii 30.
127 Aššur-nāṣir-apli II, RIMA 2, A.0.101.17, v 29 – v 34.
128 Šurpu VIII, 76.
129 For occurrences cf. CAD: *naṣṣabu*.
130 SAA 13, 168.
131 SAA 13, 162, r. 8 – r. 11.
132 SAA 13, 40.
133 SAA 13, 30.

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Fig. 13: A baked brick drain from a bathroom at Ziyaret Tepe (photograph courtesy of Timothy Matney).

4.7 Tombs

kimahḫu

Tombs are mentioned here because their symbolic importance binds them to the structure of buildings. Sîn-aḫḫē-erība replaces the brickwork which is used "from the work of the living to the tombs symbol of the dead" (*ultu šipir balṭūti adi kimahḫī simat mētūtu*) with mountain limestone.[134]

A clear distinction was established between the spaces of the living and those of the dead. An omen from *Šumma ālu* warns that if a man lays out a tomb like a house, that house will become poor.[135] It was therefore significant that Sîn-aḫḫē-erība should choose to build both houses and tombs out of limestone.

134 Sîn-aḫḫē-erība, RINAP 3/2, 168, 17.
135 *Šumma ālu* XVI, 53.

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5 OPENINGS

Three-dimensional accessibility is what sets architecture apart from other forms of art. For a structure to be accessible it has to be "open". Architectural openings can be classified in two main categories, doors and windows. Whilst doorways serve human mobility, windows facilitate the circulation of basic natural resources essential to human life such as air and light. Because access supposes motion and transition, thereby defining space in relation to time and change, doorways and windows necessarily assume a special significance in a human's understanding of the built environment.

Questions of daily life that trigger universal thinking are often at the core of cultural constructs. Time from a human perspective is determined by a human's mental and physical position in space, which implies continuity between states. The liminal aspect of doorways and windows calls for this type of continuity, one induced by the necessity of crossing the limits set by defined spaces. Doorways and windows are treated in the same chapter due to their shared characteristics. Much more information is available for doorways (together with doors) than for windows in both the royal inscriptions and state archives.

5.1 Doorways and windows in Mesopotamian culture

It comes as no surprise that doorways and windows should stand out as conspicuous architectural features in our sources. A word should be said about the important symbolic role played by doorways/doors and windows in Mesopotamian culture more braodly. Doors and windows were most commonly composed of wooden elements. In the case of doors this would involve features such as leaf, pole, bolt, frame. Wood being rather rare in Mesopotamia proper and thus precious, building items such as wooden doors/windows and beams were particularly prized, often receiving special treatment, independently from the rest of the building. This was the case on all levels of society. For example, from kings to commoners there is evidence that doors were being passed on between generations. Kings could offer doors as gifts,[1] whilst it was standard practice amongst commoners to bequeath them in wills[2] or include them in sale contracts of real estate[3]. As valuables, doors were recycled. This would also have been the case with windows should they have included frames or shutters.[4] Doors/windows would thus have become symbolic of some form of continuity and ownership, making them status objects. The special value of doors and windows meant they were also ritually-sensitive architectural features. Doors and, to a lesser extent, windows, were perceived as places of transit since they permitted passage from one space to another. In that sense they formed a spatial dimension of their own which today is often described as "liminality" (< Latin *limen*, "threshold"), a concept developed in anthropology to describe transitional states. Liminal space is space in which one does not *dwell*, it merely takes you from one state of dwelling to another.[5] What happens in such space is typically open to all sorts of beliefs. In Mesopotamia, this liminal dimension of doors and windows meant they were associated with supernatural forces.

It was believed that demons lived in the proximity of doors and windows not usually with good intentions. As a result, rituals were invented to avert and/or exorcise evil from these places and apotropaic objects were deposited therein.[6] One ritual text specifically designates doorjambs and windows, together with corners of rooms, courtyard, roof and roof rooms, as areas that must be purified in order to prevent evil from entering someone's house.[7] A demon that should be mentioned here is Kilīli because her character provides some insight into the manifestation of doors and windows in Mesopotamian "popular culture" by pointing to one notable case: the roles of divinity and gender as agents of liminality. Kilīli is listed in An = Anum IV as the first of the eighteen messengers of Ištar. She is equated with the Sumerian ^{d}ab-ba-šu$_2$-šu$_2$ ("one who leans at the window") and thus partakes in the widespread ancient Near Eastern concept of "woman at the window" **[FIG. 14]**.[8] This concept is expressed

1 ▸ **5.2.1.b**.

2 See for example Old Babylonian division of paternal estate in Postgate 1992a: 97.

3 See for example SAA 14, 40.

4 There is barely any archaeological evidence for this.

5 For liminality see also ▸ **8.2.4.a**.

6 For a brief survey of important theories about space and liminality relevant to Neo-Assyrian apotropaic rituals see Nakamura 2004:18.

7 (246) GIM KEŠDA.MEŠ *tuktennû* ESIR IM.BABBAR I$_3$.KUR.RA (247) LAL$_3$ I$_3$.NUN.NA I$_3$.DUG.GA I$_3$.BUR A.GUB$_2$.BA 7 NIG$_2$.NA (248) 7 GI.IZI.LA$_2$ UB.MEŠ E$_2$.MEŠ ZAG.DU$_8$.MEŠ (249) TUR$_3$ UR$_3$ *rugbēti* AB.MEŠ TAG.MEŠ "When you have set up the assemblage correctly, with bitumen, gypsum, crude oil, honey, butter, fine oil, oil-of-the-pot, pure water, seven censers and seven torches, you shall touch the corners of the rooms, the doorjambs, the courtyard, the roof, the roof rooms, the windows." (Cf. Wiggermann 1992:16).

8 For the "woman at the window" motif see Suter 1992.

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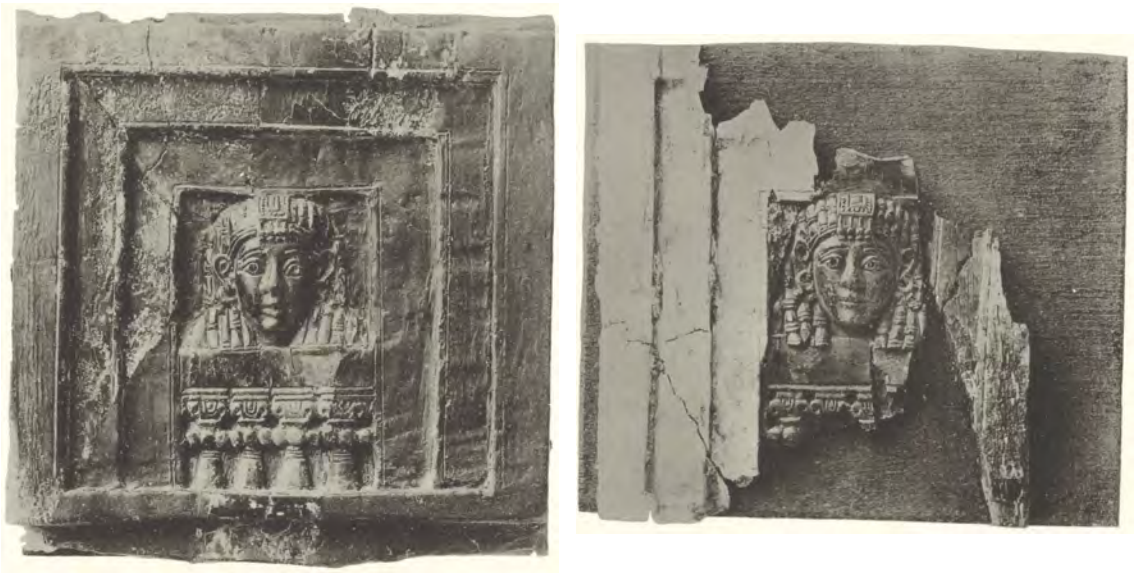

Fig. 14: Woman at the window.
Ivory plaques from the Nabû temple in Dūr-Šarrukīn (10 × 10.2 cm and 9 × 10.1 cm respectively)
(Loud/Altman 1938: Plate 51).

in literature and as pictorial representations[9] from Mesopotamia to the Levant; it is also widely referred to in the Bible.[10] Its exact significance is not clear, but it obviously situates the designated woman (often interpreted as Ištar or any woman related to her cult) at the margin of society, on the border of the supernatural world. This symbolism speaks for the special significance of windows. It may be symptomatic of this same perception of liminality that Inanna/Ištar, the female goddess par excellence, should have been symbolised in her early days by a pictogram representing the reed ring posts that were used as doorposts in what is today known as *mudhif* architecture: again, zones of transit are associated with the extraneous, here a mixture of sacredness and marginality. These examples serve to illustrate the popular dimension of doors/windows and the underlying ideological principles which would have made their way into the associated semantics.

5.2 Doors and gates

A survey of all architectural terms referenced by the CAD (+AHw)[11] revealed that terms for the category "door/gate" outnumber by far any other category, which makes it clear that there was a marked interest in this architectural feature. The Assyrian royal inscriptions employ only a small selection of these terms, namely *daltu* (GIŠ.IG), *bābu* (KA_2), *abullu* (KA_2.GAL). Also relevant here is the term *nērebu* ("entrance"). Distinctions must be established between these terms.

5.2.1 Single doors

daltu

daltu (< *edēlu,* "to shut") refers to the door as leaf with closing and opening potential. *daltu*'s are often described as being fixed in the doorways (*bābu*) of buildings. Dūri-Aššur, the governor of Aššur, informs Tukultī-apil-Ešarra III that the door (GIŠ.IG) has been placed in the gateway (KA_2.GAL) of the garrison.[12] Aššur-aḫu-iddina's mother mentions the "matching pair of cypress doors" (*dalāt šurmēni šutāḫâti*) she received as a gift from her son and installed in the palace which she built for him in Nīnawā.[13] Similarly, Tukultī-apil-Ešarra III comments on the "twin doors of cedar and cypress" (*dalāt erēni šurmēni tū'amāte*) in his palace.[14] This makes it clear that *daltu* was understood as door-leaf. It was therefore the appropriate term for door to use when describing the materials from which doors were made. Wood was the choice material for doors[15]. Coniferous woods were preferred. A notable common denominator of the woods used for doors is their fragrance. Cedar and cypress were particularly popular, not only for their resistance and durability but also because of

9 See for example the famous ivory from Kalḫu known as "Mona Lisa of Nimrud".
10 See for example Aschkenasy 1998.
11 This survey was carried out by the author in 2008 and updated in 2017.
12 SAA 19, 60, 9.
13 Aššur-aḫu-iddina, RINAP 4, 2003.
14 Tukultī-apil-Ešarra III, RINAP 1, 47, 28'.
15 For types of wood used for doors see ▸ **3.3.1**.

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their sweet fragrance. This sweet fragrance is put forward as an essential characteristic of doors in many Assyrian inscriptions. Tukultī-apil-Ešarra III and Sīn-aḫḫē-erība both describe the phenomenon from a passer-by's perspective thereby accentuating its sensory aspect **RINAP 1, 47, 28'; RINAP 3/1, 17, vi 23 – vi 24**.[16]

5.2.1.a Door parts and mechanisms

meserru, šukû, ṣerru, sikkatu, mēdelu, sikkūru, šigaru[17]*, aškuttu, nukuššu, uppu*

A review of typical Mesopotamian door parts and mechanisms is necessary here.[18]

A door leaf usually consisted of vertical planks of wood reinforced by horizontal wooden battens that were fixed with metal nails or wooden pegs. On the more elaborate doors, the nails/pegs were masked by bands of metal (*meserru*) serving as decoration. If light enough, the leaf was simply attached to the ground and wall through the plank closest to the axis of rotation. This plank's upper and lower extremities were formed into pegs, which allowed the leaf to swivel. When the leaf was heavy, it was hung onto a wooden pole (*šukû*) through its battens which were extended to fit into cavities in the pole. The pole was set from its lower end into a pivot stone (*ṣerru*) and it was secured to the wall in its upper end by means of a strong holdfast, often a wood or stone collar. The bolt usually consisted of a beam/bar slid through either horizontal or vertical shoulders. Bolts could be equipped with a locking device such as the typically Assyrian "*sikkatu*-lock". Two *sikkatu*-lock mechanisms have been reconstructed by Fuchs.[19] The following descriptions draw partly upon these reconstructions.[20]

To block a single leaf door, the crossbar (*mēdelu*) or bolt (*aškuttu*[21])[22] had to effectively bridge the walls on either side of the doorway. The crossbar would thus be slid through (open) cleats attached to the door and each of its ends would be fitted in a cavity in its respective wall. On its opening side the door might overlap with the wall towards the interior (bolt side) so as to be caught between the bolt and the wall. A small holding bar (*sikkūru*) was pushed through a hole in the bolt until it reached a cavity in the wall where it fitted. The crossbar and holding bars were kept in place with the help of pins (*sikkatu*) that were fitted into a vertical hole/casing (*uppu*) in the crossbar, reaching all the way down into a matching hole in the holding bar: this locked the door. In order to unlock the door, the pins had to be removed, which required a special key. The key (*namzāqu*? *medēlû*?[23]) was designed to fit

16 ▸ **6.3.1**.

17 Could potentially also be spelt **šimaru**: Landsberger apud Weidner 1958: 346 believes that *šimarāte* (Tukultī-apil-Ešarra I, RIMA 2, A.0.87.3, 39) might be an unusual writing of *šigarāte* (the plural of *šigaru* would otherwise be *šigarū*).

18 For a detailed summary of door parts see Curtis/Tallis 2008: 4–6.

19 Fuchs 1999.

20 Although our texts seem to refer mainly to the *sikkatu*-locks, these were certainly not the only locking systems available. For example, five simpler types of latching systems are identified by Zettler 1987: 235, see also pages 212 and 213 (figures 3 and 4). In summary, a hook (or cord) attached to a clamp on the door was hooked (or knotted) around a knob, cylindrical peg (for cords only) or multiple pegs fixed to the wall. When the latch was released the door was free to swing on its pivot. The latching system was typically used for administrative purposes. Clay sealings were applied on top of the hook/rope. Their integrity served as evidence that no one had unlawfully broken in. It is most likely that certain doors would have combined this legal security locking system with the more functional *sikkatu*-lock.

21 Fuchs (1998: 97–107) convincingly identifies *aškuttu* as *Sperrbalken* (which according to the illustrations he provides would correspond to both a "crossbar" and a smaller "bolt"). The identification is based on the "Gottesbrief" from Šarru-ukīn's eighth campaign (Eighth Campaign, 372: 1 […] *qar-ni še-ʾla-la?/al?ʾ-te aš*$_2$*-kut-ti* KA$_2$.MEŠ-*šu ša* 2 GUN KU$_3$.SI$_{22}$ *sa-gi-ru i-n*[*a*] *šu*$_2$*-qul-ti šap-ku* : "1 […] horns/of a horn thʾreeʾ? (of?) the bolt of its entrances, which was/were wrought with a weight of 2 talents of refined gold", cf. Mayer 2013: 134, and the "Annals of the year 711", see FUCHS 1998: 98–99, IV.b–d (8.F.372) 58: [1? *aš*$_2$*-kut-t*]*i* KA$_2$-*šu*$_2$ *ša* 2 GUN KU$_3$.SI$_{22}$ KI.LA$_2$. One of the main criteria used for this identification is the weight associated with *aškuttu* (2 talents, i.e. 60 kg) which brings to mind a massive crossbar, although the *aškuttu* need not have been that heavy. In line 372 of the Gottesbrief two talents of gold are mentioned in relation to the term *aškutti.* This amount of gold seems to apply to the unidentifiable item mentioned in the damage at the beginning of the line, since in this list only one type of item appears to be treated per line. Accordingly, the terms *qarni*, *še-la-la/al-te* and *aškutti* would be part of a description of the unidentifiable item, in line with the descriptive style of this listing. Moreover, as pointed out by Mayer (2013: 135), the term *še-la-la/al-te* could be read as *šelalte* and understood as "three" meaning more than one *aškuttu* would be at stake here. Line 58 of the Annals is reconstructed [1? *aš*$_2$*-kut-t*]*i* KA$_2$.MEŠ-*šu*$_2$ *ša* GUN KU$_3$.SI$_{22}$ KI.LA$_2$, suggesting the *aškuttu* weighed 2 talents. However, should the sign [-t]i indeed hide the term *aškutti* and bearing in mind that about six signs would fit in the lost part of the relief, it could be that the passage should be restored [x *še-la-la/al-te aš*$_2$*-kut-t*]*i* in line with the Gottesbrief.

22 Like "crossbar", *mēdelu* (< *edēlu*, "to shut") conveys the idea of barring and is used quite broadly in that sense. It is equated in lexical lists with *sikkūru*, *napraku* and *sakkāpu*. As would a bolt, *aškuttu* appears related more specifically to locking and locking devices.

23 Both *namzāqu* and *medēlû*, which are described as liftable (and sometimes transportable) objects have been understood to mean key, see for example Fuchs 1998: 99–100. Based on available attestations for *namzāqu* (cf. CAD: *namzāqu*), it seems this term could at times also designate the "assembly" locking device of the Egyptian lock (cf. Potts 1990: 190) and maybe also the "Gehäuse"

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into a horizontal hole in the crossbar situated below and parallel to the hole of the holding bar. The pin way cut through the crossbar all the way down to the keyhole, so when the key was inserted a simple upward movement was enough to fit the key tooth into the pin way and lift the pin out.

To block a double leaf door, the crossbar could be smaller, meaning it would be best translated in English by the more generic term "bolt", which unlike "crossbar" does not connote a large size. Such a bolt would be attached halfway through the door, between the two leaves so as to keep them bound. The fore edge where the two leaves met might be shaped into a rabbet for better security. One cleat, through which the bolt was slid, would also serve as clamp lock[24] thus replacing the holding bar. To lock the system, a pin would be dropped through a hole in the clamp lock. Here too, a key was used to remove the pin and unlock the system.

The technical complexity and importance of these locking devices explains their recurrent mention in royal inscriptions, notably as symbols of entrances. The term *šigaru* is often used as synecdoche to mean gate. For example, Sîn-aḫḫē-erība records placing protective deities "at the *šigaru*" of the *bīt kutalli*.[25] The *šigaru* is symbolic of gates: the beauty of a gate can be determined by its *šigaru.* Moreover, the *šigāru* could also reflect the beauty of the building's inhabitant: Aššur-aḫu-iddina is careful to make the *šigaru* of Eanna extremely fine for Nanāya (*ušparziḫ šigaršа*).[26] The *šigaru* is therefore likely to have been quite a visible aspect of the gate, possibly a central feature. This would have been the case should *šigaru* designate the clamps of the locking device identified by Fuchs as "*Sikkatu-Schoß Variante b*": a bar is slid through a series of clamps and then secured with pins. Note that *šigaru* is also used to refer to the neck stock imposed on captives. This is not surprising given that the clamps distinctive of a *sikkatu*-lock would have been very similar in shape to neck stocks. If *šigaru* designates the clamps, then *uppu* may have designated the cavities into which the pegs were slid.[27]

Pivot stones, the door's main connection with the ground, were, metaphorically, just as significant. These objects were commonly inscribed. As stone media they would have guaranteed the longevity of the message. A stone pivot was recovered from Ur that bears a Sumerian inscription dedicated to Sîn by Sîn-balassu-iqbi, a governor under Aššur-bāni-apli **RIMB, B.6.32.2001**. The inscription records the restoration of the temple Etemennigurru, in particular the construction of a new door for that structure. The door is described with a focus on what its most significant parts would be. Terms that stand out are gag (*sikkatu*), uš (*ušše*), sigar (*šigaru*), aškud (*aškuttu*) and nu-kuš$_2$-u (*nukušše*). Breaking down the door into its parts to describe it suggests doors were perceived as complex objects, not just as barring devices devoid of higher meaning: the functional entity did not prevail over the parts. Precious metals are used to enchance the characteristic features of the door, namely decorative pegs (*sikkatu*), base (*ušše*), clamps (*šigaru*), bolt (*aškuttu*) and pivot (*nukušše*). It seems that this text is referring to the *Sikkatu-Schoß Variante b*.

Locking mechanisms were of primary importance to control circulation and access within palaces and temples, which was itself an essential parameter of order to ensure the empire was run properly. The large number of officials serving as gatekeepers and lock masters is a testimony to the importance that Assyrian rulers ascribed to the control of circulation and access.[28]

naṣbatu, *saramū,* GIŠ.ŠU$_2$.A[29], *šipšatu*[30], *sippu*

A number of tablets refer to work on doors. Among these are letters containing measurements for door components. For example, the governor of Ḫarran Nabû-pāšir writes to Šarru-ukīn to inform him about measurements for door planks (GIŠ.ŠU$_2$.A.MEŠ). A sample of the information provided:

1 *šipšatu*
26 *ina* 1 *ammat šarri mūruku*
1 *ina* 1 *ammiti rupšu*
ammar eṣentu mūbû

1 plank
26 × 1 royal cubit, the length
1 × 1 cubit, the width
as much as one bone, the thickness[31]

It is quite remarkable how Šarru-ukīn kept himself informed about the smallest details. Doors would have required very accurate planning because it was important to manage as effectively as possible the provision of wood, a precious material laboriously

(cf. Fuchs 1998: 101) of the Greek βάλανος lock.

24 It is conceivable that such a clamp lock would qualify more as a *šigaru* (GIŠ.SI.GAR) than a *sikkūru* (GIŠ.SAG.KUL). The terms *šigaru* and *sikkūru* are occasionally used synonymously in the Akkadian sources but it seems nuances existed between the two terms. Although both *sikkūru* and *šigaru* stand for the *sikkatu*-locking mechanism, *sikkūru* refers specifically and nearly exclusively to the holding bar whilst *šigaru* can have a more general meaning, often through synecdoche, implying it also occurs in more varied contexts. More on *šigaru* in the following paragraph.

25 Sîn-aḫḫē-erība, RINAP 3/1, 34, 75.

26 Aššur-aḫu-iddina, B.6.31.17, 15.

27 That *uppu* must refer to cavities is also the interpretation put forward by Scurlock 1988.

28 For more on gatekeepers and lock masters cf. Radner 2010.

29 See also ▸ **3.3.1**.

30 See also ▸ **3.3.1** and **4.2.2**.

31 SAA 1, 202 o. 9 – o. 12.

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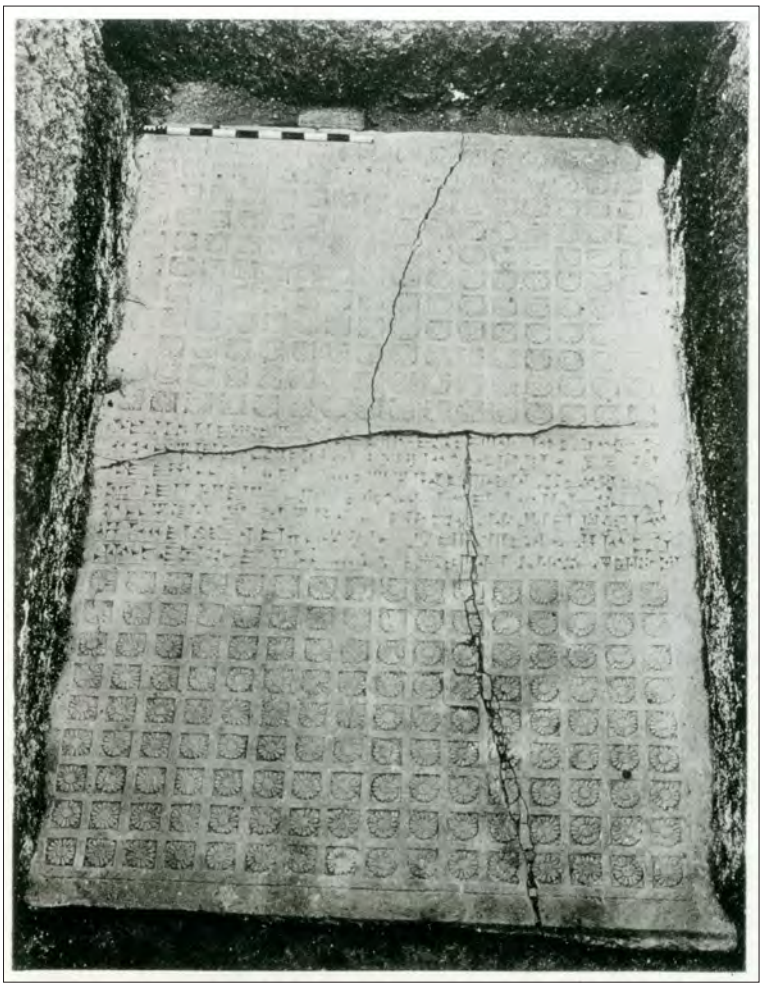

Fig. 15: Inscribed stone threshold from the residence of Sîn-aḫu-uṣur, Šarru-ukīn's brother and grand vizier, Dūr-Šarrukīn (approx. 2.50 × 3.70 m) (Loud/Altman 1938: Plate 36).

obtained. Parts of doors mentioned in the records are the door leaves themselves (GIŠ.IG), the door handles (*naṣbatu*)[32] and the *saramū* (rabbeted components?)[33]. Planks/boards/beams (GIŠ.ŠU$_2$.A and *šipšatu*[34]) are equally mentioned in relation to doors, presumably serving as door leaves and frames. A letter from an exorcist to Aššur-aḫu-iddina suggests that *šipšatu* could refer to the lintel of doors, since a mouse and a shoot of thornbush are to be hung from the *šipšatu* of the patient's door.[35]

The *sippu* (doorjamb) should also be mentioned here. This term is usually encountered in the plural (*sippāni*), referring to the jambs on either side of the entrance, which were typically rabbeted. [36] For example, an official suggests to Aššur-aḫu-iddina that he give orders that a stele inscribed with the king's name be set into the doorjambs (*sippāni*) of a new building **SAA 16, 125, r. 8 – r. 9**.

askuppu/askuppatu/askupputu[37], *kisirtu*[38]

Stone slabs (NA$_4$.I.DIB, *askuppu*) typically used as thresholds figure prominently in the state archives. For example, Šamaš-bēlu-uṣur is ordered by Šarru-ukīn to collect four hundred wood planks and haul a threshold from Yasubu on his own.[39] Thresholds were considered important parts of rooms. This is clear from the fact that they were commonly inscribed with texts (royal genealogies, excerpts from military annals and foundation accounts) and/or decorated with elaborate floral motifs (skeuomorphic designs evocative of carpets). Thresholds

32 SAA 7, 87.
33 SAA 1, 66.
34 The two terms, employed in very similar contexts, are probably equivalent.
35 SAA 10, 283. Compare with the use of *šipšatu* to mean window lintel in SAA 16, 100 ▸ **3.3.1**.
36 See discussion by George (1995: 184–185) of the term in relation to Esagil.
37 See also ▸ **3.2.1**.
38 See also ▸ **4.1.1**.
39 SAA 15, 123.

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inscribed with texts **[FIG. 15]** are a tradition typically found in the palaces of Aššur-nāṣir-apli II, Salmānu-ašarēd II and Šarru-ukīn II.[40] Inscriptions were practically supplanted by floral motifs in the palaces of Sīn-aḫḫē-erība and Aššur-bāni-apli.[41]

Since thresholds marked the edges/lower ends of rooms and buildings, they could be used metaphorically to describe the limits of a person's benevolence. The exorcist/astrologer Šumaya writes to Aššur-bāni-apli, then crown-prince, pleading for recognition. He proclaims: "I am a dog of the crown prince, running about at the threshold (*askuppete*) of your house!"[42]

Interestingly, whilst the concept of threshold is evoked in the state archives, it is virtually absent from the royal inscriptions where the term *askuppu* is more likely to designate slabs in the general sense, rarely located at doorsills. It is not inconceivable that the term *askuppu* in the sense of threshold should have had negative connotations due to its associations with demons. This would have made the term unsuitable for royal inscriptions. The terms *askuppu*/*askuppatu*/*askupputu* figure pre-eminently in omens and *namburbî* rituals.[43]

A term which is found in the royal inscriptions to designate threshold slabs that bore a cut into which the vertical bars of doors could be slid is *kisirtu.* Aššur-nāṣir-apli II uses *kisirtu* slabs for the thresholds of doors in his North-West Palace of Kalḫu.[44] It could be that the term *kisirtu* was more neutral than *askuppu* and preferred in royal contexts. The etymology of *kisirtu* (< *kesēru*, "to block; to pave") suggests it may have been chosen to designate doorsills specifically since the function of these was to block doors.

5.2.1.b Doors as objects

Doors were precious, materially and symbolically. Aššur-aḫu-iddina presented to his mother Zakūtu/Naqīa a double door of cypress as a gift for her palace.[45] Aššur-aḫu-iddina also honoured the goddess Ištar by means of a door. After renovating Enirgalana, Ištar's temple, he presents to Ištar sumptuous offerings and "makes her door lock (*šigaru*) splendid".[46] The "door lock" is probably used as synecdoche to mean door/gate. Aššur-aḫu-iddina embellishes the gate to Ištar's sanctuary and thereby glorifies her status. Through the *šigaru* it is the barring nature of doors which is emphasised. Doors are guardians of the inner sanctums, literally and metaphorically. What is behind the door to Ištar's sanctuary is Ištar's essence. It is therefore not only very important that the door be secured but also that it reflect what cannot be seen to establish its presence and thereby legitimate its aura. Doors reflect the inside on the outside.[47] Another example of gates providing an inside-out impression of the building's contents is when Sīn-aḫḫē-erība engraves the main bronze gate of his *bīt akīti* with illustrations and inscriptions narrating the Epic of Creation.[48] The Balāwāt Gates of Aššur-nāṣir-apli II and Salmānu-ašarēd III provide another example of "narrative" doors.

The state archives also provide evidence that doors were appreciated as objects in their own right. As an excuse to claim his food ration, Nabû-šumu-lēšir an official active in Babylonia, writes to Šarru-ukīn to inform him that the door (GIŠ.IG) of Esagil has been put up, the leaves being ready.[49] He points out that "all the Babylonians who on the fourth day went to Esagil and saw the door blessed the king (…) and rejoiced greatly". This indicates the door was an object of veneration for the people who would have interpreted it as a sign of wealth and good fortune for the land. Doors were treated as ceremoniously as thrones. A letter from the reign of Šarru-ukīn reports that the silver "Throne of Destiny" and the "Door of Ištar-tašme" (*dalat Issar-tašme*) should be polished with polishing stones[50] from the mountain Izalla.[51]

40 See Russell 1999: 111.
41 Russell 1999: 111.
42 SAA 16, 34.
43 Cf. CAD: *askuppatu* and *askuppu*.
44 See for example Aššur-nāṣir-apli II, RIMA 2, A.0.101.103. For a discussion of the term within its archaeological context see Paley 1989: 40.
45 Aššur-aḫu-iddina, RINAP 4, 2003, iii 4 – iii 7.
46 Aššur-aḫu-iddina, RINAP 4, 134, 14–15 (=Aššur-aḫu-iddina, RIMB, B.6.31.16).
47 The role of doors as spatial and temporal markers is well attested in Mesopotamian literature. Doors allow a play on the ambivalence created by the fact that they are at once inside and outside. The rather cinematographic encounter between Nabû and Tašmētu in the text known as "Love Lyrics of Nabû and Tašmētu" could be read in this light, for example. Nabû is singing the praise of his lover Tašmētu as he waits for her in the bedchamber. Suddenly she appears at the door and locks it behind her. The text says: "Looking luxuriant, Tašmētu entered the bedchamber. [Refrain]. She closed the door, putting in place the lapis lazuli bar (GIŠ.SAG.KUL). [Refrain]." As soon as the door is closed, the room belongs to Tašmētu. The only way in and out of that situation is that locked door. The door is symbolic of the place and moment it contains. In that sense it functions as a spatial and temporal marker. Another example would be the instance in the Epic of Gilgameš (standard version) when Enkidu prevents Gilgameš from entering the marital chamber by blocking its door with his foot (see Tablet II: 111).
48 Sîn-aḫḫē-erība, RINAP 3/2, 160, o. 5 – r. 1 ▸ **6.4**.
49 SAA 17, 34.
50 Probably pumice, cf. Radner 2006: 293.
51 SAA 1, 141.

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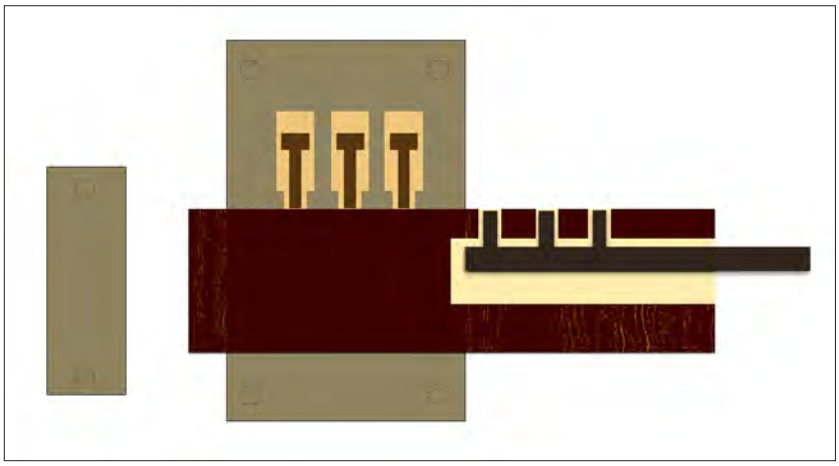

Fig. 16: Schematic rendering of the pin lock's general mechanism (after https://en.wikipedia.org/wiki/Pin_tumbler_lock#/media/File:Egyptian_Lock_Mechanism_Unlocked.png [Accessed on 25.07.2019]).

5.2.2 Double entrances and gates

mutīrtu

mutīrtu is usually translated as "double door", but may be better understood as double *entrance*, which can but does not necessarily imply a door leaf. When a double entrance (with or without door leafs) is meant the term *mutīrtu* is usually used in the singular, so that the plural *muterrētu* would effectively refer to a multiplicity of double entrances. The concept *bīt muterrēti* is encountered in Neo-Assyrian inscriptions with a usage similar to that of the term *bīt ḫilāni* **RINAP 3/1, 17, vi 20; RINAP 3/1, 1, 82**. Both terms seem to designate the same structure. This does not however mean that the terms should be exactly synonymous since they may be designating different aspects of the same structure. Etymologically the term *mutīrtu* goes back to the verb *târu* "to turn, return" and is cognate with *mutirru* "a bolt or lock of a door" with which it also shares at least one meaning as designation for the wooden part of a fowler's net. The etymology from *târu* of *mutirru* appears perfectly clear in so far as the action of turning or returning something into a position is fundamental to a locking device. For the etymology of *mutīrtu*, *târu* is usually understood in the sense of "to swing back into place (a door leaf)", since *târu* is the verb typically used to describe this action. Why a double door should be distinguished from a single door based on swinging criteria alone is, however, difficult to explain since any door, single or double, will swing in pretty much the same way. A different somewhat metaphoric explanation is proposed here. This explanation focuses on the shape of a *mutirru,* which it is assumed here must have inspired the coining of the term *mutīrtu*. *sikkuru* and *mutirru* are both independently equated in the lexical list *Ḫa-ra = ḫubullu* (V 271–272) with GIŠ.SAG.KUL.NIM.MA, which suggests the *mutirru* must have ressembled the *sikkuru* in some way, most likely serving also as the holding bar of the *sikkatu* lock described in the previous chapter.[52] Now, when the key enters the holding bar of a *sikkatu* lock (or any Egyptian lock type for that matter), the arrangement of the mechanism is (when not hidden by a protective case, of course) visually very much reminiscent of a *bīt ḫilāni* type portico [**FIG. 16]**. This would certainly have provided the poetically inclined Mesopotamians a good enough reason to call a double entrance a *mutīrtu* and a structure with multiple entrances such as the *bīt ḫilāni* a *bīt muterrēti.*

bābu (KA_2); *bāb zīqi*

bābu is the gate/gateway/doorway, an opening with entry/exit potential. It can refer to gate buildings by analogy. *bābu* may or may not include door leaves. English translations must therefore alternate between "gate" or "gateway/doorway" depending on the context. *bābu* is typically used to refer to gates of buildings; *abullu* (KA_2.GAL) is generally preferred for city gates. It is no surprise that concept of *bābu* should often be mentioned in relation to courtyards (see following section), since courtyards were typically the main architectural unit of large buildings. Also, the concept *bābu* has more to do with courtyards than *daltu*: doorways connecting courtyards to adjoining rooms would not usually warrant door leaves since they facilitated the circulation of air and light in the building, and were internal to the building, hence safe from the exterior. Aššur-aḫu-iddina installs door leaves of cypress (*dalāt šurmēni*) in the doorways (*bābāni*) of his palatial halls.[53]

52 ▸ **5.2.1.a**.

53 Aššur-aḫu-iddina, RINAP 4, 77, 54.

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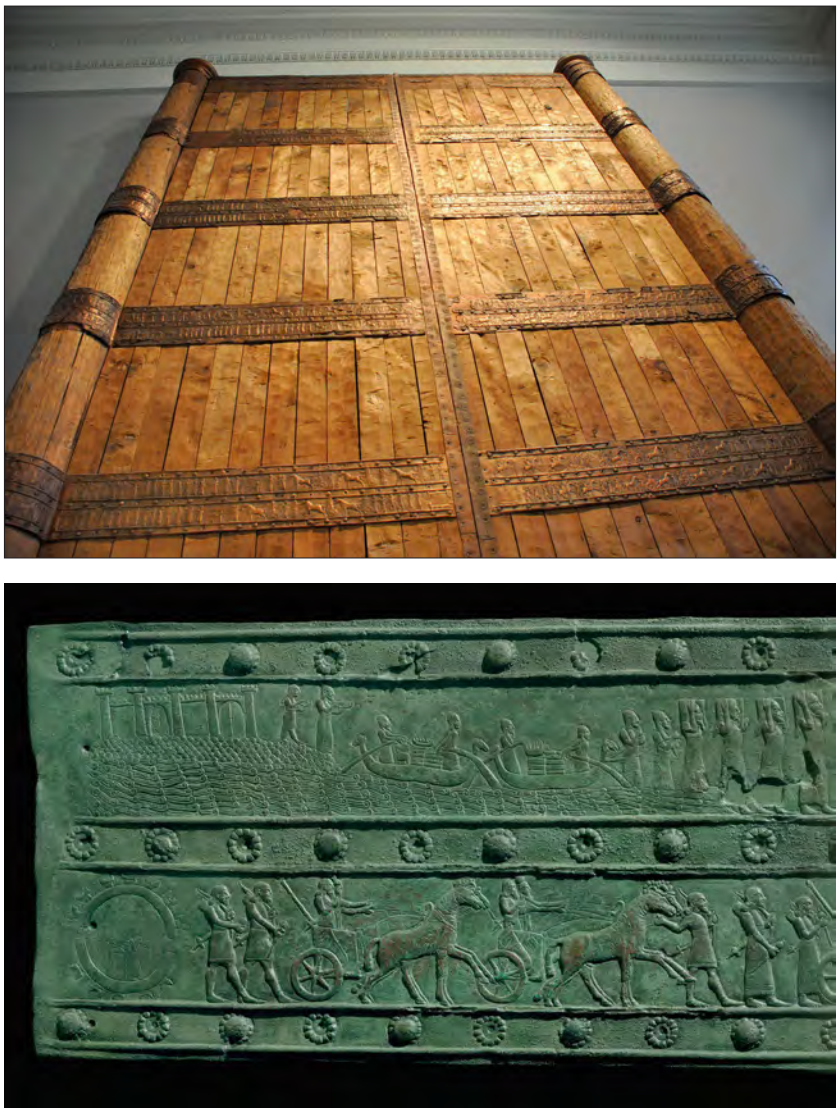

Fig. 17: Above: modern replica of the so-called Balāwāt Gates from the palace of Salmānu-ašarēd III in ancient Imgur-Enlil (modern Balāwāt), displayed at the British Museum (photograph courtesy Osama Shukir Muhammed Amin FRCP (Glasg)/ Ancient History Encyclopaedia); below: one of sixteen bronze bands from the Balāwāt Gates (right door leaf) of Salmānu-ašarēd III; the king is depicted receiving tribute from Tyre; H. 27 cm, W. 180 cm, D. 0.1 cm., BM 124661 (© Trustees of the British Museum).

Stone colossi were typically associated with *bābu*. Marduk-remanni, the governor of Kalḫu, informs Šarru-ukīn that he will place bull colossi against the gates (*babāte*) of the palatial halls.[54] The most evocative remains of gates recovered to date are the bronze bands of the three sets of so-called "Balāwāt Gates" which date from the time of Aššur-nāṣir-apli II and Salmānu-ašarēd III and belonged to the temple of the dream god Mamû and the palace residence at Imgur Enlil. Each gate was mounted with eight bronze bands embossed with narrative scenes. The original gates were of cedar and their height can be reconstructed to around 6.8 metres **[FIG. 17]**.

The term *bāb zīqi* (lit. "gate of wind") occurs once in Šarru-ukīn's "Nimrud Inscription".[55] Šarru-ukīn rebuilds the palatial hall of *duprānu*-juniper which according to him had been built centuries earlier by Aššur-nāṣir-apli II[56] and which was by then dilapidated due to the "rainstorms poured from heaven". Left of the palatial hall's gate he opens a *bāb zīqi* for his "delight" (*ana multaʾûtīya*). It may be the same *bāb zīqi* which is mentioned in an administrative document from the palace archive of the governor

54 SAA 1, 110, o. 10 – o. 11.

55 Šarru-ukīn, Winckler 1889: Nimrud Inscription, 13–18.

56 Eight palatial halls each characterised by a different wood are listed in Aššur-nāṣir-apli II, RIMA 2, A.0.101.30, 25–27. Whilst Aššur-nāṣir-apli II does not mention a *duprānu* palatial hall he does specify using *duprānu* wood for the doors of the palatial halls.

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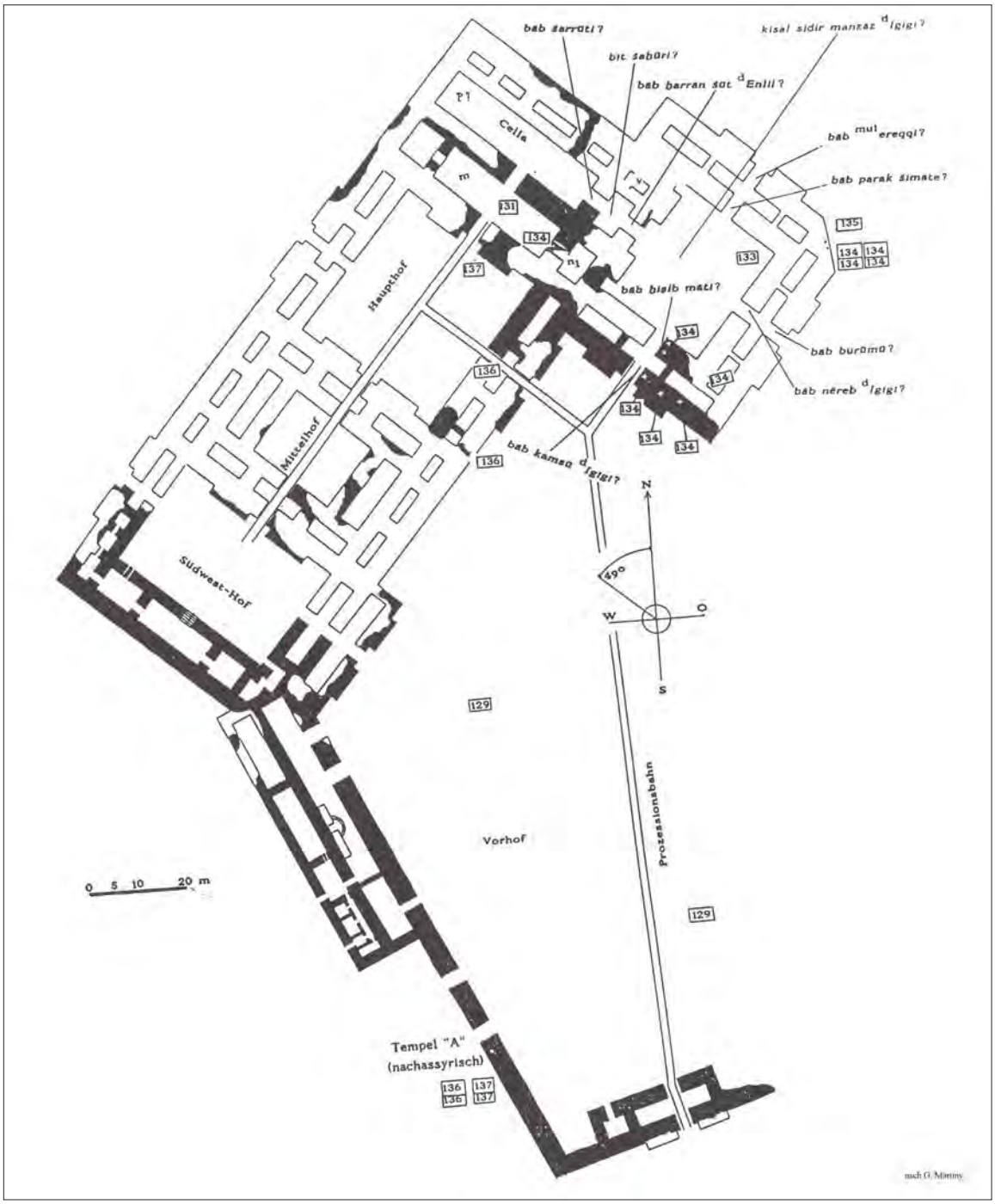

Fig. 18: Plan of the Aššur temple (FRAHM 1997: 172).

of Kalḫu.[57] The text lists beams of various sizes to be used in a building project. Two small beams of 2+1/6th cubits (about 1.15 m) each are required for the *bāb zīqi* of a house (*bītu*). Specifications as to the type of house were lost in the damage of the tablet but it could legitimately be restored E_2.GAL *dup-rani*. The size of the beams suggests a small opening more akin to a window than a gate. The *bāb zīqi* is likely to have been an air vent, perhaps even a structure similar to the "windcatchers" found today in Iran for example and potentially evidenced archaeologically for the Neo-Assyrian period.[58] The fact it affords Šarru-ukīn some pleasure suggests it was

57 See text No 212 (Pl. 76), l. 5′, edited in POSTGATE 1973.

58 It would be interesting to investigate whether the rather enigmatic niches that were recovered at sites such as Tall Ḥalaf (Area A, Neo-Assyrian period) or Nuzi (M94, L27) could potentially have constituted the base of windcatchers.

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designed to provide fresh air drafts into the wooden structure.

5.2.2.a Gates in space: cosmological principles

Narratives involving gates and courtyards are not unusual. For example, Sîn-aḫḫē-erība describes in great detail the gates and courtyards of the *bīt šaḫūru* of Eḫursaggalkurkurra **RINAP 3/2, 166**, and he also reports enlarging the gates (*bābu*) of the courtyard of the *bīt kutalli* in Nīnawā to facilitate the exercising of horses.[59] The text recording the renovation of the Ešarra of Aššur **RINAP 3/2, 166** warrants closer inspection. It can be read against the archaeological evidence uncovered by Arndt Haller and Walter Andrae, for which a plan is provided [**FIG. 18**].[60]

The gates are arranged around the courtyard according to cosmological principles, notably providing an earthly echo to the astronomical concept of "Gates of Heaven".[61]

The cult room is connected to the courtyard through the "Gate of Kingship" and the "Gate of the Path of Enlil" which contain the *bīt šaḫūru*. The courtyard is surrounded by three additional double gates: one double gate opening to the east, one double gate opening to the south and one double gate opening to the north. Note that the double gates connecting the courtyard to the cult room are not described as westerly: any mention of the west is omitted in the description. This is probably not a coincidence since the west symbolic of the netherworld had inauspicious connotations.[62] Instead, the "Gate of Kingship" and the "Gate of the Path of Enlil" are referred jointly as the *bāb papāḫi,* a term evocative of the positively connoted east/sunrise, which could here be interpreted as either "Gate of the sanctuary" in view of its function, or "Gate of the East" based on its position relatively to the cult room. That the "Gate of Kingship" and the "Gate of the Path of Enlil" should constitute together the *bāb papāḫi* illustrates how *bābu* can refer to both an individual gateway and a series of gateways forming a structure or building.

Archaeological evidence suggests that the gates described by Sîn-aḫḫē-erība as eastern, southern and northern, were not actually on the exact cardinal points.[63] Here the layout of the temple is meant to reflect the order of the universe and so the orientations of the gates become symbolic, they must match divine geography. The names of the gates and the courtyard designate cosmological principles and associated astronomical phenomena proper to the different cardinal points.[64]

The "Gate of Heaven" to the east no doubt references the point of the sun's rising on the eastern horizon at the spring equinox during the New Year Festival.[65] It is associated with the gate "Entrance of the Igīgī" which Margaret Huxley convincingly interprets as an allusion to the eastern horizon from which the multiple stars representing the multiple Igīgī gods are seen to rise.[66] The "Gate of the Abundance of the Land" to the south could refer to the star registered in MUL.APIN as "Abundant One" and identified with the star β Comae Berenices, which in spring appears on the southern horizon. It is associated with the "Gate of the Bowing Igīgī", which following Huxley's interpretation would refer to those stars on the southern horizon which appear to rise on a slanted course due to their long distance from the equinoctial point. The "Gate of the Wagon" is clearly named after the constellation Ursa Major visible in spring on the northern horizon. As for the "Gate of Kingship", although it was effectively to the west of the courtyard, it probably refers to the star registered in MUL.APIN as "King" and identified with α Leonis.

The associated "Gate of the Path of Enlil" is eponymous with the northern stellar path, which suggests, as pointed out by Huxley, that this gate was considered northerly. Huxley argues that the northerly orientations were meant to symbolise power. The "Gate of the Path of Enlil" is surrounded right and left by figures of a mad dog (*uridimmu*) and a scorpion-man (*girtablullû*) whose role it is to hold the cleats. Mad dog and scorpion man are well known as apotropaic figures.[67] A connection with the sun and its risings is moreover clear for the scorpion man.[68] It is also possible to see in these two figures astronomical references to the constellations *uridimmu* (Lupus) and *zuqaqipu* (Scorpio), which both belong to the path of Ea according to MUL.APIN, the first associated with the goddess Kusu, the second with the goddess Išḫara.[69]

Pinches' Astrolabe connects the Mad Dog constellation in the path of Ea, with the Scorpion constellation (here) in the path of Anu, and the King

59 Sîn-aḫḫē-erība, RINAP 3/1, 34, 58.

60 Haller/Andrae 1955.

61 This is discussed in detail by Huxley 2000. For the concept of "Gates of Heaven" see Horowitz 1998: 266–267.

62 See for example the "Lost Omen Tablet" published by Moren (1977: 27) which states: DIŠ KA_2-$šu_2$ *ana* IM.MAR. TU BAD $UŠ_2$ *sa-dir*-[$šu_2$] ("If his door opens toward the west wind, death will follow him"). Compare this with the positive omens for doors opening to the north and south winds, on the same tablet (ll. 24–25). The line concerning doors opening to the east is damaged but one expects it was a positive omen too.

63 ▸ **1.1.2.c**.

64 For leading principles in the gate names of Aššur, Nīnawā, Dūr-Šarrukīn and Babylon see Pongratz-Leisten 1994: 28–31.

65 Cf. Huxley 2000: 116. For Šamaš's special association with the concept "Gate of Heaven" see Heimpel 1986: 140.

66 Huxley 2000: 117.

67 Wiggermann 1992: 172–174, 180–181.

68 Wiggermann 1992: 180.

69 Hunger/Pingree 1999: 61.

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constellation (Leonis) in the path of Enlil, by associating all three constellations with the eighth month (*Araḫšamnu*).[70] Hermann Hunger and David Pingree argue some of these connections must have been mythological since they do not all work astronomically.[71] In any case, setting Mad Dog and Scorpion Man figures at the "Gate of the Path of Enlil" symbolic of royal power could be reflecting the association Mad Dog – scorpion – king enunciated in Pinches' Astrolabe.

5.2.2.b Gates and magic

Gates (and to a lesser extent windows) were associated with demons because they were the openings that demons chose to come in and out of the homes and lives of individuals. It was therefore essential to provide gates with guardians. In royal monuments these guardians took the form of giant sculptured stone colossi representing beneficent genii, typically of the type *aladlammû*/*šēdu* (male), *lamassu*/*apsasītu* (female).[72] These creatures had the body of a bull or lion and the head of a human, occasionally they were winged, emphasising their supernatural nature, and always they were depicted as smiling to symbolise their friendliness. Halfway between animals and humans, they were liminal creatures *par excellence*. Their gate keeping consisted in averting evil. Well guarded gates were symbolic of divine protection. Aššur-aḫu-iddina prides himself of having set up divine protection (*kidinnu*) at the gates of the citizens of Aššur forever.[73]

5.2.2.c Great city gates

abullu (KA_2.GAL)

abullu is the greater door or gate typically used to refer to a city's fortification gates which often would have had the appearance of tower gates. It normally functions as a barring device and will therefore include door leaves. Both Šarru-ukīn and Sīn-aḫḫē-erība describe at length the tower gates of their capital cities' fortification walls.[74] These tower gates are often named after deities, hence deified. Šarru-ukīn assigns the gate facing east to Šamaš and Adad and names it "Šamaš the begetter of victory, Adad the provider of wealth".[75] Sīn-aḫḫē-erība whose wall has more tower gates assigns each of these gods his own tower gate. The Šamaš tower gate to the east is named after Enlil "Enlil who makes firm the reign", whilst the Adad tower gate to the north is named "Adad who gives wealth to the land".[76] Sîn-aḫḫē-erība's city wall also includes gates with more prosaic names: "That in which grain and flocks are always good" and "That which carries the produce of the mountains" towards the east; "That which brings forth the riches of the inhabited lands" and "That which controls everything" towards the west.

As noted by John Russell: "Sîn-aḫḫē-erība's approach to the reconstruction of Nīnawā was as practical as his father's approach to Dūr-Šarrukīn had been idealised. (…) There was no preconceived number of gates per wall as at Dūr-Šarrukīn. Instead gates were placed as needed on the lines of principal roads or to provide access to major structures inside and outside the walls."[77] Pragmatic concerns are clearly perceptible in the names of the gates. The greater number of gates in Sîn-aḫḫē-erība's city (twelve, against eight in Šarru-ukīn's city) no doubt also reflects this pragmatism. Such pragmatism did not however supplant the symbolism inherent to city gates: city gates maintained a certain aura.

The great *abullu* gates were a city's connection nodes with the wider world and cosmos. Naming a city's gates after divine phenomena suggested that the flux of exchanges between the interior and exterior spheres of a city were determined by a relationship of the highest order that could not easily be transgressed. Describing a gate as *abullu,* instead of the simpler *bābu,* gave it importance. *abullu* could therefore also denote temple gates. Sîn-aḫḫē-erība refers to the temple gate of his *akītu* temple as *abullu.* The description he makes of it testifies to its importance.[78] It was made of red bronze and engraved with the battle of Aššur (replacing Marduk) against Tiamat, a reference to the Epic of Creation that was to be re-enacted in the *akītu* temple. A full narrative of the scene was reproduced on the gate, which suggests the gate was probably intended to serve a similar purpose as the front cover of a book, indicating the way into the story or myth.

5.3 Porticos

bīt ḫilāni, bīt appāti, bīt muterrēti

The *bīt ḫilāni*, borrowed from the land of Ḫatti, and known as *bīt appāti* and *bīt muterrēti* in Akkadian,[79] was a portico-type structure[80] used in royal palaces **[FIG. 19]**.[81] This stylistic trend, the origins of which

70 Hunger/Pingree 1999: 51.
71 Hunger/Pingree 1999: 51.
72 ▸ **6.2.3.a**.
73 Aššur-aḫu-iddina, RINAP 4, 57, iii 13 – iii 15.
74 ▸ **1.1.1**.
75 Šarru-ukīn, Fuchs 1994, Stier, 83–84.
76 Sîn-aḫḫē-erība, RINAP 3/1, 16: vii 44 – vii 45, 54–56.
77 Russell 1999: 243.
78 Sîn-aḫḫē-erība, RINAP 3/2, 160.
79 See also ▸ **1.2.2.**
80 See Kertai 2017 fort the argument that this portico structure was to be found in the palaces' interior monumental suites.
81 For a discussion of the *bīt ḫilāni* as an archaeological and

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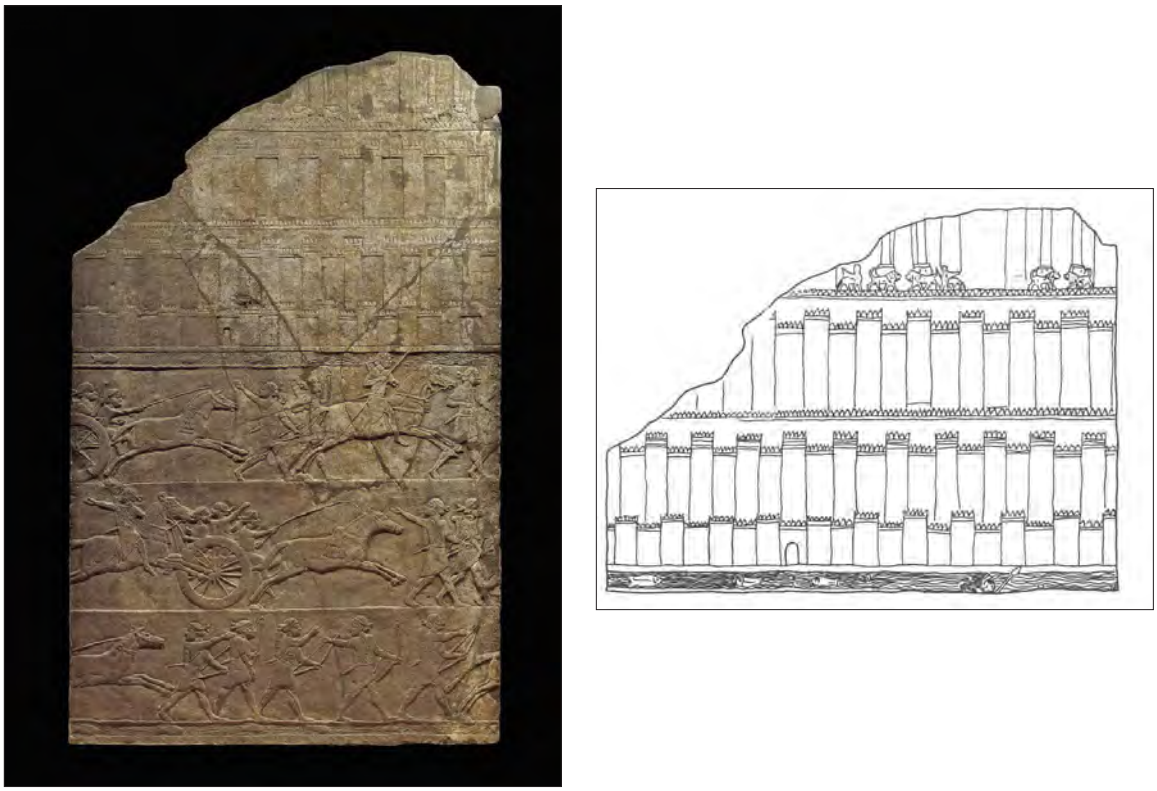

Fig. 19: Left: relief from the North-West palace of Aššur-bāni-apli in Nīnawā containing a depiction of a building within city walls (top register) corresponding to the description made by Sîn-aḫḫē-erība of his *bīt ḫilāni* in Nīnawā, ME 124938 (© Trustees of the British Museum); right: drawing of detail (Frahm 1997: 99).

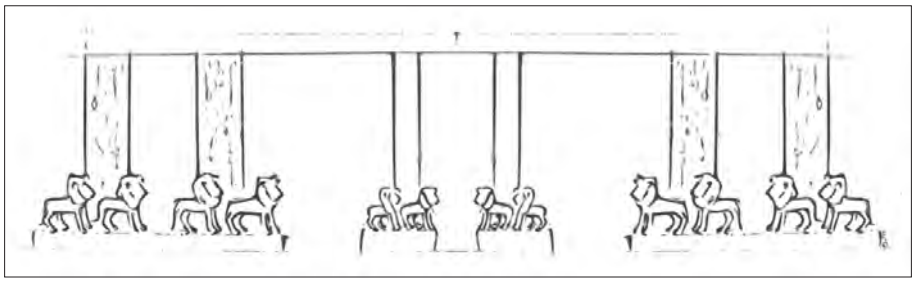

Fig. 20: Schematic reconstruction of Sîn-aḫḫē-erība's *bīt ḫilāni* with twelve lions (drawing by the author).

can be traced to northern Syria[82], started in the reign of Tukultī-apil-Ešarra III and was popular with Neo-Assyrian kings from then onwards. Its significance is wide-ranging. It is therefore discussed under various sections of this book (▸ **1.2.2**; ▸ **8.2.1.c**).

The columns of the *bīt ḫilāni* were traditionally of cedar. Sîn-aḫḫē-erība innovated by combining columns of cedar with columns of bronze. The characteristic of the columns is that they were supported by copper lions, the number of which appears to have increased over the years. Šarru-ukīn paired eight twin lions of copper with four columns of cedar **Fuchs (1994), Stier 70–72**. Sîn-aḫḫē-erība combined eight copper lions (including *pirigallu* lions) with two matching columns of bronze and two columns of cedar for one *bīt ḫilāni* (possibly the one represented in [**FIG. 19**]) **RINAP 3/1, 1, 83–84**; twelve copper lions (including *pirigallu* lions) with two matching columns of bronze and four columns of cedar for another *bīt ḫilāni* (possible reconstruction proposed in [**FIG. 20**]) **RINAP 3/1, 16, vi 74**. The columns of cedar appear to always be placed on top of the special lions designated by Sîn-aḫḫē-erība as *pirigallu*.[83] A letter from an officer to Šarru-ukīn

linguistic phenomenon see Novák 2004.

82 See Novák 2004.

83 **RINAP 3/1, 17, vii 29** which is in part a later reworking of **RINAP 3/1, 16, vi 81** suggests that copper columns were also placed on *pirigallu*-lions, but this could be a misinterpretation of **RINAP 3/1, 16, vi 81** which is itself not clear.

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mentions the manufacture of small lions (*nēšē qallūte*) and big lions (*nēšē dannūti*) for a *bīt ḫilāni* **SAA 1, 66, o. 13 – o. 15**. This suggests the *pirigallu* must have been designating such big lions designed specifically to support the large cedar columns.

5.4 Entrances and exits

nērebu; mūṣû

nērebu (< *erēbu*, to enter), "the entrance/entry", is used interchangeably with *bābu* which underlines the "open" aspect of *bābu* as a feature enabling circulation.

The notion of entering and exiting is sometimes formulated as part of building descriptions. Sîn-aḫḫē-erība opens in the city wall of Nīnawā fifteen gates towards the four winds "for entrance and egress" (*ana erēbi u aṣê*).[84] Similarly, Aššur-aḫu-iddina has build anew the *bīt mušlālu*[85] of his palace in Aššur (Baltil) *ana erēbi u aṣê.*[86] It is noteworthy that these kings should have found it necessary to stress the obvious function of gates. Obvious facts are not stressed unless significant. This suggests the function of gates was also conceived as a special *property* warranting their consecration. Gates were valued as key locations for controlling circulation in and out of cities and buildings.

A passage from Tukultī-apil-Ešarra III's inscriptions suggests *nērebu* can refer to a gateway/doorway as perceived from the exterior of a building/room when one walks in, whilst *mūṣû* (< *waṣû,* "to go out"), "the exit", would be the gateway/doorway as perceived from the interior of a building/room when one walks out. At the entrances (*nērebu*) of his palaces Tukultī-apil-Ešarra sets lion and bull colossi for display, beneath them he lays slabs of gypsum and *parutû*-limestone to brighten the exits (*unammera muṣû*).[87] Interiors would have been darker than exteriors. The light coloured stones at the exits would have created an impression of brightness from the inside. When describing his *bīt ḫilāni,* Sîn-aḫḫē-erība refers to "locks of egress and entrance" (*šigarū aṣê u nērebi*) **RINAP 3/1, 16, vii 10**.

5.5 Symbolism of doors and gates

Doors/gates figure prominently in idioms and proverbs, some of which are cited in the state correspondence. The concept of gate could be used to symbolise the presence and authority of individuals. A letter from Aššur-aḫu-iddina to the "king of the non-Babylonians" cites the proverb: "The words of a sinful woman have more weight at the judge's gate (*bābu*) than (at) her husband's (gate)".[88] The idea seems to be that even the most righteous judge will be more tolerant toward a sinful woman than her husband who has been wronged. The king of the non-Babylonians is compared to the sinful woman, whilst the Assyrian king would be the wronged husband. The gate as metaphor of personal authority is also found in the expression of exemption *ina bābīšunu lā ettiq* ("no one will pass through their gate"). The expression is used by Issar-dūrī in a letter to Šarru-ukīn regarding the exemption from litigations and taxes of the Chief-Eunuch's recruits.[89]

That doors could symbolise individuals is also clear from the importance attributed to the doors of patients' houses in exorcist rituals. In a letter mentioned previously, the chief exorcist Marduk-šakin-šumi writes to Aššur-aḫu-iddina about a ritual to drive out the evil demon and epilepsy.[90] Amongst other things, a mouse and a shoot of thornbush are to be hung from the lintel of the patient's door, and two exorcists, with a censer and torch should go around the patient's bed reciting the incantation "Go away evil *ḫultuppu*" as far as the door, after which they should conjure the door.

In his letter about the gate of Esagil, Nabû-šumulīšir praises Šarru-ukīn ensuring him that he blesses the king everyday "from the unlocking of the door-bolt socket to the closing of the gate" (*ina patê up*[*pi a*]*di turru bābi*).[91] The unlocking and closing of the gate mark the passing of time, revealing that the gate was perceived as controlling the flow of activities that make up a day. The referential fixity of the gate would also have made the gate symbolic of a certain permanence.

5.6 Windows

"Window" here refers to any purposefully designed hole in the wall of a building, which opens onto the other side of the wall but is not intended to be accessed by humans. As indicated by its English etymology (the kenning "wind + eye"), the concept of window is typically associated with both air (wind) and light (eye). There is relatively little archaeological evidence for the use of windows in Mesopotamian architecture. This is not surprising given that: 1) if they were to serve a different purpose than doors, windows would have been situated above ground level at a reasonable height of the walls, yet

84 Sîn-aḫḫē-erība, RINAP 3/1, 17, vii 71.
85 For a discussion of *mušlālu* as term and structure see Sollee/Tudeau 2018.
86 Aššur-aḫu-iddina, RINAP 3/1, 62, 5–8.
87 Tukultī-apil-Ešarra III, RINAP 1, 47, r. 30′.
88 SAA 18, 1.
89 SAA 15, 15.
90 SAA 10, 238.
91 SAA 17, 34.

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after millennia of deterioration the remaining elevations of walls are often very modest; 2) windows are holes, so it is negative evidence that is being sought and this, in the context of ruins, is not easy to identify; 3) any potential wooden, stone or metal components of the window such as frames, shutters, lattices, or bolt pins are likely to have perished or been recycled. It is nevertheless reasonable to hypothesize that windows were probably not very widely used in Mesopotamian architecture anyway, as is the case in traditional Middle Eastern architecture today. The primary function of windows in Mesopotamia was not so much to diffuse light, which was already ensured by courtyards, but rather to facilitate ventilation. Letting too much light in would have prompted temperatures to rise in the hot summer, so windows would not usually be designed for this purpose.

Now, whilst windows designed as ventilation apertures would have been very useful in the summer, in the winter this would have increased the risk of draft, which was also to be avoided although it would have been less menacing than excessive heat in the summer. It is therefore to be expected that the distribution of windows would have been all in all limited. Unless they were equipped with shutters, windows would have constituted to some extent a health and safety hazard. As mentioned at the beginning of this chapter, windows are an emblem of the demon Kilili. Kilili is associated with wisdom, she is "the wisest of the wise"[92]. Windows are a suitable emblem for Kilili because they convey ideas of wisdom, through them it is possible to gaze out into the world and see better. Windows are a point of communication with the outer world.[93]

Some of the rare archaeological evidence for windows in Mesopotamia includes wood/clay/stucco pierced screens or lattices mounted within apertures in the walls. The earliest evidence is Old Akkadian from Tall Asmar **[FIG. 21]**.[94]

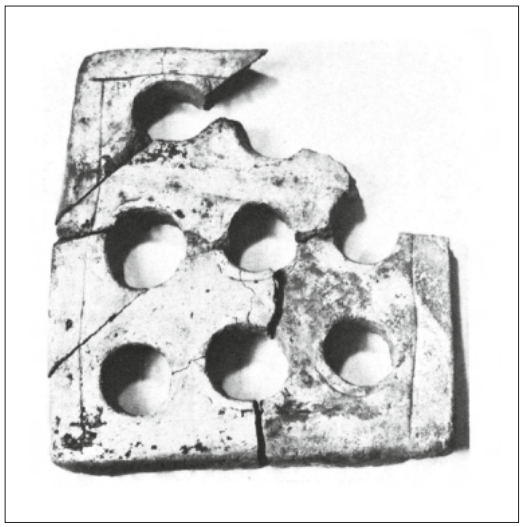

Fig. 21: Baked clay grille probably used for window in Arch House, Tall Asmar (55 × 47 cm) (Delougaz/Hill/Lloyd 1967: Plate 67).

Since windows are rare in Middle Eastern archaeology in general, it is worth mentioning the discovery of what could be late third millennium "take out" windows used to provision military troops at the site of Godin Tepe in the mountains of western Iran.[95]

apti birri, aptu, bāb zīqi

The royal inscriptions provide only one reference to an architectural feature that can be described as a window. It occurs in the inscriptions of Sîn-aḫḫē-erība: Sīn-aḫḫē-erība opens a latticed window (*apti birri*) in the corridors of his palace to bring light **RINAP 3/2, 43, 25**. The etymology of the term *birru* ("lattice") is uncertain but it could conceivably be related to the verb *barāru,* "to flicker" which is used in different contexts to describe variation in the intensity and reception of light rays.[96] In fact, light rays channelled through latticed windows very easily produce the impression that they are flickering. To get an idea of the type of lighting that could be obtained with latticework one need only turn to the latticework of the Marsh Arabs' reed houses still produced today in southern Iraq **[FIG. 22].**

Ancient iconography indicates that reed architecture changed little since its earliest depictions about 4000 years ago. The ancient Mesopotamians would have been familiar with such light and shade effects. Stark light and shade contrasts are typical of sunny dry environments. In the context of Mesopotamia, latticework would have been to light what irrigation is to water: it controls and channels it to greater effect. Latticework provided a filtering pro-

92 See Farber 1989, Beschwörungsrituale an Ištar und Dumuzi, A.1a.22–23.

93 This idea is clear in an Ugaritic myth known as the "Cycle of Baal" recovered from the house of the High Priest in Ugarit. The god Baal is adamant about building a window in his palace for reasons that are lost due to damage on the tablets. The craftsman of gods Kothar convinces him of the contrary. Baal changes his mind and commissions Kothar to install windows identifying them as a "break in the clouds". The window is thereby accepted as symbolic of Baal's meteorological function. The Baal Cycle bears similarities with the only (Akkadian) building account recovered at Ugarit from the house of Urtenu, government official from the late thirteenth century BCE. The narrator is commanded by Ea to build a window into the structure of a building. He obeys. The connection between Ea (equated with Kothar in Akkadian/Ugaritic god lists), god of wisdom and patron crafts, and windows highlights the epistemological significance of windows.

94 Potts 1995: 184.

95 Jarus 2011.

96 See occurrences in CAD: *barāru* A.

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Fig. 22: Inside the mudhif of a Marsh Arab, Iraq (Thesiger 2000).

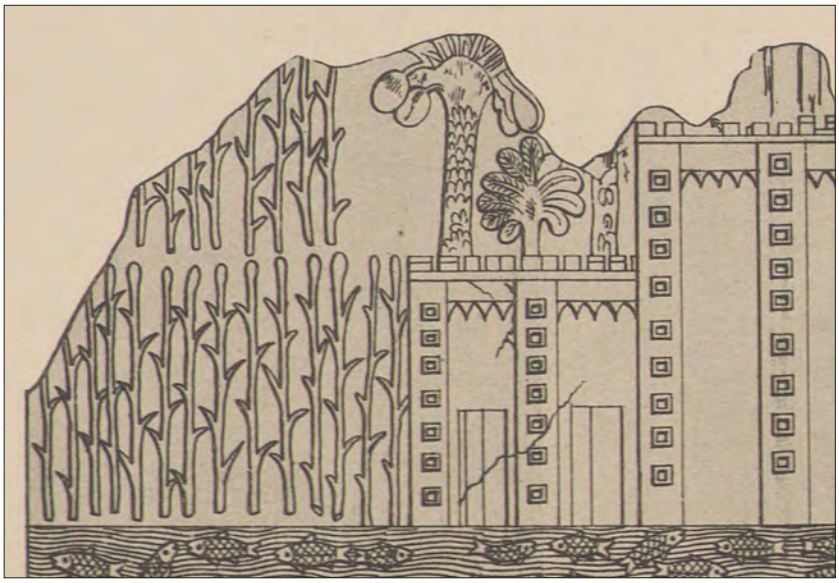

Fig. 23: Copy of a relief from the palace of Sîn-aḫḫē-erība at Nīnawā (Paterson 1912–1913: Plate 94).

tection from the sun without however obstructing it completely, the result was a gentle penumbra. It also had a strong aesthetic potential since it could create patterns in the projections of the sun. It is not inconceivable that the Assyrians hoped to reproduce in their colossal brick palaces an echo of the subtle light and shade patterns typical of the traditional reed architecture from southern Mesopotamia, the most basic but not least complex of Mesopotamian dwelling types.

References to windows (*aptu*) are scarce in the state archives. One letter suggests that *šipšatu* (*šipšutu* in text) could refer to the wooden parts of windows, presumably the lintel.[97] The scribe Nabu-šumu-ka''in writes to his king (Aššur-aḫu-iddina or Aššur-bāni-apli) about destruction in Aššur following an earthquake. In a damaged section he mentions the *šipšutu ša apte* (window lintel?) from the temple (of Aššur), suggesting it must have fallen due to the earthquake.[98] A letter from the Governor's Palace Archive in Nimrud indicates that wooden pieces were considered integral parts of windows: two pieces of wood measuring 2 cubits

97 It also appears to refer to the lintel of doors ▸ **5.2.1.a**. For more on *šipšatu* see ▸ **3.3.1**; ▸ **4.2.2**.

98 SAA 16, 100.

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and 1/6th each are used for the *bāb zīqi* (air vent) of Šarru-ukīn's *bīt ḫilāni*.[99] If these pieces of wood were divided into four equal parts as frames for the *bāb zīqi* than we can estimate that the format of the *bāb zīqi* would have been about 58 × 58 cm. A relief from the palace of Sīn-aḫḫē-erība at Nīnawā could be depicting such air vents **[FIG. 23]**.

In another letter, the exorcist Arad-Gula writes to Aššur-bāni-apli about his devotion to the king, pointing out that when Aššur-bāni-apli was crown-prince, he stood at his windows, keeping watch, to appease his god ([*ina lib*]*bi aptāte attitiz maṣṣartu* [*at*]*taṣar*).[100] It is not clear whether the windows meant are physical or metaphorical, but the same idea underlies both cases: windows were vulnerable loci and had to be guarded.

99 Postgate 1973: 208–209, no. 212.

100 SAA 10, 294, o. 20 – o. 21.

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6 DECOR

Decor here refers to the working of materials into the architecture to produce special effects, which in Assyria regularly involved media such as lighting, colours, volume, fragrances, imagery (paintings + sculpture/reliefs), and inscriptions. Different sensorial faculties were summoned. The aim however was not to simply indulge in a luxurious, stimulating environment. Although Assyrian kings certainly would have taken personal pleasure in the building projects they patronised, they were also keen to promote ideologies. Architectural decorum followed the ruling ideologies.

To be functional, ideologies, political or religious, required acceptance and therefore had to be convincing and authoritative. The external display of architectural monumentality was a clear enough message of authority to convince the masses who were not in a position to require any further justification regarding the legitimacy of ideological claims: the king did not need to win over people he controlled by force and practically never met. Those persons the king had to convince were his closest entourage, those who legitimised his power and on whom he relied, all those who actually lived around him and spent time inside the buildings, palaces or temples, where the fate of things was decided. Betting on monumentality would not have been enough to encourage the acquiescence of instructed individuals, many of whom would have understood power better than the king himself. Something more subtle, engaging and accommodating was needed. Such spatial conduciveness could be provided by the decor.

6.1 The concept of 'decor': decoration and the senses

za'ānu, usāmu

The concept of 'decorating' exists in the Akkadian language, usually expressed by the verb *za'ānu* "to overlay, to adorn" and its derivatives. In the architectural context it is used mainly to designate the metal plating and stone studding of walls. The verb most commonly used to denote the act of decorating a building more generally is *usāmu* (Bab. *asāmu*), literally "to make appropriate." For example, Aššur-aḫu-iddina "made appropriate" the cult centres of Assyria and Akkad with silver and gold to make them "glow like the day".[1] This reflects how ideological soundness was an essential criterion when making aesthetic choices. "Decorating" a building in the Akkadian sense was not only about adornment but also about transforming the inhabited space into something that would inspire a form of trust in the order of the world. Interestingly, the latin *decorare* from which "to decorate" is derived, comes from a Proto-Indo-European base **dek*-, "to take, to accept; to be suitable". In fact, the Roman architect Vitruvius lists *decor,* "propriety", as one of his six architectural principles, linking it to the ethic notion of *decorum* encountered in the rules of rhetoric, which demanded that the choice of words fit the occasion. The Mesopotamian notion of decoration is therefore akin to the Roman.

Decoration in the sense conveyed by the verb *za'ānu* was strongly associated with luxurious ornamentation. Only kings could afford it and it was therefore essential to royal ideology. Itti-Šamaš-balāṭu, an Assyrian official active in Northern Phoenicia, writes to Aššur-aḫu-iddina seeking help against Ikkilu of Arwad and his followers. To obtain the king's favours his letter ends with expressions of humility. He pleads "may I decorate (*luza''in*) the interior of the king's palace!"[2] Itti-Šamaš-balāṭu suggests he is such an insignificant person compared to the king, that he would happily devote his life to the simple task of decorating the king's palace; at the same time, by helping to decorate the king's interior, which is essential for royal ideology, he hopes to enjoy the honour of belonging to the king's closest entourage.

Architectural decorum had to awaken the senses in a way that would capture the mind, triggering positive responses to the established order. Exposed to "extreme aesthetics", subjects would have experienced what is most accurately described through an Akkadian expression, *puluḫti melammi,* the "terror of the formidable radiance", typically inspired by the gods and which, it will be argued here, was also to be provoked to a certain extent by Assyrian architecture even though it was never put in those terms by the Assyrians. This architectural "*melammu* effect", as we shall call it, was not only luminous, as its name might suggest, but operated on all levels of perception. It relied on techniques which made use of:

—monumentality

—colour and light contrasts

—materials and motifs evoking nature

1 Aššur-aḫu-iddina, RINAP 4, 1, 38–39.

2 SAA 16, 127.

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—mythological and political themes treated in three dimension (relief and sculpture)

—the productive ambiguity of cuneiform writing (form and content)

Monumentality will not be treated here since, although it is intrinsic to the impression a building makes, it goes beyond the decor proper and touches more upon questions of urbanism. All the other techniques listed here were fundamental to decor and will therefore constitute the topic of this chapter. As we shall see, these techniques were developed in a highly sensorial way, taking into account the senses of sight, smell, hearing and touch. This means that the "formidable radiance" (*melammu*) of Assyrian architecture is very much subjective, it depends on the subject (the passer-by) more than on the object: the passer-by perceives what his senses reconstruct after experiencing the *puluḫti melammi*.[3]

6.2 Visual techniques: light and imagery

It is clear from the Assyrian royal inscriptions that decoration often involved interior spaces, those in which people lived, those in which they sought protection. The design of interior spaces would determine what people considered home in its broadest sense, that is, the familiar environment they found comfort in. It provided a reference for the construction of identities. It was a highly effective medium of psychological conditioning. Interior spaces were tied to questions of lighting.[4]

In the Assyrian royal inscriptions, decoration is often associated with internal dark spaces. This is not to say it did not manifest itself on the exterior of buildings. Decoration was an integral component of external architecture as evidenced not only by the inscriptions but also by reliefs, iconography and archaeology. In fact, royal inscriptions do not always make it explicit whether decors described apply to indoor/closed (ex. function rooms, private apartments) or outdoor/open (ex. courtyards, external facades) environments: internal decoration could be reflected in the external decoration and vice versa. It is information related to lighting that one typically uses to determine whether the decoration described is indoors or outdoors. Such information more often than not draws us inside. As a result, decoration often involves making spaces brighter, or enhancing the aesthetic quality of darkness. For example, as seen in the previous chapter, Tukulti-apil-Ešarra III tells us he laid slabs of gypsum and alabaster below the colossi at the entrance of his palace in order to brighten the exits, thereby placing the imagined observer inside the dark palace looking out into the bright exterior reflected on the slabs **RINAP 1, 47, 1, 30′**. As for Sîn-aḫḫē-erība, he opened latticed windows in the corridors of his palace to brighten them up. He then fixed knobbed pegs of silver and copper along the ceilings, capturing the light **RINAP 3/2, 43, 28–29**.[5] The desire of brightening dark spaces applied mainly to palaces and was is in stark contrast with the necessity of keeping certain spaces dark, especially in temples. For example, it was a religious obligation that the cella of gods should not see sunlight.[6] In an inscription describing the reconstruction of the temple of the goddess Kidmuru, Aššur-nāṣir-apli II urges his successors who in the future will find a mound (*bīrūtu*) in place of this temple, to renovate its ruins and prevent it from seeing the sun (*ašar Šamši lā tušaribšī*).[7]

Light is only one in many aspects of nature the Assyrians attempted to imitate in the decoration of their palaces. Natural themes include water, plants, animals. Light as an aspect of heaven, in a physical and metaphorical sense, is, however, the natural theme most thoroughly developed in building accounts. Luminosity is the main ground on which heaven and architecture are compared.

manzât, kilīlu

Decorative motifs and features related to vegetal or atmospheric phenomena are not uncommon.[8] Aššur-aḫu-iddina describes surrounding the palatial halls of his *ēkal māšarti* with friezes and ledges in bricks glazed the colour of obsidian and lapis lazuli "like a wreath" (*kilīliš*) and he besets all the gates with a vault and an archivolt "like a rainbow" (*kīma manzât*) **RINAP 4, 1, vi 25 – vi 26**.[9] The rainbow imagery is already present in the Sumerian inscriptions of Gudea dating from the late third millennium BCE: curved wooden posts join above the gate of the Eninnu as a "rainbow stretching above the sky".[10]

kilīlu evokes vegetal elements. Vegetation, more specifically flowers and fruit were symbolic of fertility and wealth. Sîn-aḫḫē-erība has set at the door of his palace "*lamassātu* of *parūtu*-limestone and

3 Here French comes in handy. We could say that the *éclat redoubtable* (formidable radiance) produces an *éclatement sensoriel* (sensorial explosion) so that *le passant devient patient* (the passer-by becomes the patient).

4 For an exhaustive treatment of sunlight and shade in early Iraq see Shepperson 2017.

5 ▸ **6.5.1**.

6 As pointed out by Shepperson (2017: 191–192), the darkness of the cella allowed a private relationship between worshipper and deity, without any interference from other gods, not even Šamaš.

7 Aššur-nāṣir-apli II, RIMA 2, A.0.101.38, 30–31.

8 For the latter phenomenon see following section.

9 ▸ **4.1.2**.

10 Gudea, Cyl. A xxv 7– xxv 8 (ETCSL, c.2.1.7, 681–682).

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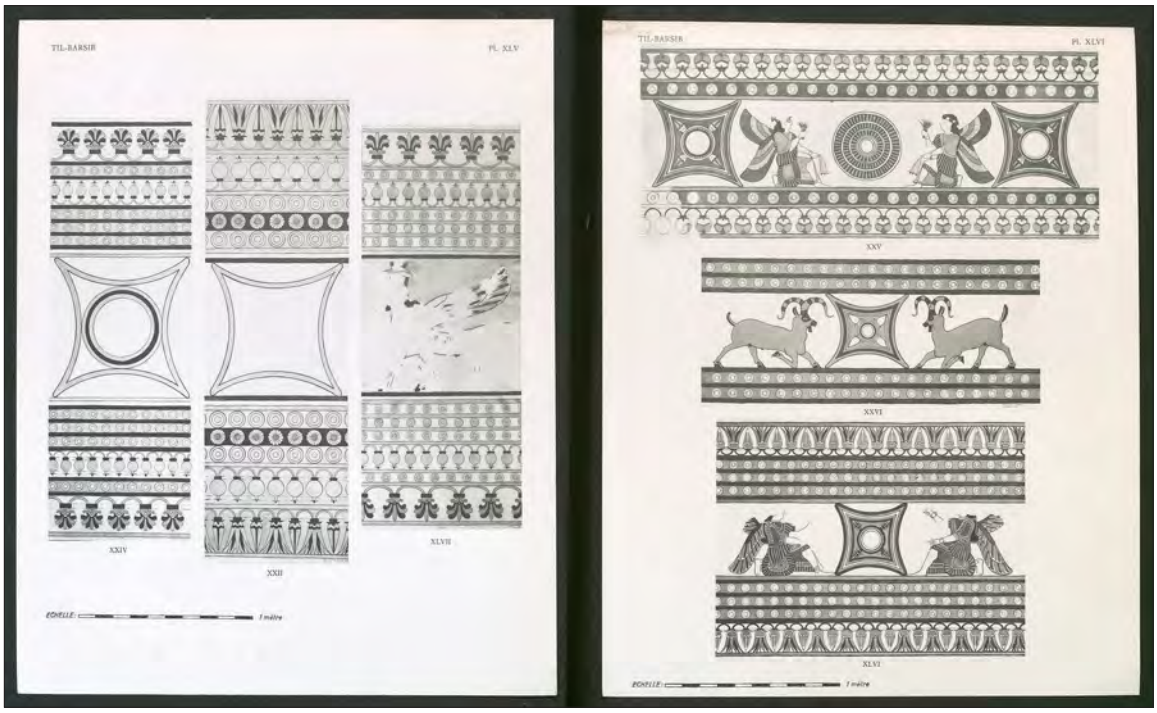

Fig. 24: Vegetal motifs from the palace of Til Barsip (Thureau-Dangin/Dunand 1936: Plates 45–46).

ivory which carried flowers (*illūru*), their fore-legs (lit. "hands") kneeling, clad with dignity and allure, filled with abundance".[11] Tukultī-apil-Ešarra I sets replicas in obsidian of date palms against the towers of Aššur-rēša-iši's palace which he renovates in Nīnawā.[12] As seen earlier, Aššur-rēša-iši himself surrounded the towers at the gate of Ištar of Nīnawā's palace with rosettes (*ya'erī ša abnê l*[*ū ul*] *mîšunūti*).[13] Archaeological evidence has revealed that vegetal motifs were amongst the most popular motifs in ornamental decoration of palaces[14] and temples[15], especially in the Neo-Assyrian period. Such motifs include (often in the form of garlands) palmettes, arcaded buds, pomegranates, large rosettes like sunflowers, small rosettes like daisies, lotus flowers, lilies, (pine) cones **[FIG. 24]**.[16] The "tree of life" motif emblematic of royal abundance should also be mentioned here.[17]

nummuru

The general aim of Assyrian rulers when building, repairing, renovating and rebuilding was to make temples and palaces "radiant" (*namru*) for the gods and thereby achieve the "admiration" (*tabrītu*) of the people. This made a building "appropriate" (*maḫru*).

It is clear from the earliest Assyrian royal inscriptions that the aesthetics of interior decoration for temples were inspired by celestial imagery.[18] This is not surprising given that it was believed that the world of the living on earth was to reflect the world of the gods in heaven. A Babylonian text known as the "Babylonian diviner's manual" states: "The signs of the earth with those of the sky give signals (*ṣaddū*). Sky and earth together produce portents (*giskimmu*). (Although these appear) separately (*aḫennâ*), they are not (actually) separate (*aḫûtu*), (because) sky and earth are interrelated (*itḫuzū*)."[19]

The earthly forms of the temples are meant to reflect heaven. This is a topos of Mesopotamian literature.[20] Descriptions of such decors are popular

11 Sîn-aḫḫē-erība, RINAP 3/2, 43, 25–26.
12 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.10, 67–68.
13 Aššur-rēša-iši, RINAP 1, A.0.86.2.
14 See for example the stone relief with sacred tree in Aššur-nāṣir-apli II's throne-room at Kalḫu.
15 See for example the entrance to the temple of Sin in Loud/Altman 1936: fig. 99.
16 Cf. Reade 1979: 43–44; Albenda 2005: 84–118.
17 See Nevling Porter 2003: 1–37.
18 The earliest evidence for the use of celestial imagery in temple decoration comes from Gudea's Cyl. A xxviii 1–xxviii 2 (ETCSL c.2.1.7, 757–758): "Gudea decorated (the Eninnu) with the radiance of heaven (še-er-zi an-na-ka)".
19 Text edited in Oppenheim 1974: A Babylonian Diviner's Manual, 38–40.
20 For example, a Sumerian text known as "Enlil in the Ekur" (Enlil A) illustrates this idea already. Enlil's temple is personified ('n' before verbal stems taken as final person prefix of the 3rd person agentive) and described in very vivid terms as if it were reflecting heaven. The earthly temple decorations emulate characteristics of the divine abode: 77) e_2-kur e_2 za-gin$_3$ ki-tuš maḫ ni$_2$ guru3^{ru}-zu /78) ni$_2$ me-lim$_4$-bi an-ne$_2$ im-us$_2$ /79) ĝessu-bi kur-kur-ra ša-mu-un-la$_2$ /80) MUŠ$_3$-bi an-ša$_3$-ga-aš ša-mu-un-

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in Assyrian inscriptions from the Old Assyrian period onward. In the rooms of the temple of Enlil at Aššur[21], Šamšī-Adad I sets cedar doors inlaid with stars of silver and gold **RIMA 1, A.0.39.1, 39–42**:

> *ina bētāte dalāte erēni ša kakkabānīšina kaspi u ḫurāṣi ušziz*
>
> In the rooms I set up doors of cedar whose stars were of silver and gold.

The doors' decoration is not introduced as a novel feature: the stars are mentioned as components of the doors without further explanation suggesting they were not an uncommon detail at the time. The emphasis is instead on the choice of precious metals. The effect of clear shining metals on dark cedar would have been striking so this, in addition to the prestige of silver and gold, is probably what Šamšī-Adad I prides himself on.

In the same spirit, Tukultī-apil-Ešarra I compares the interior of the temple of Anu and Adad in Aššur to the interior of heaven. He plans and laboriously rebuilds and completes for the gods a dwelling "which is resplendent like the stars of the sky and is the choicest through the craft of the building trade" (*ša kīma kakkab šamê šūpû u ina šipar itinnūti ma'diš nussuqu*).[22] The description continues as follows:

> *qerebšu kīma libbi šamê ubenni igarātēšu kīma šarūr ṣīt kakkabāni ussim ušerriḫ nāmerēšu u siqqurātēšu ana šamê ušeqqīma u gabadibbīšu ina agurrī urekkis*
>
> Its interior I made beautiful like the core of heaven, its walls I made proper and splendid like the brilliance of star-rise, its watchtowers and its ziqqurats I raised high toward heaven, and its parapet I bound up with kiln-fired bricks.[23]

Centuries later, Aššur-aḫu-iddina also employs imagery evocative of the sky to describe the interior of his temples. He presents himself as the one who had Egašankalama the temple of Ištar in Arbēla covered in *zaḫalû* alloy and who "made it glow like the day" (*unammeru kīma ūme*).[24] The same expression is used when referring to renovations in the sanctuaries of the cult centres of Aššur and Akkad: the sanctuaries are inlaid with silver and gold and made to "glow like the day".[25] This is echoed in the inscriptions of Aššur-bāni-apli where the king records he had the walls of Eḫursaggalkurkurra in Aššur "clad with red gold" (*ḫuššû ušalbiš*) and made them "glow like the day".[26] He also resorts to celestial imagery when describing Marduk's cella in Esagil:

> (…) *ina kaspi ḫurāṣi nisiqti abnī Esagil aznunma kīma šiṭir burūmû unammir Eumuša*
>
> (…) With silver, gold and precious stones I decorated Esagil. Like the stars of heaven I made Eumuša glow.[27]

Here the simile uses as referent for brilliance the metaphor *šiṭir burūmû* which is usually employed with more technical connotations to evoke the cosmic significance of architectural planning[28]. The importance of luminosity is apparent in these descriptions, not only explicitly through the lexical field but also implicitly through the choice of materials. The materials used are lustrous and shiny, imitating the radiance of the sky and its celestial bodies. Sparkling gold and silver interiors were not the norm. For their gods, Assyrian rulers intended to create interiors that felt out of the ordinary. In his account of renovation works for the temple of Aššur, Aššur-aḫu-iddina describes smearing the walls of Aššur's cella with gold as if it were plaster (*igārāti ḫurāṣa kīma sīri asīr*) **RINAP 4, 60, o. 25′**. In the divine world that temples recreate, gold replaces plaster.

The notion of radiance had an important *Sitz im Leben*.[29] Images of radiant temples made their way into everyday speech. In a letter to Šarru-ukīn, Ḫunnî a temple official (?) praises the king in these words: "May those (gods) whose temples you have made glow like sunrise (*kīma nipḫi Šamaš tunamerrūni*) bless the king my lord!"[30]

Metals provided the luminosity evocative of the stars in heaven. Heaven as the uppermost domain of the world would equally have been associated with the sky. The colour blue must therefore also have contributed to producing heavenly impressions. Lapis lazuli blue was the Mesopotamian blue *par excellence*. Lapis lazuli was used as slabs but seems to also have been used as pigment for the glazing of

bad-bad-re$_6$ — "...The Ekur, your shining house, great dwelling that carries splendour, has its awe-inspiring radiance reach heaven, stretches its shadow over all the lands, pushes back its crown (?) toward the heaven's core" (for text edition, cf. Attinger 2014/2015). The temple's grandeur is metaphorical but it is described in very physical terms as a building so high that its crenellations (lit. "crown") touch the sky and its shade projects over all the lands. This is evidence that heavenly grandeur could be conceived of in terms of physical realities. The awe-inspiring radiance of the temple that reaches heaven is perceptible to humans through earthly forms. An Old Babylonian riddle (IM 10863) suggests that in Mesopotamian folklore tall splendid buildings were likened to rays of light from heaven: "The tower is high, it is high but nonetheless has no shade. (–What is it?) The sunlight." For edition see Streck/Wasserman 2011: 123–124.

21 According to Grayson (1972: 19), the temple described here was probably part of Aššur's temple.

22 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.1, vii 93 – vii 96.

23 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.1, vii 97 – vii 104.

24 Aššur-aḫu-iddina, RINAP 4, 77: 8–9.

25 Aššur-aḫu-iddina, RINAP 4, 1: v 38 – v 39.

26 Aššur-bāni-apli, RINAP 5, 15, ii 4.

27 Aššur-bāni-apli, RINAP 5, 1, 14–16.

28 ▸ **1.2.3**.

29 For a discussion of radiance in the art of Mesopotamia see Winter 1994.

30 SAA 1, 133, r. 4′ – r. 6′.

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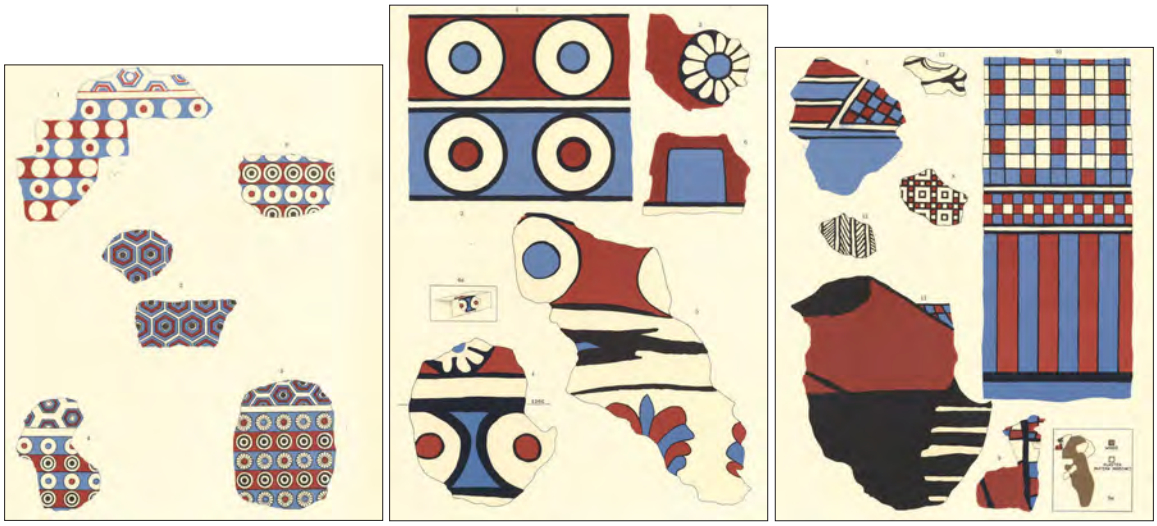

Fig. 25: Ornamental motifs from the throne room and bathroom of Šarru-ukīn, Dūr-Šarrukīn (Loud 1936b: Plates 1, 2 and 3).

bricks. Aššur-nāṣir-apli II uses gold and lapis lazuli for the shrine of Ninurta.[31] Aššur-bāni-apli uses kiln-fired bricks (the colour) of obsidian and lapis lazuli for the *bīt akīti* of Ištar in Nīnawā. The lapis lazuli blue would have been enhanced by the lustrous black colour of obsidian, both colours evoking together different shades of the night sky.

In the state archives, silver, gold and bronze figure as important decorative materials to create impressions of divine radiance, especially in temples. A letter from Ṭāb-šar-Aššur to Šarru-ukīn reports that the doors for the temples of Sîn, Šamaš and Ningal/Nikkal, which are to be coated with plaques (*lē'āni*) of silver and bronze, have been made **SAA 1, 66, r. 8 – r. 13**. The metallic radiance would have been of particular significance in the temples of the moon god, his consort, and the sun god. One would expect apertures would have been provided to let sun or moon rays into the dark sanctuary rooms and let the metals glimmer, otherwise the metals could only have been revealed by fire devices. Mār-Issar writes to Aššur-aḫu-iddina from Babylon informing him that he has given silver to the artisans who came with him so that they may overlay (*uḫḫuzū*) the sanctuaries of Ezida as the king commanded.[32] Another letter from either Aššur-aḫu-iddina or Aššur-bāni-apli orders an official to consult four other individuals about the feasibility of making the waters of the flood monsters gold.[33] If it is feasible, the four individuals will release the necessary gold. The context of the letter is building works, so the flood monsters are in all likelihood decorative elements.

The splendid decoration of temples attracted thieves. A letter from Aššur-rēṣuwa, priest of Ninurta's temple at Kalḫu, reports that an area x spans wide and 11 cubits long was cut out and eight *sakāni* (bands?) of silver taken off from the walls of the temple by temple personnel. Previously, three fingers of gold had been cut off from the beams at the head of Ninurta's statue.[34] Another letter, from Sîn-na'di, mayor of Aššur, notifies the king that a plaque (*lē'u*) of gold, which had been stolen from the temple of Aššur, has been recovered.[35] Precious metals ornamented the temples on all levels of the architecture, doors, walls, roofs.

The "heavenly style" which favoured the use of lapis lazuli and obsidian unsurprisingly made its way into palaces too, although the heavenly connection is made less explicit. Both Sîn-aḫḫē-erība and Aššur-aḫu-iddina decorate their palaces with friezes of (kiln-fired bricks glazed the colour of) obsidian and lapis lazuli.[36] Tukultī-apil-Ešarra I covers his palace with a revetment of kiln-fired bricks (glazed the colour) of obsidian, lapis lazuli, *pappardilû*-stone and *parutû*-limestone.[37]

6.2.1 Painting on plaster and stone

eṣēru, banû, esēqu

No explicit mention is made of murals[38], as if it were not considered an art in its own right. On some oc-

31 Aššur-nāṣir-apli II, A.0.101.30, 69–70.
32 SAA 10, 354.
33 SAA 12, 7.
34 SAA 13, 128.
35 SAA 13, 28.
36 Sîn-aḫḫē-erība, RINAP 3/1, 15, vi 53 – vi 54; Aššur-aḫu-iddina, RINAP 4, 1, vi 24.
37 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.10, 63–70.
38 The available cuneiform evidence suggests that the Akkadian language does not have a term equivalent to "painting" as such. One would then expect references to coloured plaster or perhaps terminology related to the

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casions kings mention "depicting" (*eṣēru*) their exploits[39] in their palaces/temples but it is not clear what medium they were using for the depictions, since *eṣēru* can refer to drawing through any medium including carving.[40] In any case, archaeological evidence reveals that the Assyrians did paint murals, those at Kār-Tukultī-Ninurta dating from the late second millennium being amongst the most impressive.[41] Paint was typically used to depict ornamental motifs on both internal and external walls of temples and palaces **[FIG. 25]**. It could also on some occasions depict narrative scenes, but from the available evidence this usage appears to have been rare. It may be that its typically non-narrative character made wall painting less significant in the eyes of the Assyrians. Abstract geometrical motifs were popular but they do not appear to be mentioned in the written sources.

The earliest archaeological evidence for al secco technique in Assyria was recovered from the palace terrace of the Middle Assyrian city Kār-Tukultī-Ninurta founded by Tukultī-Ninurta I[42], whilst the most comprehensive evidence is provided by the Assyrian governor's palace in Til Barsip, probably dating from the reign of Tukultī-apil-Ešarra III. Colours popular amongst Assyrian kings for plaster were blue, blue/green, red, red/brown, black, white.[43] The most common colours for the plaster in Šarru-ukīn's palace at Dūr-Šarrukīn appear to have been blue/green, red and black on a white background **[FIG. 26]**.[44] Blue, red, black and white are also the main plaster colours recovered from the palace of Tukultī-Ninurta I in Kār-Tukultī-Ninurta and the Kassite Kurigalzu I's palace in Dūr-Kurigalzu.[45] From the palace of Til Barsip were recovered red/brown and various shades of purple (red+blue) in addition to red, blue, black, white.[46]

The first potential written attestation of a mural dates from the reign of Tukultī-apil-Ešarra I who depicts (*eṣēru*) in his palace the victory and might

Fig. 26: Reconstruction of a wall painting from Ḫorsābād (Loud/Altman 1938: Plate 89).

granted to him by the gods.[47] The interpretation that this should be a reference to wall painting is founded on historical grounds alone. Tigalth-pileser I would have been acquainted with the art of fresco, which is already evidenced under Tukultī-Ninurta I, and he may have made a point of reintroducing it. As noted by Pauline Albenda, he was likely inspired in his endeavours by the skilful wall paintings of the Kassites at Dūr-Kurigalzu, a city he conquered on his campaigns to Babylonia.[48]

Paint was not only applied to plaster but also to stone. A passage from the inscriptions of Aššur-nāṣir-apli II most likely refers to pigment (*zagindurû*) applied either on plaster, in the glazing of bricks, or directly on stone reliefs[49]. The king states with respect to his palatial halls at Kalḫu:

verb *tarāpu* which means to cover/sprinkle/brighten, occasionally referring to colour (cf. AHw: *tarāpu*).

39 Unsurprisingly, the first references to such depictions coincides with the first examples of the narrative genre known as "royal annals": both developments can be assigned to the reign of Tukultī-apil-Ešarra I. For a historical overview of narrative developments in the royal inscriptions see Tadmor 1981.

40 Cf. Tukultī-apil-Ešarra I, RIMA 2, A.0.87.10, 76–77; Aššur-nāṣir-apli II, RIMA 2, A.0.101.30, 30–31; Šarru-ukīn, Winckler 1889: Nimrud Inscription 18.

41 Cf. Moorey 1994: 325.

42 See Harper et al. 1995: 110–111.

43 For the statistical prevalence of black and red in the palaces of Aššur-nāṣir-apli II at Kalḫu and Šarru-ukīn at Dūr-Šarrukīn, see Sou 2015: 5.

44 Altman/Loud 1938: 83. Regarding the accuracy of Altman's reconstruction see Green/Teeter/Larson 2012.

45 Albenda 2005: 16–17.

46 Thureau-Dangin/Dunand 1936: 47–48.

47 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.10, 76–77.

48 Albenda 2005: 4.

49 Marchetti (2009: 86) argues in favour of a relief (instead of a mural or glazed brick panel), which according to him would have been cut into "*zagindurû* stone". The existence of a "*zagindurû* stone" is disputable. Should

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Fig. 27: Tile from Til Barsip representing a goat painted with Egyptian blue (L. 51.6 cm; W. 63.5 cm), AO 23010 (© Musée du Louvre).

> *tanatti qardūtīya ša pirik ḫuršāni mātāti u tâmāti attallaku kišittu ša mātāti kalîšina ina zagindurê ina iqārātīšina ēṣir agurrī ina uknî ušabšil ana elēna bābātīšina ukīni*
>
> The praise of my heroism, that I walked across mountains, lands and seas, (as well as) the conquest of all the lands —in *zagindurû* (colour) I depicted on their walls. I fired bricks in lapis lazuli (glaze) and fixed them above their gates.[50]

It appears very likely that *zagindurû* (< Sum. za-gin$_3$ "lapis" + duru$_5$ "fresh") should refer to Egyptian blue.[51] In his eighth campaign Šarru-ukīn describes a fresh meadow as having the appearance of fired *zagindurû* (*ugāršu ša kī zagindurê ṣirpa šaknūma*)[52], which evokes well the celadon tints shared by fresh meadows and Egyptian blue. Egyptian blue was commonly used in relief painting. A sculpted gypsum relief from the palace of Šarru-ukīn at Dūr-Šarrukīn depicting a caparisoned horse was recently studied using visible-induced luminescence imaging and Raman spectroscopy: Egyptian blue was found to be extensively used.[53] Moreover, comparison with the distribution of pigment on contemporary frescos from Til Barsip revealed that similar colour schemes were used on reliefs and frescos **[FIG. 27]**.

In addition to the aforementioned colours one should finally also mention the popular practice of applying gold and silver leaf to walls (usually on a plaster surface) as plating. For example, Aššur-bāni-apli clad the walls of Ehursaggalkurkurra with gold and silver.[54]

6.2.2 Polychrome glazed bricks

Polychrome glazed bricks were recovered in significant quantities from various Assyrian temples and palaces. Often they were arranged to depict narrative compositions **[FIG. 28]**.

Obsidian black and lapis lazuli blue must have been the dominant colours of the brickwork in temples and palaces judging from their frequent mention. Tukultī-apil-Ešarra I covers the towers and walls of his palace with a revetment of kiln-fired bricks (glazed the colour) of obsidian, lapis

zagindurû have been a precious stone (such as a variety of lapis lazuli, as has often been assumed based on lexical texts), it is likely to have been extracted in small sizes and quantities and could therefore not have been appropriate for the carving of a monumental relief.

50 Aššur-nāṣir-apli II, RIMA 2, A.0.101.30, 30–32.

51 The identification of *zagindurû* as a type of glass proposed by Oppenheim et al. (1970: 35) cannot be verified and, more generally Robert Brill notes that "there is sufficient ambiguity in the translations of the texts to leave room for the possibility that the materials being prepared were glassy faience, Egyptian blue or some related but not yet clearly-defined material (Brill 1970: 108)". What is clear however from the so-called "glass texts" is that *zagindurû* was produced in *kūru*-furnaces (see Tablet A, line 15 in Oppenheim et al. 1970: 34) and would thereby have belonged to the category *uqnû kūri* ("lapis lazuli of the furnace"): artificial "lapis lazuli" was distinguished from real lapis lazuli (Oppenheim et al. 1970: 10). This makes the identification with Egyptian blue more plausible yet since Egyptian blue was known in Egyptian as *hsbḏ iryt* ("artificial lapis lazuli") (Delamare 2008: 18–19). The use of *zagindurû* as pigment is supported by a letter from Māri (ARM 28, 9) which states: 6 *ma-na* NA$_4$ *za-gi-id-ru-u$_2$ / a-na ši-pi$_2$-ir / ˹te-qi$_2$-tim˺ / ša* 2 GIŠ *e-re-˹qi$_2$˺* GAL *˹Mār-Ištar˺ am-ḫu-ur* (Six mina of *zagindurû* I received for the painting work of two great chariots).

52 See KAH 2, no. 141, 229 + TCL 3, Pl. 11, 229.

53 See Verri et al. 2009.

54 Aššur-bāni-apli, RINAP 5, 6, i 13′.

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Fig. 28: Left: glazed brick panel from Fort Shalmaneser, Kalḫu, reign of Salmānu-ašarēd III, IM 72136 (Iraq Museum) (photograph courtesy Osama Shukir Muhammed Amin FRCP (Glasg)/Ancient History Encyclopaedia); right: reconstruction of relief (Reade 1963: Plate IX).

lazuli, *pappardilû*-stone, *parūtu*-alabaster.[55] Aššur-bāni-apli rebuilds the *bīt akīti* of Ištar in Nīnawā with kiln-fired bricks of obsidian and lapis lazuli (glazing).[56] Stones were often mentioned to refer to glazed bricks. As seen previously, Aššur-nāṣir-apli II states he "fired bricks in lapis lazuli" (*agurrī ina uknî ušabšil*) [57] for his palatial halls at Kalḫu. Although copper and cobalt ions were typically used to produce blue glazes[58], Aššur-nāṣir-apli's statement suggests that the lapis lazuli mineral may also have been used to produce the colour, and was not simply mentioned to describe the colour obtained.[59]

55 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.10, 63–70.
56 Aššur-bāni-apli, RINAP 5, 10, v 46 – v 48.
57 Aššur-nāṣir-apli II, RIMA 2, A.0.101.30, 30–32.
58 See Moorey 1994: 320.
59 This is not inconceivable in view of recent evidence yielded from the application of Raman spectroscopy on 13th century C.E. Persian Lâjvardina ceramics: the ultramarine colour of the ceramics resulted from an unexpected deposit of lazurite-rich slip at the interface between the body and a cobalt-containing lime-rich glaze (cf. Colomban 2003). This proves that ancient Persian references to lapis lazuli colouring for glazing were not about a colour "similar" to lapis lazuli gems as previously thought, but about lapis lazuli pigment itself. The same situation could be envisaged for Assyrian lapis lazuli glazed bricks.

6.2.3 Sculpture and relief

Mesopotamia was a land of clay. Practically all creative productions were channelled through this material, from writing to architecture. Although clay was the preferred building material of the Assyrians, they had better access to stone than the Sumerians and Babylonians, and made greater use of it, for tectonic and decorative purposes. As a result, they developed a distinctive style in the craft of stonemasonry, which culminated in sculptures and reliefs becoming an integral part of Assyrian architecture.

Whilst the sculptures[60] were essentially protective, the reliefs were demonstrative. The artistic expression developed by the Assyrians could be described as both defensive and "offensive". In a way, the dynamics of war, essential to the Assyrian ideological narrative, infused life into what would otherwise be a very static architecture. Interestingly, there appears to have been no term that meant "relief" specifically. In cases where it is clear that reliefs are at stake, the verbs typically employed are *banû* ("to fashion")[61] and *esēqu* ("to carve") **RINAP 4, 1, vi 29**:

60 Only sculpture incorporated into the architecture is treated here.
61 Šarru-ukīn, Fuchs 1994, Stier, 77–78: "On slabs of limestone I depicted (*abnīma*)…"

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danān Aššur bēlīya epšēt ina mātāti nakrāti
ēteppušu ina šipir urakūti ēsiqa qerebša

The strength of Aššur, my lord, (and) the action I accomplished in enemy lands I carved in it[62] through the work of the sculptor's craft.

6.2.3.a Depicting mythological and exotic creatures

šēdu, lamassu, lamassatu, apsasû/apsasītu, immer šaddî, urmaḫḫu, piriggallu, kusarikku, uridimmu, girtablīlu, kulīlu, laḫmu, kurību, binût apsî, abūbu, burḫiš, nāḫiru

A number of mythological and/or exotic creatures are mentioned as sculptures in the Assyrian royal inscriptions. As we shall see, apart from the lion, ubiquitous royal emblem, the creatures most frequently mentioned are mythological. Starting in the Middle Assyrian period, however, Tukultī-apil-Ešarra I explicitly incorporates non-mythological creatures into his royal architecture. For the right and left of an entrance to his palace he has made replicas in basalt of the exotic animals he encountered as a result of his conquests in foreign lands. The animals are a *nāḫiru* "which they call sea horse" (*ša sisû ša tâmti iqabbišūni*), probably a toothed whale[63], which he killed with a harpoon in the sea of the West, and a "live *burḫiš*" (*burḫiš balṭa*), a wild ox, from the land Lumaš in the East.[64] Inscriptions of Tukultī-apil-Ešarra I reveal he was an enthusiastic animal collector. By representing in his palace the animals he collected he indulged in his passion and showed off how far his empire reached. Aššur-bēl-kala also decorates his palace in Aššur with statues of the *burḫiš* and *nāḫiru.*[65] He makes some *burhiš* statues in black basalt, others in white limestone, which could be a realistic representation of differently coloured specimens. Aššur-nāṣir-apli II no doubt inspired by Tukultī-apil-Ešarra I and Aššur-bēl-kala also incorporates exotic animals in the decoration of his palace. With white limestone and *parūtu*-limestone he makes "beasts of the mountains and seas" (*umām šadê u tâmāti*) and stations them at the entrances of his palace.[66]

Statues are usually described in pairs or sets. Aššur-aḫu-iddina places to the right and left of the gates of his palatial halls in Nīnawā: various *šēdu*'s and *lamassu*'s (always mentioned in pairs); lions facing one another; matching *apsasītu*'s; and twin *lamassatu*'s cast in shining copper **RINAP 4, 1, vi 15**. The appeal of parity was probably related to its protective connotations by analogy with protective deities. Protective deities were typically positioned in pairs, to the right and left, and front and back of individuals. A sense of wholeness was achieved since protection was secured in all directions of the universe.[67]

Fig. 29: One of a pair of limestone lions from the temple of Ištar adjoining Aššur-nāṣir-apli II's palace in Nimrud (W. 224 cm; H. 259 cm), ME 118895 (© Trustees of the British Museum).

Displaying statues in pairs also increased their presence, emphasising their significance and making them more visible. Aššur-nāṣir-apli II stationed statues of lions in white limestone at the gates of Ištar Šarrat-nipḫi's temple at Kalḫu **[FIG. 29]**. These lions were discovered by Layard, carved with inscriptions. In the inscriptions, Aššur-nāṣir-apli summons the "future prince" not to remove these lions from that entrance and curses whomever "removes these lions, throws (them) in the water, burns (them) with fire, (or) puts (them) in a prison where (they) cannot be seen (*ina bīt kīli la amāri*)".[68] The visual aspect was primordial.

Here follows for reference a list of creatures encountered, with brief descriptions:

62 Refers to the palace.

63 Cf. Wapnish 1995. Remains of what is probably one of the two basalt *nāḫiru*-animals mentioned by Aššur-bēl-kala have been found in the courtyard of the Aššur temple. The object bears an inscription describing it as property of the palace of Aššur-bēl-kala. The object has the sleek appearance of some kind of dolphin. See picture of the sculpture in Gadd 1948.

64 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.4, 67–71.

65 Aššur-bel-kala, RIMA 2, A.0.89.7.

66 Aššur-nāṣir-apli II, RIMA 2, A.0.101.23, 19–20.

67 ▸ **8.2.4.a**.

68 Aššur-nāṣir-apli, RIMA 2, A.0.101.32, 13–21.

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—(male?) *šēdu* ([d]ALAD[69]); (male?[70]) *lamassu* ([d]LAMMA): protective genies typically in pairs[71], the distinction may be standing human figure with wings (*šēdu*) vs. half-human half-bull colossi (*lamassu*)[72]; the term *lamassu* can at times be used with the meaning "representation" to refer to divine statues (see **RIMA 2, A.0.101.1, ii 133**).

—(female) *lamassatu*[73] (MUNUS.[d]LAMMA[74]): counterpart of (male) *lamassu;* possibly referring to some sort of sphinx-like crouching female bull(?) colossi.

—*apsasû/apsasītu* (MUNUS.AB_2.ZA.ZA), typically in the feminine: originally designates in Sumerian some sort of cow/zebu, in the Assyrian royal inscriptions more likely refers to protective (crouching) female sphinxes[75], half-human half-lion winged creatures, possibly of the type depicted on ivories **[FIG. 30]**; Sîn-aḫḫē-eriba mentions placing two sphinxes of white limestone in front of the entrance to the "palatial hall of lovemaking, rejoicing and celebration" (*ekal ru'āme ḫidâti u rīšāti*) which he built for the palace lady Tašmētu-šarrat[76], suggesting these sphinxes may have been perceived as guarantors of a certain hedonism.

Fig. 30: Small alabaster "sphinx" from a doorway at the entrance of Aššur-aḫu-iddina's South-West palace in Kalḫu (Barnett/Falkner 1962: Plate 111).

—*immer šaddî*, (UDU.KUR) mountain sheep[77]; *urmaḫḫu* (UR.MAḪ), lion; *piriggallu* (PIRIG.GAL), big lion[78]: less common than the *šēdu, lamass*(*at*)*u* and *apsasītu,* these creatures nevertheless come in substantial numbers when mentioned; both wild sheep and lions would have been symbolic of royalty based on their majestic appearance.

—*kusarikku* (GUD_4.ALIM), bison-man; *uridimmu* (UR.IDIM), wild dog; *girtablīlu* (GIR_2.TAB.LU_2.U_{18}.LU), scorpion man; *kulīlu* (KU_6.LU_2.U_{18}.LU), fish man; *laḫmu,* hairy primordial deity; *kurību,* lion headed genie(?); *binût apsî,* creatures of the *apsû*; *abūbu,* flood monster: these creatures are mentioned by Sîn-aḫḫē-erība and Aššur-aḫu-iddina in relation to Eḫursaggalkurkurra specifically, suggesting they must have been chosen because their theological meanings were appropriate to that specific context.

69 ALAD (KALxBAD) was previously read $ALAD_3$; the value $ALAD_2$ (= KAL) should be discarded. Note that KAL is used for LAMMA.

70 The Sumerian [d]lamma (Akk. *lamassu*/*lamassatu*) typically designates female tutelary deities and can also refer to the eponymous female deity from Lagaš. The fact that the Assyrian royal inscriptions specify MUNUS.[d]LAMMA as feminine suggests that [d]LAMMA may have then been understood to refer to a masculine deity. For more on [d]lamma/*lamassu* see Foxvog/Heimpel/Kilmer 1980–1983.

71 The spelling [d]ALAD.[d]LAMMA.MEŠ has often been transcribed as **aladlammû** (following Landsberger) as if it were referring to a specific type of creature, but syllabic spellings of this form are unsubstantiated (cf. Foxvog/Heimpel/Kilmer 1980–1983). Since the two terms often appear together as a pair, separated by a conjunction ([d]ALAD *u* [d]LAMMA), it is possible that the writing [d]ALAD.[d]LAMMA.MEŠ should just be a shorthand designating the physical occurrence of [d]ALAD and [d]LAMMA in pairs.

72 For the difficulties undermining the philological and archaeological understandings of *šēdu, lamassu* and *lamassatu* see Foxvog/Heimpel/Kilmer 1980–1983.

73 Outside of Assyrian texts, *lamassatu* seems to be used somewhat synonymously with *lamassu*. The relationship between the two terms is not clear. Note that *lamassatu* can also refer to figural representations of divine beings in general.

74 This logographic spelling starting with the feminine element MUNUS is attested only in the Assyrian royal inscriptions.

75 See Layard note as reported by Russell 1991: 311.

76 Sîn-aḫḫē-erība, RINAP 3/2, 40, 45′′–46′′.

77 Mentioned by Šarru-ukīn and Sîn-aḫḫē-erība, together with *šēdu*, *lamassu*, *apsasītu* **Fuchs (1994), Stier 75; RINAP 3/1, 1, 85**; according to Frahm (1997: 84) refers to the bull colossi.

78 In his royal inscriptions, Sîn-aḫḫē-erība mentions using both *urumaḫḫu* and *piriggallu* for the entrance to his *bīt ḫilāni* **RINAP 3/1, 16, vi 74 – vi 81** This can be compared with a letter to Šarru-ukīn from the treasurer Ṭāb-šar-Aššur (SAA 1, 66) reporting that small lions and big lions have been cast as column bases for the *bīt ḫilāni*. It suggests identifying the *urumaḫḫu* with the small lions and the *piriggallu* with the big lions.

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Fig. 31: Bull colossi from the outer portal of the citadel gate of Dūr-Šarrukīn (Loud/Altman 1938: Plate 7).

—*burḫiš,* wild ox; *nāḫiru*, tooth-whale (or dolphin?): employed as decorative reminders of hunting trophies[79]

NA_4.^{d}LAMMA.ALAD[80]

Sculpture, in the form of colossi, was an essential aspect of Assyrian architecture and this stands out from the state archives, although there is an emphasis on this form of decoration in both the royal inscriptions and state archives.

One letter from the reign of Šarru-ukīn lists bull colossi (NA_4.^{d}LAMMA.ALAD) to be placed in different locations of the king's palace at Dūr-Šarrukīn **[FIG. 31]**.[81] The location of these statues was ritually important and therefore carefully planned. A letter from Marduk-remanni informs Šarru-ukīn that he has planned out the bull colossi's designated positions at the gates of the palace, the sculptures will be hewed and put into place.[82]

Statues could be sculpted according to the style of specific sculptors. This is indicated by a letter to Šarru-ukīn informing him that a bull colossus has been sculpted according to (*ina pitti*) the style of (the sculptor) Duianusi and has now been loaded on a boat.[83] Another letter, from Aššur-šumī-ke'in to Šarru-ukīn, replies to an order by the king to find big 12 cubits (high) bull colossi for the royal palace at Dūr-Šarrukīn.[84] Here too, an individual who is in all likelihood a sculptor, Zēru-ibni[85], is mentioned as provider of a certain type of bull colossi. What also transpires from this letter is the decentralisation of colossi production, which could account for variations in style, especially size-wise. Also interesting is the relative paucity of bull colossi (five in total) available across Assyria at any one time and the fact that they seemed to have been assigned to the care of specific officials, which altogether testifies to their preciousness. Bull colossi were assigned as tasks to the magnates of the country in the same way as *pilku* duties.[86]

Aššur-šumī-ke'in explains there is one 11 cubits bull colossus available currently in front of the main gate of the city centre (presumably Dūr-Šarrukīn), under the responsibility of the Chief Cupbearer; then there are two bull colossi being finished in the cities of … (tablet damaged) and Tastiate (where Aššur-šumī-ke'in seems to be based)[87]; otherwise, there is another bull colossus by Zēru-ibni available, equal to the one already in place at the royal palace gate, 10 cubits high; there is also a bull colossus kept by the Treasurer in Arzuḫina. Aššur-šumī-ke'in suggests that Zēru-ibni's extra colossus be sent to Dūr-Šarrukīn. He supposes, however, that the king will ask why he is sending a(nother) colossus by Zē-

79 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.4, 67–71 and Aššur-nāṣir-apli II, RIMA 2, A.0.101.23, 19–20.

80 Probably a shorthand spelling for *lamassu u šēdu* ▸ **6.2.3.a**.

81 SAA 15, 283.

82 SAA 1, 110.

83 SAA 5, 299.

84 SAA 1, 150.

85 See SAA 1, 206 for evidence that he must be a sculptor.

86 See SAA 1, 145, r. 6′ – r. 7′) referring to the "eight remaining bull colossi of the magnates", 8 NA_4.^{d}ALAD.^{d}LAMMA.MEŠ *rēḫūte ša* LU_2.GAL.MEŠ.

87 See SAA 1, 120.

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ru-ibni, and explains the reason for this is that he has already brought it all the way to Adia so it will be easier to transport. The high waters make transportation difficult. When the waters are lower the other bull colossi, located further away, can be transported. It seems Zēru-ibni's 10 cubits colossi are deemed too small. They are perhaps what prompted the king to ask specifically for *big* bull colossi of (at least) 12 cubits each.

Comparable to bull colossi in terms of decorative significance are the bronze and copper lions incorporated to the columns of the *bīt ḫilāni* entrances by both Šarru-ukīn and Sîn-aḫḫē-erība. Šarru-ukīn's correspondence reveals that Aššur-šumī-ke'in was also involved in the making of such lions **SAA 1, 66, o. 9**[88], which suggests he must have been appointed to supervise the production of decorative components for gates and entrances.

6.2.3.b Depicting royalty and the empire

Whilst sculptures were not uncommon in temples, wall reliefs were typical of palaces. The rare archaeological evidence for wall reliefs in temples should be mentioned here, all of it comes from the reign of Aššur-nāṣir-apli II who instigated the fashion of wall reliefs in Assyrian architecture, probably inspired by Hittite architecture on his return from a military campaign to Karkamiš[89]. The doorjambs of the temple of Ninurta in Kalḫu were lined with reliefs depicting a combat between Ninurta and Anzu.[90] The temple of Ištar at Nīnawā was also decorated with wall reliefs, one depicting a procession of three tributaries before the king, the other depicting the king hunting lions in the upper register and pouring libations over a dead lion in the lower register.[91]

Archaeological evidence indicates that the most popular themes for reliefs in palaces were scenes of war, conquest, building activities, royal piety and governance. The reliefs[92] most commonly described in the royal inscriptions are those relating to conquests, which suggests these were deemed the most important ideologically and appealed to the imagination.

For example, Tukultī-apil-Ešarra I depicts (*eṣēru*) the victory and the might(?) that Aššur and Ninurta granted to him.[93] Šarru-ukīn depicts (*eṣēru*) in his palace the conquest of cities, and the triumph of his weapons which he achieved over the enemy.[94] Šarru-ukīn fashions (*banû*) in stone the settlements conquered by his hands.[95] Aššur-aḫu-iddina carves

Fig. 32: Stone statue of Aššur-nāṣir-apli II in the round from the temple of Ištar-šarrat-nipḫi in Kalḫu (H. 113 cm; W. 32 cm; D. 15 cm), ME 118871 (© Trustees of the British Museum).

(*esēqu*) on the walls of his palace the might of the god Aššur and the deeds that he accomplished in enemy lands **RINAP 4, 1, vi 28 – vi 29**. One commentary accompanying a relief depicting the battle with Teumman of Elam and Dunanu of Gambulu, from Aššur-bāni-apli's palace in Nīnawā, is written in the first person as if by Aššur-bāni-apli: the king describes how the might of the god Aššur and his own overwhelmed Zinēni, his Palace Manager, whom he "depicted in the lower register (of a relief)".[96] This illustrates the very conscious effort and attention invested in the production of detailed and realistic reliefs serving as historical narratives.

ṣalam šarri

Images and figures (*ṣalmu*/ALAM, NU) of the king **[FIG. 32]** were also incorporated into the architecture.[97] For example, Aššur-aḫu-iddina fashions images of himself and his crown prince Aššur-bāni-apli on the "Dais of Destiny" in Aššur's temple.[98]

In a letter to Šarru-ukīn, Nasḫir-Bēl[99], governor of Amedi and Sinabu, reports that he has built a royal palace and drawn the form of the king therein (*ṣalam*

88 See also SAA 1, 119 ▸ **7** for discussion of work distribution.
89 Winter 1982.
90 See Russell 1998–2001: §3.2.
91 See Russell 1998–2001: §3.4.
92 Where the verb *eṣēru* is employed, paintings could also be meant.
93 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.10, 76–77.
94 Šarru-ukīn, Winckler 1889: Nimrud Inscription 18.
95 Šarru-ukīn, Fuchs 1994, Stier, 77–78.
96 Cf. Borger 1996: 299, 'A. Teumman und Dunanu', 3I 8 A1 I8.
97 ▸ **8.2.1.b**.
98 Aššur-aḫu-iddina, RINAP 4, 60, r. 26′ – r. 28′.
99 ^{m}NIGIN.EN read Lipḫur-Bēl by Lanfranchi/Parpola 1990.

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šarri ina libbi ēteṣir).[100] The Aššur temple official Nabû-ašāred informs his king (either Aššur-aḫu-iddina or Aššur-bāni-apli) that he has sent him two royal images (*ṣalam šarri*), one as outline (*ša mīṣiri*), the other in the round (*ša kabbusite*[101]).[102] That royal images were perceived not only as symbolic features but also as purely decorative elements is suggested by a letter from an official to Aššur-aḫu-iddina/Aššur-bāni-apli which lists two royal images together with fifty images of cherubim (*kurībī*) and winds of silver, three silver doorjambs, one silver cauldron.[103]

6.2.4 Metallurgical decoration

Sîn-aḫḫē-erība forges the gate of his *akītu* temple out of bronze. The description points to a very elaborate work of art.

▸ **5.2.2.c.**

6.3 Non-visual technique

6.3.1 Fragrances

The importance of wood-derived fragrances is clear from descriptions of the "sweet fragrance" that wafts in the air as cypress and cedar doors are opened and closed. Tukultī-apil-Ešarra III points out that the double cedar and cypress doors of his palace in Kalḫu "bring wellbeing to those who enter them as their fragrance wafts into the heart" (*munaḫḫišā ērebīšina erēssina iziqqu libbu*) **RINAP 1, 47, r. 28′**. He also roofs his palatial halls with tall beams of cedar "which are as pleasant to smell as the fragrance of *ḫašuru*-cypress wood" **RINAP 1, 47, r. 26′.** In a similar spirit, Sîn-aḫḫē-erība describes the cypress doors of his palace as "doors whose fragrance is sweet when opening and closing" (*ša ina petê u târi erēssin ṭābu*) **RINAP 3/1, 1, 81**.

Wood was a distinctive element of Assyrian buildings. It was used for doors, roofing and probably also panelling since certain palaces are named after dominant wooden features. Tukultī-apil-Ešarra I is the first to describe wooden structures evoking panelling. He constructs the "house of the *šaḫūrū"* with cedar surrounded with basalt slabs, and the "house of the *labūnu*" with cypress surrounded with white limestone slabs.[104] Aššur-nāṣir-apli II builds palatial halls of cedar, cypress, *daprānu*-juniper, boxwood, *musukannu*-wood, terebinth and tamarisk.[105]

Fragrances were in all likelihood also very important in the process of a building's foundation and inauguration as well as in the first stages of the building's existence. The fragrant substances incorporated into the bricks and mortars or deposited in the foundations probably released strong emanations which would have lingered in the air during the foundation and inauguration rituals as well as in the early days of the building's use.[106]

6.3.2 Sounds

Sound was present in the Assyrians' perception of architecture. Imagery could evoke sound. A neat example are the castings of silver and copper which Aššur-aḫu-iddina sets up at the entrance gates of Egašankalama, the temple of Ištar of Arbēla: mythological creatures are represented, amongst these *anzû* birds and "screechers" (*nā'irī*).[107] Also to be mentioned here are the twelve "roaring lions of bronze who are endowed with splendour" (*urmaḫḫī siparri nē'irūti ša ramû namrirri*) over which Sîn-aḫḫē-eriba places columns and crossbeams to crown the gates of his palace.[108] Sennacherib also makes moulds in the shape of roaring lions and pours copper into them.[109] It cannot be a coincidence that gates should be chosen as the locus to evoke sound. Gates tend to be noisy. They are in fact the only intrinsically sonorous architectural feature of the built environment. The intrinsic property and primary purpose of gates is to be open and closed, which produces sound. Floors will also produce sound when trod upon but being trod upon is not their intrinsic property or primary purpose. An indication that gates were perceived as dynamic and potentially noisy features is the term used to designate one of their key components. The pivot of gates is known in Akkadian as *nukuššu*, from Sumerian ĝeš-nu-kuš$_2$-u$_3$, "that which does not tire".[110] The association of leopards and lions with door pivots could be meant to suggest the groaning of the doors.[111]

Water could also be integrated into the architecture as a sonorous element. Aššur-aḫu-iddina reports that after widening the avenue to his *ēkal māšarti,* he directed a channel into the palace as wa-

100 SAA 5, 15, r. 8 – r. 10.
101 The exact reading and meaning of *kabbusite* are unclear. Translation follows Cole/Machinist 1998 and is based on context.
102 SAA 13, 34, 14–17.
103 SAA 13, 28, o. 13′ – o. 14′.
104 Tukultī-apil-Ešarra I, RIMA 1, A.0.87.4, 62–65.
105 Aššur-nāṣir-apli II, RIMA 2, A.0.101.2, 56–57.
106 An experiment was carried out by the author to determine the fragrant potential of clay mixed with essential oil. A week after incorporating aromatic essences to a small brick of clay from the banks of the River Cam, the clay, dried up, was still fragrant and capable of perfuming a small room. The materials used for this experiment were not exactly the same that were used by the Assyrians, but they can serve as indicative models for potential chemical reactions between poroplastic solids and terpenoids.
107 Aššur-aḫu-iddina, RINAP 4, 77, 10.
108 See Sîn-aḫḫē-eriba, RINAP 3/2, 40, 38′′– 41′′.
109 See for example Sîn-aḫḫē-eriba, RINAP 3/2, 40, 32′′–34′′.
110 ▸ **5.2.1.a**.
111 Frankfort 1939: 18; see also Averbeck 2010: 9 ▸ **2.2.2.a**.

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tering place for his horses. He notes that he had the channel murmur like a canal (*ušaḫbiba atappiš*).[112] This suggests Aššur-aḫu-iddina appreciated the sonorous value of water as an enhancing feature for his palace. He may even have intentionally wished to incorporate that soothing sound into his residence.

"Aššur-aḫu-iddina's Succession Treaty" should be mentioned here since it alludes to the significance of sound in relation to space. Practically half of the treaty consists of curses against whoever might in the future transgress its terms. One of the curses runs as follows:

> *ikkil arî u tinūri ina bītātīkunu ay ibašši*
>
> May the sound of the grindstone and oven be absent from your homes![113]

6.3.3 Textures

The sense of touch is neither explicitly mentioned nor directly connected with decoration but a comment by Aššur-aḫu-iddina suggests that the sensual and tactile dimension of clay, main fabric of Assyrian buildings, was recognised and valued. Regarding the rebuilding of Ešarra, Aššur-aḫu-iddina states: "I moulded bricks with my pure hands" (*ina qātīya ellēti albina libittu*)[114]. For the king to fashion the new bricks with his own hands was no doubt an act of communion with the temple. Although no mention is made of the clay specifically, its presence in the brick is intimated more strongly through the use of the adjective "pure" (*ellu*) to describe the king's hands. The notion of purity although highly symbolic and religiously significant is deeply rooted in material objects. Purity is the condition material objects and beings must meet in order to be worthy of divine recognition. Emphasising that the king's hands are pure suggests imminent contact with the clay which, by implication, must be pure too. Paradoxically, the sensorial experience serves to abstract material forms (body and clay) into ideational ones (divine purity). This literary symbolism of the king's hands would support the argument made by Soldi that hand shaped devices associated across the ancient Near East with the roofs of buildings could be symbolic of the king as builder.[115]

6.4 Inscriptions as decoration

Aššur-nāṣir-apli II inaugurated a new decorative style. He introduced the use of royal inscriptions as decoration for the main fabric of palaces and temples, that is, the walls, floors and — in palaces — the monumental colossi which were an integral part of the structure.[116] This style was later emulated by many of Aššur-nāṣir-apli's successors who developed it mainly in the context of palaces leaving temples somewhat out of the fashion Extensive inscriptions were found on practically all surfaces of Aššur-nāṣir-apli's North-West palace at Kalḫu.[117] One of the longest and most important Assyrian royal inscriptions known was inscribed on stone reliefs that lined up the walls and floors of Aššur-nāṣir-apli's Ninurta temple in Kalḫu.[118] Inscriptions were found at Kalḫu and Nīnawā, which consisted in standard texts relentlessly repeated and without variation across buildings[119]. This phenomenon affected mainly the interior of buildings.

Very little information is provided in the Assyrian royal inscriptions regarding the 'written' dimension of the cuneiform inscriptions when they were used as decorative devices for palace or temple fabric. Archaeologically, however, it is clear that this dimension was being exploited. The significance of royal inscriptions as written objects did not have to be spelt out since it would have been self-evident to whomever the inscriptions were addressed as soon as they were deciphered and read: encryption was their foremost intrinsic value and it is this aspect that made them especially powerful as decorative devices. In contrast, decorative features which did not imply an inevitable interaction with the spectator, such as glazed bricks, would have warranted an explicit mention in the inscriptions to raise the awareness of the occasional reader in case (s)he had not noticed them or had failed to appreciate them. The external appearance of such "silent" features was not necessarily reflexive of their intrinsic value and meaning, it was therefore necessary to formulate their significance with words.

The lack of information regarding the decorative nature of cuneiform inscriptions on walls and floors is a testimony to the quality of their decorative value. They were for "instant consumption", as it were, and spoke for themselves. This was not the case of inscriptions on statues, steles, prisms and cylinders, which were either erected or buried for "future consumption", as objects in their own right, functioning as markers of the king's eternal greatness. Whilst inscriptions on walls and floors were expected to crumble with the palaces and temples they adorned, inscriptions on designated objects were designed

112 Aššur-aḫu-iddina, RINAP 4, 1, vi 32 – vi 34.
113 SAA 2, 6, o. 443 – o. 444.
114 Aššur-aḫu-iddina, RINAP 4, 57, iv 31– vi 32.
115 Soldi 2017: 18.
116 For a detailed study of this trend in the context of Neo-Assyrian palaces see Russell 1999.
117 See for example Aššur-nāṣir-apli II, RIMA 2, A.0.101.2; A.0.101.8; A.0.101.23; A.0.101.34.
118 Aššur-nāṣir-apli II, RIMA 2, A.0.101.1
119 See for example in RIMA 2 the "Standard Inscription" A.0.101.23 engraved on hundreds of reliefs in the North-West palace and the "Standard Inscription" A.0.101.40 engraved over and over again on reliefs in the Ištar temple at Nīnawā.

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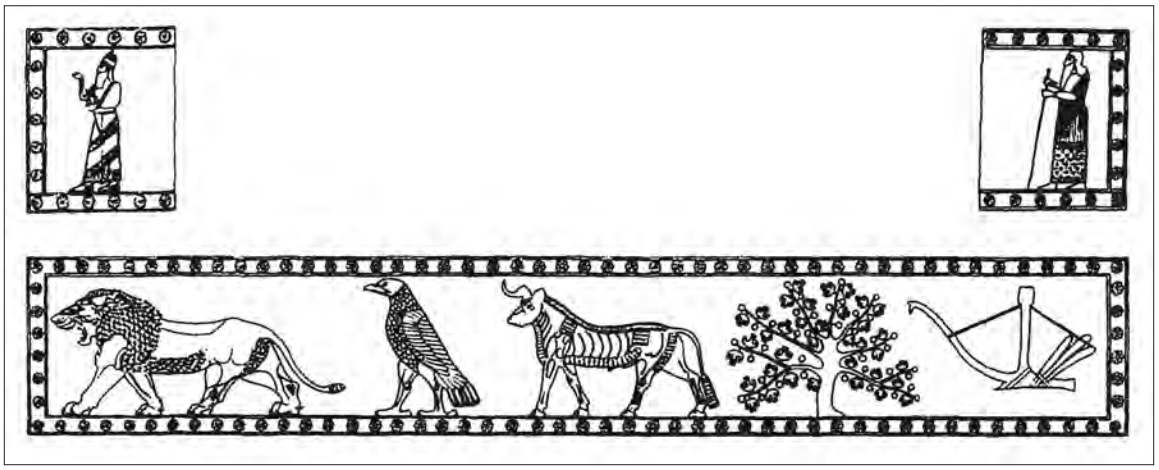

Fig. 33: Astroglyphs on glazed bricks from the entrance to Sîn's temple at Dūr-Šarrukīn, reign of Šarru-ukīn II (Roaf/Zgoll 2001: 267).

to last forever because they were intended to carry royal names into the future and for eternity.

The act of writing is typically recorded when it is an object that is inscribed (as opposed to a temple or palace), either on the object itself or on related objects. This occurs on countless occasions.[120] For example, Aššur-nāṣir-apli II says on the stone reliefs of the Ninurta temple of Kalḫu that he made a statue of himself in white limestone and wrote on it the praise of his conquests and the ways of his heroism which he accomplished in the land Nairi[121]. As seen previously, on an octagonal stone prism that was buried in the foundations of Ešarra, Sîn-aḫḫē-erība invokes the object itself so that it may communicate his prayers to Aššur: "You, foundation document (*temennu*) (…) to Aššur speak!" **RINAP 3/2, 168, 55–57** — the object was clearly intended to carry an intelligible message. Elsewhere, after describing the scenes he depicted on the bronze gate of the *bīt akīti* of Assur, Sîn-aḫḫē-erība points out he also wrote on that gate.[122] An unusual occurrence is found on a stele inscription of Aššur-bēl-kala. The voice of the scribe can be heard in a passage written in the third person. The passage describes the exploits of Aššur-bēl-kala. The scribe lists some of the exotic animals acquired by the king noting about the remainder of animals not listed: "their names are not written with these animals, their numbers are not written with these numbers." He adds: "(this account) excludes the (other) lands he conquered and numerous foreign campaigns he conducted (…) — such are not written (here) with these deeds of his."[123] It is thereby suggested that the king is so great that a full narrative of his deeds will not even fit on a stele.

lumāšu

Royal successors of Aššur-nāṣir-apli II who used inscriptions as decoration for their palaces include Salmānu-ašarēd II, Tukultī-apil-Ešarra III, Šarru-ukīn, Sîn-aḫḫē-erība, Aššur-aḫu-iddina, Aššur-bāni-apli. Šarru-ukīn was the precursor of yet another usage of writing as decoration. He decorated the exterior of his temples at Dūr-Šarrukīn with glazed brick panels bearing signs that are today known as "astroglyphs" **[FIG. 33]**. These astroglyphes would seam to read something along the lines of "Šarru-ukīn, great king, king of the land of Assyria". [124] Similar astroglyphs were found on foundation deposits (a black stone and clay prisms[125]) from the reign of Aššur-aḫu-iddina. Aššur-aḫu-iddina refers to such astroglyphs with the term *lumāšu*: on inscribed documents of baked clay he carved *lumāšu*-astroglyphs equivalent to the writing of his name.[126]

Inscriptions could also be cast on metal doors. As seen previously, this is evidenced in Sîn-aḫḫē-erība's inscription relating to the building of his *bīt akīti*: the building's gate of red bronze was carved with inscriptions (*mašṭaru*) narrating the Epic of Creation.[127]

Some inscriptions were visible, others hidden.[128] It appears that their content varied accordingly:

120 The rare instances in which wall inscriptions contain allusions to themselves are to be found in curses from the epilogues of texts. For example, Aššur-nāṣir-apli II's "Standard Inscription of Nīnawā" engraved all over the Ištar temple warns: "The one who erases my written name and writes his name (instead), may Adad the canal inspector of heaven and earth strike his land with terrible lightning and afflict his land with distress, famine and hunger" (Aššur-nāṣir-apli II, RIMA 2, A.0.101.40, 42–44).

121 Aššur-nāṣir-apli II, RIMA 2, A.0.101.1, ii 5 – ii 6.

122 Sîn-aḫḫē-erība, RINAP 3/2, 160: 17.

123 Aššur-bēl-kala, RIMA 2, A.0.89.7, iv 31– iv 39.

124 Cf. Finkel/Reade 1996: 247–250.

125 See Roaf/Zgoll 2001.

126 See Aššur-aḫu-iddina, RINAP 4, 104, ix 26 – ix 29.

127 Sîn-aḫḫē-erība, RINAP 3/2, 160.

128 See in Fuchs (1994: 373–377) list of visible and hidden

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some aspects of construction were shown off whilst others seem to be kept secret. For example, the indication that the dimension 16280 corresponds to Šarru-ukīn's name is only given in a hidden copy of the text inscribed on the reverse of a wall slab **Fuchs (1994), Zyl. 65**, not on the copies of the texts inscribed in visible locations. It may well be then that the value 21815 given by Sīn-aḫḫē-erība as circumference of his city's outer-wall should also be equivalent to his name, although this is not specified in the inscription, an octagonal foundation prism[129]. These prisms would have been buried and the inscriptions hidden. However, unlike the reverse of wall facing slabs (which if at all addressed to an audience would probably have been intended for divine audiences, like nails in temples), they were addressed to human audiences. The foundation prisms may have been read out during rituals at the time of burial and were designed to be read later when discovered by future kings. Ellis notes that prisms were often used as writing surfaces for literary texts (which require an audience) remarking moreover that Babylonian kings never used them as support for building inscriptions, only for literary texts.[130] The public nature of the foundation prisms would explain why Sīn-aḫḫē-erība did not specify the meaning of the number 21815, should it have a meaning that had to be kept secret. In the case of Dūr-Šarrukīn, the hidden inscriptions appear to be older than the visible ones.[131] The spatial distribution of inscriptions provides valuable chronological information. For example, as pointed out by Fuchs, the temple of Nabû is only mentioned in the visible inscriptions, which supposes its construction had originally not been planned.[132] That the Nabû temple was a later addition seems to be corroborated by the archaeology: unlike the other temples which are directly connected with the palace, the Nabû temple is off the side, connected to the palace complex only by a bridge.

Although inscriptions were treated like decoration, their content mattered of course. For example, it was important not to leave out the names of different protagonists involved in relief narratives. Šarru-ukīn asks his treasurer Ṭāb-šar-Aššur why the names of the city lords (of Mēdia and Mannāya) were not carved[133] (on the reliefs of his new palace at Dūr-Šarrukīn). The treasurer replies that the previous campaign against Mēdia and Mannāya was already depicted on the walls of the Old Palace at Kalḫu.[134] It is interesting that the chronology of events should have mattered less to Šarru-ukīn than to his treasurer.

Magical powers could be assigned to inscriptions and signs. Aššur-bāni-apli believes that because a cross, the emblem of Nabû, was established in his palace, he might become wiser. A letter to Aššur-bāni-apli from the astrologer Issar-šumu-ereš quotes the king as having said:

> *issurri issu b*[*ēt*] [*ina*] *bētīya ispillurtu iškunū*[*ni*] [*mā*] *abitē lē'īti*
>
> Perhaps n[ow] that they have set u[p] the cross [in] my house my word will become apt.[135]

Issar-šumu-ēreš then reassures the king: "You will speak a word that is as perfect as that of a sage."[136]

6.5 Choice of materials

6.5.1 Sparkling and lustrous

The choice of materials was naturally determining for the atmosphere of the buildings. Mentions of shining metals and precious stones are prominent throughout the Assyrian royal inscriptions. Wooden doors were typically fastened with bands of precious metals. Different woods (e.g. cypress, cedar, juniper) could be mixed with different metals (gold, silver, copper, bronze, KI.SAG-alloy).[137] This style was employed in both temples and palaces. It seems there were no preferred wood-metal combinations, although cypress and bronze appear to be, independently, very popular. Various metals could be used at a time but combinations of metals with very similar appearances (e.g. gold and copper) are seldom mentioned when their sole function is decorative, probably because this would be visually somewhat redundant.

Woods and metals were also combined in columns. Columns are not mentioned in the Assyrian royal inscriptions as significant architectural features until the reign of Šarru-ukīn, although the use of columns is implicit in Tukultī-apil-Ešarra III's description of a *bīt ḫilāni*. Columns could be cast in metal (bronze, copper) or made of wood. In the latter case, they were often covered with sheets of metal (silver, copper, tin, *pašallu*-alloy). Sīn-aḫḫē-erība had the columns at the entrances to his palace chambers made of different woods (ebony, cypress, cedar, *duprānu*-juniper, *burāšu*-juniper and *sindu*-wood) and covered them with *pašallu*-alloy and silver **RINAP 3/1, 17, vi 36 – vi 38**.

Shining effects were also obtained by covering walls with sheets of silver and gold. This type of dec-

inscriptions at Dūr-Šarrukīn.

129 Frahm 1997: T11, Textvertreter a, l. 156, see p. 77.

130 Ellis 1966: 114.

131 See Fuchs 1994: 9–10.

132 Fuchs 1994: 376.

133 Verb read *na-qu-ru* (< *naqāru*, "to incise").

134 SAA 1, 70 + SAA 5, 282 (= K4304 + K7517).

135 SAA 10, 30: b.e. 15 – r. 2.

136 SAA 10, 30, r. 3 – r. 4.

137 ▸ **3.**

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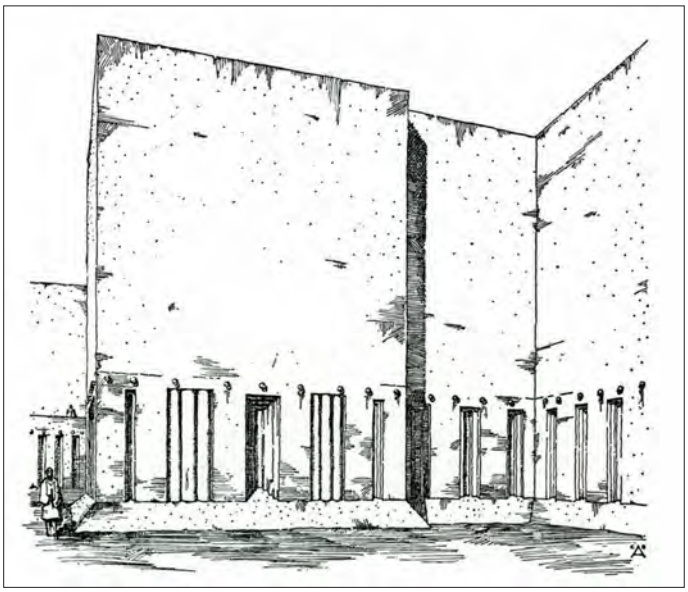
a



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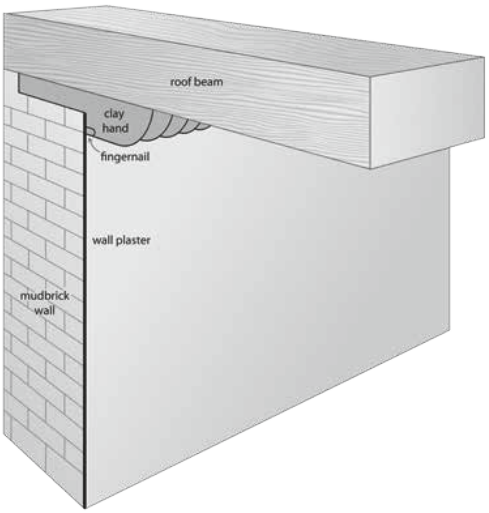

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e

Fig. 34: a: *sikkatu* clay nails from Dūr-Šarrukīn (H. 37.5 cm; W. 20 cm) (Loud/Altman 1938: No. 250); b: reconstruction of nails' emplacement (Loud/Altman 1938: 43); c: clay hand from Nimrud (L. 14.2 cm, W. 9 cm, D. 5.75 cm), 52.27.30 (Metropolitan Museum of Art); d: hand sheathing from Nimrud (L. 8.57 cm, W. 10.16 cm), BM 55.12.5 (© Trustees of the British Museum); e: possible usage of clay hands under roof beams (Soldi 2017: 14).

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oration was specific to temples. When Aššur-aḫu-iddina boasts that he smeared the walls of Aššur's temple with "gold like plaster" (*hurāṣu kīma sīri asīr*) **RINAP 4, 60, 25**, indicating precious gold was treated like ordinary plaster, he is evoking opulence. Opulence in its most "awe-inspiring" form would have characterised temple interiors, especially the innermost rooms where it was believed that deities lived. Shine was the most direct expression of opulence. Another Aššur-aḫu-iddina inscription suggests that temples were plated with silver and gold leaf regularly: Aššur-aḫu-iddina presents himself as the king "who daily had (the temples of all the cult centres) coated with silver and gold" (*ūmešamma kaspa hurāṣa ušalbīšu*)[138]. The daily care required for the maintenance of metal plating no doubt contributed to its ceremonial value and promoted a ritual significance. The verb most commonly employed to describe the act of covering buildings with metals is *labāšu* ("to clothe"), typically in the Š-stem. Associating the decoration of buildings with that of human beings instils life into the concept of building and adds meaning to the architectural act. Note the verb *labāšu* is used only for humans and buildings.[139] Plaques of metal and stone appear to have also been used to decorate interiors. Aššur-nāṣir-apli II binds the room of Ninurta's shrine with (plaques[140] of) gold and lapis lazuli (*bīt atmāni Ninurta bēlīya ina ḫurāṣi u uqnî uṣabbit*).[141]

Whilst there are no attestations of palace walls being plated with gold and silver, we know that they could be delineated with nails of precious metals to increase the brightness of dark spaces. The inscriptions of Tukultī-apil-Ešarra I, Aššur-nāṣir-apli II, Sîn-aḫḫē-erība and Aššur-aḫu-iddina point to the use of decorative knobbed nails (*sikkatu*) or cornices (*sikkat karri*) of various metals (bronze, copper, silver, gold) on the walls of palaces. Here is an evocative description from Sîn-aḫḫē-erība's palace already partially mentioned previously **RINAP 3/2, 43, 28–29**:

> *ṣulūl tarāni ša qereb barakkāni eṭûssun ušaḫlâ ūmiš ušnammir sikkāt karri kaspi u erî qerebšin ušalme*
>
> The ceiling (lit. "canopy of the roof") which is within the corridors whose darkness I brightened, I made shine like the day. With cornices of silver and copper I had their (the corridors') interior surrounded.

sikkatu clay nails were found in situ at Dur-Šarrukīn lining the forecourt of the Nabû temple **[FIG. 34]**. Frame suggests that the architectural features known as "clay hand", also found in quantity at Dūr-Šarrukīn[142], may have been referred to as *sikkat karri*[143] since Aššur-nāṣir-apli II mentions *sikkat karri*'s of bronze in relation to his palace in Kalḫu where cornice-like objects in the shape of clay hands covered in bronze were found.[144] Sebastiano Soldi makes the convincing argument that "clay hands" must have been skeuomorphic replica of the protruding ends of the wooden beams used to support roofs, which appear to have often been carved as hands; the *sikkat karri*'s made of bronze would have then served as sheathings to cover these wooden protruding hands.[145].

6.5.2 Fragrant and textured

Different woods of different fragrances and tonalities, would have created a contrasted textured atmosphere.

For more on wood types see ▸ **3.3.1.**

138 Aššur-aḫu-iddina, RINAP 4, 48, o. 38.

139 Cf. CAD: *labāšu.*

140 That gold was not simply smeared but actually installed as plaques is suggested by the use of the verb *ṣabātu* in the D-stem ("to set, enclose, bind with") and the fact that KU_3.GI.MEŠ is employed in the plural, which if not a plurale tantum as suggested by Von Soden in GAG (§61 h), could point to a multiplicity of objects.

141 Aššur-nāṣir-apli II, RIMA 2, A.0.101.30, 69–70.

142 See Guralnick 2008.

143 The *sikkat karri* are occasionally described as ŠU.KA.AN which recent editions have amended to UD.KA.BAR ("bronze") to match the frequent occurrences of the syntagm *sikkat karri* UD.KA.BAR (compare Aššur-nāṣir-apli II RIMA 2, A.0.101.17, v 15, v 29 – v 30). The unit ŠU.KA.AN deserves closer examination, however, because it contains the element ŠU (logogram for "hand") which would tie in well with the interpretation as "clay hands".

144 Frame 1991: 359.

145 Soldi 2017.

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7 ACTORS

Inseparable from the meaning of architecture and space are the human actors who realise the building projects. Human involvement operated on three main levels: 1) conceptualisation, 2) organisation, 3) construction. Each level was typically the domain of a certain class of people: the rulers ordered the project, officials and other subordinates engineered and managed it, the masses toiled. There is evidence however that rulers could navigate between the levels, even if sometimes only symbolically as we shall see. Also to be mentioned here is the belief in divine agency, which would of course have implications on all three levels. The Assyrians perceived and treated their gods as powerful determining actors, adjusting their own actions to the conjectured divine ones. These gods will therefore also be considered here as actors.

In Assyria, the evidence suggests that categories of labour were only broadly defined, probably not watertight. The general hierarchical structure could be described as an hourglass, with the king serving as the bond between gods and humans, heaven and earth [**FIG. 35]**.

The royal inscriptions reflect quite clearly the hierarchical organisation of Assyrian building operations, although all actors are not given equal attention. The state archives are most informative about the administrative organisation of labour, including how and to whom tasks were delegated. This aspect of building projects will be the main focus of the present chapter. It is particularly discernible in the correspondence of Šarru-ukīn II who not only carried out the customary building and renovation works across the empire but also invested much time and effort in the construction of his new capital Dūr-Šarrukīn. Special attention will therefore be devoted to Šarru-ukīn's correspondence. The archives also reveal that scholars, and to a lesser extent priests[1], could play an important role in building projects. The correspondences of Aššur-aḫu-iddina and Aššur-bāni-apli are the most enlightening in this respect.

7.1 The gods: divine agency

Assyrian kings regularly invoke or at least evoke the gods in their inscriptions. The inscriptions make it clear that it is with the gods' benevolence and through their aid that kings succeed in their actions, be it war, governance or religious duties, and all the artistic craftsmanship involved. Building enterprises were an offshoot of the three main spheres of royal action (war, governance, religion). Buildings were significant because they provided conspicuous material expressions for each of the three spheres of royal action. Concurrently, architecture pervaded royal life and was for that reason the artistic medium with the most powerful resonance. It is no surprise then that the gods should have been strongly associated with building enterprises.

The gods could be mentioned in general or in particular, the latter case being more frequent because architecture required specialised skills, which typically spanned the domains of various specific gods. An instance where the gods are mentioned in general is encountered in Sîn-aḫḫē-erība's inscription for the building of his "Sîn-aḫḫē-erība Canal":

> *ilāni rabûte utnīnma suppîya išmûma ušēširū lipit qātīya*
>
> The great gods I prayed, they heard my supplications and made right the touch of my hands.[2]

In the context of building, Ea (Enki), god of wisdom, patron of crafts and magic, is the most celebrated deity. In the late Neo-Assyrian period he is typically invoked by his Sumerian names Nudimmud (lit. "Begetter of Mankind") and Niššiku ("Prince").

uznu[3]*, ḫasīsu/ḫissatu, karšu*

Ea's help in building enterprises is first referenced in the inscriptions of Aššur-nāṣir-apli II who rebuilds the temple of Ištar-Kidmūri in Kalḫu with the intelligence of his heart (*hissat libbī*) that Ea, king of the *apsû*, who grants wisdom (*uznu*) and understanding (*ḫasīsu*), gave him.[4] In the same spirit, Salmānu-ašarēd III erects a ziqqurrat in Kalḫu with the intelligence of his heart (*ḫissat libbī*) that Ea, god of great wisdom (*uznu rapšu*), gave him.[5] Tukultī-apil-Ešarra III and Šarru-ukīn respectively introduce the names Nudimmud and Niššīku in the building context. Tukultī-apil-Ešarra III builds his palatial halls in Kalḫu through the artistic knowledge (uzun nikilti) and vast intelligence (*ḫasīsu palkû*) granted to him by Nudimmud.[6] Šarru-ukīn claims that both Ea-Niššiku and Bēlet-ili increased his knowledge (*ḫasīsu*) over that of the kings his fathers thereby granting him a broad culture[7] (*mērešu rapšu*) and

1 This category here refers to cultic personnel attached to temples.

2 Sîn-aḫḫē-erība, RINAP 3/2, 223, 29–30.

3 See also ▸ **1.1**.

4 Aššur-nāṣir-apli II, RIMA 2, A.0.101.38, 22–24.

5 Salmānu-ašarēd III, RIMA 3, A.0.102.56, 6–7.

6 Tukultī-apil-Ešarra III, RINAP 1, 47, 17'.

7 *mērešu* II usually translated as "wisdom" is translated

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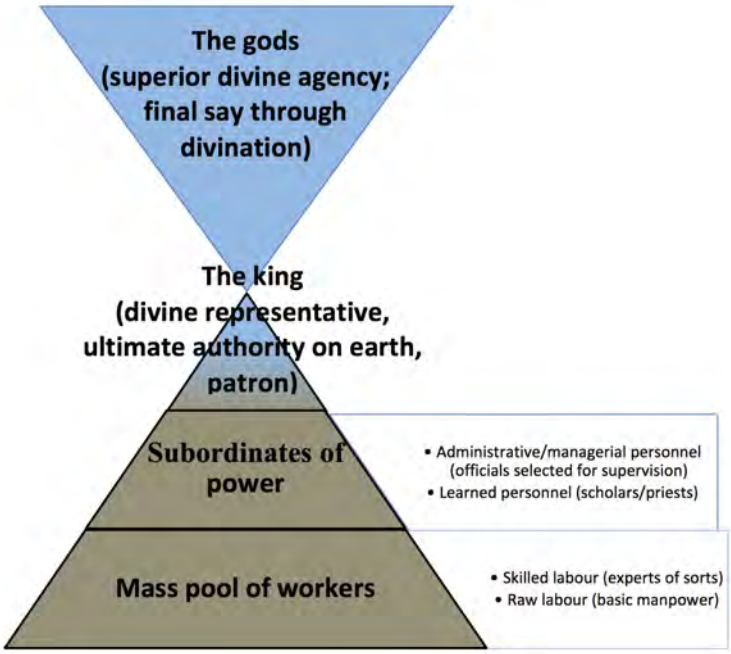

Fig. 35: Diagram illustrating the hierarchy of labour.

a vast understanding of wisdom (*ḫissat uzni palkâtu*). Similarly, Sîn-aḫḫē-erība prides himself that Niššīku granted him artistic talent (*uzun nikilti*), very broad intelligence (*karšu ritpašu*) equal to that of the sage Adapa, and vast understanding (*palkû ḫasīsu*).[8] A great innovator, Sîn-aḫḫē-erība casts columns of copper and marching lions for his *bīt ḫilāni* in Nīnawā through the artistic talent (*uzun nikilti*) that Niššīku bestowed upon him.[9] Also through the very broad intelligence (*karšu ritpašu*) and vast understanding (*ḫasīs palkê*) bestowed upon him by Nudimmud, Aššur-aḫu-iddina envisions to renovate the sanctuaries of Babylonia and make the cult centres glow.[10]

In the Old Assyrian period, Erišu invokes Aššur and Adad as helping him in his building enterprises. Aššur stands by him as he builds the walls of the temple and temple area of Aššur, whilst Adad stands by him as he builds the temple and temple area of Adad.[11] This suggests the Old Assyrian king was more interested in the moral support of the great gods than in the special powers they might afford him. The crafty and magical powers of Ea are never evoked in relation to building in the early periods.

Wim Van Binsbergen and Frans Wiggermann argue convincingly that, in Mesopotamia, magic was a holistic and popular alternative to the hegemony of empirical theism.[12] They view the principles of holism and theism as analogous to the concepts me/*parṣu* and namtar/*šīmtu* respectively. Holism would then have encroached onto Mesopotamian theism through the god Ea due to this god's association with the me's. They remark that Ea's holistic aspect somewhat set him aside from the rest of the pantheon creating a tension which led to what Samuel Noah Kramer called "Enki's inferiority complex".[13]

Building on this argument, it is not inconceivable that Ea's sudden emergence in the context of construction as a god capable of transmitting crafty and magical powers should be reflecting new developments in the Assyrians' perception of architecture. Ea's emergence coincides with the rise of Assyrian imperialism. Imperialism broadened the range of human and material resources at the disposal of Assyrian monarchs thereby inciting them to undertake new projects and innovations, which would have stimulated their creativity. Imperialism also confronted Assyrian power to the masses, more than ever before. Included within these masses were many individuals of skill such as craftsmen. Neo-Assyrian kings were keen to surround themselves with skilled craftsmen recruited from the "four

here as "culture" in an attempt to capture, in English, the possible semantic connection with the Akkadian *mērešu* I, "cultivated land".

8 Sîn-aḫḫē-erība, RINAP 3/1, 17, vii 1–2 and RINAP 3/2, 43, 4.

9 Sîn-aḫḫē-erība, RINAP 3/2, 43, 73–78.

10 Aššur-aḫu-iddina, RINAP 4, 104, ii 49 – iii 6.

11 Erišum, RIMA 1, A.0.33.14, 16–17 and A.0.33.2, 33–34.

12 Van Binsbergen/Wiggermann 1999.

13 Kramer 1970.

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quarters" of their empire. Through these craftsmen, they would have gained access to both popular lore and exotic artistic customs. Throughout its history, Assyrian architecture remained quite conservative, conforming to the ideals of the ruling order which was dependent on theistic hegemony. Any new developments were therefore necessarily associated with a form of holism. Incorporating one's own ideas, popular inventions or foreign elements into traditional Assyrian architecture would be an act of the holistic order, hence the appeal to Ea.

In the process of foundation, Šarru-ukīn offers sacrifices to two minor deities, Kulla, "lord of foundations and bricks", and Mušdama[14], "the master-builder of Enlil".[15] In one inscription Šarru-ukīn explains that he raised the top of Ištar's Eanna temple in Uruk with pure bricks through the work of Kulla the master-builder and the craftsmen who know the work.[16] Aššur-aḫu-iddina renovates buildings such as the Ekur or Eanna, as well as Nēmed-Enlil the outer-wall of Babylon, through the work of Kulla.[17] Aššur-bāni-apli too had Nēmed-Enlil, the outer-wall of Babylon, built quickly anew with the strength of his labour forces and through the work of Kulla.[18] This may be additional evidence that popular beliefs, typically encapsulated in minor deities, were infiltrating the royal building ideology.

Divine agency does not figure as a primordial concern in the building related correspondence from the state archives.

7.2 The king's direct (personal) and indirect involvement

Proportionately to the size of Assyrian building enterprises, Assyrian temple and palace building accounts are, although assertive, remarkably laconic regarding labour force, not much detail is provided. Rather than negligence, this may well be intentional. Temple and palace building is presented from the start as an essentially royal undertaking. Keeping details about labour divisions sparse highlights further the king's creative role in the enterprise. The king is the prism through which the narrative is told. This reflected not only his supreme authority as head of all operations but also his essential role as unifying agent.

The king could not pretend to have built everything himself, nor would he want to appear too menial anyway. The image he wished to convey was that of a visionary and entrepreneur who possessed the inspirational force and material strength necessary to federate the masses bringing forth his people to carry out great projects worthy of the gods. The king did not only do things. The king could have things done. This was his power.

A direct marker of this ideological stance is a noted predilection for the Š-stem, as opposed to simple G- or D-stems which suppose single actors. This is especially the case in the Neo-Assyrian period when building projects attain colossal scales. The Š-stem conveys the impression of chain actions forming a system and a whole. Building actions in the Š-stem typically involve mass labour and apply to major tasks such as the procurement and processing of materials. For example, Sîn-aḫḫē-erība has great slabs of breccia dragged (*ušaldida*) from the mountains to Nīnawā for the construction of his palace.[19] He then had *šēdu*, *lamassatu* and *apsasītu* figures of white limestone fashioned (*uša'lid*) in the land of Balaṭai with the help of the mother goddess Ninkurra.[20] It is as if the king's brainchildren are being brought to light by both terrestrial and divine forces. More intricate and artistic tasks are also occasionally described in the Š-stem as if to stress the holistic nature of the king's undertakings as well as their material reality: he is not alone in the creative act, he is the legitimate leader of a great project involving many actors human and divine.[21] This use of the Š-stem is in many ways the literary equivalent of an architectural and artistic attitude which Stephen Lumsden discusses in relation with Sîn-aḫḫē-erība's work in Nīnawā, describing it as "the gaze of imperial authority"[22]. Lumsden argues that the construction within Nīnawā of the high eastern terrace and the development of reliefs that depict space from a high vantage point provide evidence that Sîn-aḫḫē-erība promoted a "high view" experience of space, which reflected his detachment and control in the exercise of power at a time when the Assyrian empire had reached its peak of influence and relative stability. The Š-stem offers the grammatical possibility of expressing this idea precisely, that one can be simultaneously detached and in control.

14 Since Mušdama is spellt "^{d}ŠITIM", it could be referring to Ea in his aspect as patron of builders given that CT 25, 48: 9 indicates that when preceded by the divine determinative, ŠITIM is to be read Mušda and refers to Ea *ša itinnū*, "Ea of the builders".

15 Šarru-ukīn, Fuchs 1994, Zyl. 60.

16 See Šarru-ukīn in Clay 1915, no. 38 (= YBC 2181), ii 1 – ii 3, Pl. 24.

17 Aššur-aḫu-iddina, RINAP 4, 129: 31–32; 133: 32–33; 106: iv 22 – iv 30.

18 Aššur-bāni-apli, RIMB, B.6.32.1.

19 Sîn-aḫḫē-erība, RINAP 3/2, 43, 9.

20 Sîn-aḫḫē-erība, RINAP 3/2, 43, 63–64.

21 The first usage of a Š-stem to convey the greatness of a creative act can be attributed to Adad-nērārī III (RIMA 3, A.0.104.6, 21–22): he has a statue of himself made, inscribes it with his victories and has it erected in the town of Zabanni. Through the Š-stem the king places himself at the centre of his people's actions without however conforming himself to being a mere object, even as a statue he remains the principal actor.

22 Lumsden 2004: 196.

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lipit qātīya

There are specific instances, however, where Sîn-aḫḫē-erība prefers the G or D stem to a Š-stem for his actions, which makes one wonder whether this may not be reflecting a real personal and physical involvement in particular tasks. It is perfectly understandable that he should use a G-stem to refer to his general creation of the Palace Without a Rival in Nīnawā (*ana mūšab bēlūtīya abnīma*)[23], but resort to a Š-stem when describing its construction more specifically and in detail (*bīt appāti … tamšil ēkal Ḫatti meḫret bābāti ušēpiš*)[24]: this clearly reflects a reality. What is more intriguing is the alternation between stems for particular building activities. For example, he has the palace roofed (*ušatriṣa*) but decorates the doors with silver himself (*ussi*)[25]. Whilst it is difficult to imagine the king risking his life to roof a palace, it is conceivable that he would have helped with the decoration of doors or with decorative principles more generally. Elsewhere, Sîn-aḫḫē-erība explains that in order for him to complete the "work of his hands" (*lipit qātīya*), Aššur and Ištar showed him how to bring out great logs from the Sirara mountains, disclosing also to him limestone in the Amana mountains and breccia in Kapridargila.[26] This suggests the king went himself on expeditions to obtain materials. It then comes as no surprise that he should have himself participated in the extraction of the materials: he claims to have himself cut free (*abtuq*) both stones he used for bull and cow colossi. Assyrian kings very often mention their hands in relation to the work they perform, which reveals a desire to be perceived as physical actors.[27] Good work was typically associated with pure hands. For the renovation of shrines, Aššur-aḫu-iddina delivers red gold to the pure hands of his artisans[28]. For the rebuilding of Ešarra he also makes bricks with his "pure hands" (*ina qātīya ellēti*) **RINAP 4, 57, iv 31 – iv 32**.

There are numerous other occasions when Assyrian kings are portrayed performing building acts themselves in the G-stem, and this since the Old Assyrian period. Such acts tend to be symbolically powerful. They may involve rituals for which a special disposition is necessary or may simply demand acute discernment, qualities which would have found perfect resonance in the king. For example, Salmānu-ašarēd III describes his restoration of the Tabīra Gate as follows:

anḫūssa unakkiri ašarša umassi dannassa akšud ištu uššēša adi gabaddibîša arṣip ušeklil

I removed its ruins, identified its site, I reached its foundation pit. From its foundations to its parapet I completely rebuilt it.[29]

Salmānu-ašarēd claims to have himself laid the foundations of the new gate. Whilst it is unlikely he would have performed all the work alone, he may well have participated in the activity physically, as part of symbolic rituals. The same can be said when he asserts he laid out himself (*atbuk*) lapis lazuli, *pappardilû*-stone, carnelian, shells, aromatics and all kinds of things in the foundations of the fortification wall of Aššur.[30] Tukultī-apil-Ešarra III "cleverly made plans" (*nakliš ukaṣṣipma*) with his artisans for the construction of his palatial halls in Kalḫu.[31] He claims to have piled up himself heavy limestone blocks twenty cubits deep in the raging waters of the Tigris as terraces for the buildings. He moreover designed the structure of the palatial halls himself (*šikittāšin ēṣirma*), to a height of five and a half *nindānu* and four cubits, from the depth of the water to the ledges.[32]

Royal intelligence is presented as an essential ingredient to great building projects, justifying the king's direct participation in the work.[33] It was typically perceived as bequeathed by the gods. This is explicit in the inscriptions of Sîn-aḫḫē-erība. In one instance where Sîn-aḫḫē-erība describes himself as participating directly in the work, he invokes divine knowledge: with the "wisdom of artistry" (*ina uzni nikilti*) bestowed upon him by Ea the lord of wisdom, Sîn-aḫḫē-erība cast all the moulds necessary for the bronze work of his palaces in Nīnawā himself.[34]

It seems that by overlooking the toil and instead diverting attention to the sole royal performance, emphasis was placed on the symbolic significance of the building act. The focus of building narratives is more on the building act impersonated by the king than the buildings and odd builders themselves. Building narratives certainly appeal to the imagination with their lush details about fabulous architecture and a large skilful labour force, but this information, composed mainly of repetitive stock imagery could be described as essentially ornamental. The greater picture revealed by building narratives is a single statement: what the king has created will survive time, if not materially, at least ideally.

On the whole, temples and palaces are described in abstract, conceptual terms, for this is how they are to be remembered. Only then can representations of

23 Sîn-aḫḫē-erība, RINAP 3/2, 42, 29.
24 Sîn-aḫḫē-erība, RINAP 3/2, 42, 29–30.
25 Sîn-aḫḫē-erība, RINAP 3/1, 17, vi 26 + vi 43.
26 Sîn-aḫḫē-erība, RINAP 3/2, 43, 33–48.
27 A hint to the importance of royal involvement may also be found in the so-called "clay hands" ▸ **6.5.1**.
28 Aššur-aḫu-iddina, RINAP 4, 48, r. 82 – r. 84.
29 Salmānu-ašarēd III, RIMA 3, A.0.102.46, 7–9.
30 Salmānu-ašarēd III, RIMA 3, A.0.103.10, iv 55 – b.e. 1.
31 Tukultī-apil-Ešarra III, RINAP 1, 47, r. 20′.
32 Tukultī-apil-Ešarra III, RINAP 1, 47, r. 25′.
33 For the topos of royal wisdom in Assyria and Babylonia see Röllig 2003.
34 Sîn-aḫḫē-erība, RINAP 3/1, 34, 77–79.

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Fig. 36: Left: limestone perforated relief of Ur-Nanše (H. 39 cm; L. 46.50 cm; D. 6.50 cm), AO 2344 (© Musée du Louvre); right: stele of Aššur-bāni-apli carrying a brick basket (H. 37 cm; W. 22 cm; D. 10 cm), ME 90864 (© Trustees of the British Museum).

earthly royalty and heavenly divinity merge into one comprehensive ideal of perpetuity. Of course, massive labour forces are clearly mentioned throughout the royal inscriptions: entire populations, all classes included, were deported across Mesopotamia so that thousands of men could be conscripted to labour in heavy building projects. Such information was not provided gratuitously, however. It served the royal image. Building a city or a monument was a demonstration of power, so when Assyrian kings forced subdued populations and rival rulers into this task it would have been for them the ultimate statement of their hegemony. Whilst the gods were supreme in heaven, the Assyrian king enjoyed supremacy on earth.

bānû

The image of the king as builder was fundamental to royal ideology.[35] Aššur-aḫu-iddina takes pride in the fact that as he completed the construction of Ešarra, Aššur proclaimed him *bānû bīti*, "builder of the house".[36] The fact that the title was awarded to him after his actions were completed indicates it was deemed an honour based on merit. As part of his participation in the foundation rituals Aššur-aḫu-iddina puts on an apron. He makes bricks with his own "pure hands" to show the "strength of Aššur" to the people of the lands. He raises a basket on his head and carries it himself to reveal to his people the "fear of the lands" (*šupluḫ mātāti*) **RINAP 4, 57, iv 39**. It seems Aššur-aḫu-iddina's act is intended to exert psychological intimidation on his people indirectly, through the gods. By submitting himself to the gods, the king presents himself as an equal to his people bound by the same fear, which legitimises his position as a simple human whose role it is to liaise with the gods. By channelling himself the fear of the people towards the gods he is able to control it. The act of building is depicted as a form of submission, probably to counteract its sacrilegious potential if interpreted as hybris due to its highly creative aspect, a typically divine quality.

The image of the king carrying a basket of bricks on his head is a motif that can be traced back to the Early Dynastic period. The earliest example is provided by the perforated relief of Ur-Nanše, founder of the first dynasty of Lagash. In the Neo-Assyrian period, the motif was depicted on steles by Aššur-bāni-apli. **[FIG. 36]** It was important to emphasise the connexion between ruler and first bricks during the foundation rituals because the bricks represented the essence of the temple. Adad-nērārī I

35 For the motif of the king as builder in Assyrian sources see Magen 1986: 36–40.

36 Aššur-aḫu-iddina, RINAP 4, 57, vii 24 – vii 25.

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appears to have rebuilt the wall of the new city of Aššur to a thickness of 14 bricks from his own great brick-mould (*erbēšer libittāti ina nalbanīya rabîti*).[37] Whether this refers to a brick-mould he personally owned or a type of brick-mould corresponding to his favoured standard of bricks is unclear.

The epithet "builder" is often encountered as an Assyrian royal title, usually in the formula "builder of DN's temple" although it could apply to any type of building since Assyrian kings took pride in claiming authorship of all the building works they initiated. These titles are typically found on the monuments they designate, as property markers. For example, on door sockets and stamped bricks from the temple of Aššur, Šamšī-Adad I is "builder of the temple of Aššur" (*bānî bīt Aššur*).[38] On door sockets from the Anu-Adad temple, Salmānu-ašarēd III is "builder of the temple of Anu and the temple of Adad" (*bānî bīt Anim bīt Adad*)[39]; on bricks from Aššur he is also "builder of the wall of the Inner City" (*bānî dūr Libbi-āli*)[40]. The idea of king as builder could also be inserted in royal inscriptions as part of the narrative. Aššur-aḫu-iddina states that Aššur, pleased by the renovation work on Ešarra, named him "builder of the temple" (*bānû bīti*)[41], which suggests this title was perceived as honorary. Aššur-aḫu-iddina also has himself described as:

> *ša ilāni rabûtu banû epēšu uddušu išrukū širiktuš*
>
> The one to whom the great gods gave 'creating', 'building' and 'renovating' as his gift[42]

Buildings were somewhat "magically" connected to their nominal builders. Tukultī-apil-Ešarra III names his palatial halls in Kalḫu "Palatial Halls of Joy Which Bear Abundance, Which Bless the King, Which Make Their Builder (*ēpišu*) Long-[Li]ved".[43] This "magical" connection could be passed on to future generations of rulers provided they respected the terms and conditions typically formulated at the end of the inscriptions in the form of curses and injunctions.[44] Rulers of the distant future could "activate" the connection by supplying the correct treatment to the foundation deposits. Rulers of the near future, in other words heirs contemporary to the king, were naturally connected to the building by actively participating in the foundation rituals. There is evidence from different periods of Mesopotamian history that rulers included their children in the rituals. The Early Dynastic king Ur-Nanše as well as the Neo-Babylonian king Nabû-apla-uṣur mention their children in their inscriptions.[45] There is potential evidence for similar proceedings in a tablet praising the building activities of Aššur-aḫu-iddina found in a private house in Aššur possibly belonging to a family of chief singers.[46] Quite tantalisingly only the obverse of the tablet was photographed by the excavators and the object has now been lost. The obverse of the tablet ends with a description of foundation rituals (mixing special substances in the clay to make bricks), the final line reading "important ones, small ones, the daughter of the king" (*kabtūte ṣeḫrūte marat šarri*). These nouns can be understood as either the subjects of the preceding verbs (*iblulū*, *ilbinū*), indicating persons of different rank (including the king's daughter) took part in the making of bricks, or they could be understood as subjects/objects of a new sentence lost to the reverse.

As seen previously, Assyrian kings could get very involved in building matters. This typically occurred on the decision-making level, which is well illustrated, for example, by the correspondence between Šarru-ukīn and his officials produced whilst the Dūr-Šarrukīn project was being carried out.[47] Suffice is to highlight here those anecdotes from the state archives that corroborate the general picture already established.

Attention to detail is the most striking characteristic of the kings' involvement revealed by the state archives. Whilst the royal inscriptions suggest that Assyrian kings were not only decision makers but could also take an active part in the building process, if only for symbolic purposes, the state archives reveal that Assyrian kings could also be personally involved in improving their built environment on the small scale. For example, a letter from an official in Aššur informs the king (probably Aššur-bāni-apli) that what the king has made for the walls of the chamber of Nikkal has been placed in the treasury of Nikkal.[48] It seems the king has designed some sort of decoration to be set on the walls of the chamber.[49] The decoration is presumably placed in the treasury as it awaits to be mounted, or perhaps as a diplomatic subterfuge to delay or avoid using it, as it may not have been up to professional standards… Another example of the attention paid by the king to the nitty-gritty are the letters received by Šarru-ukīn concerning the exact dimensions of beams. For ex-

37 Adad-nērārī I, RIMA 1, A.0.76.13, 41.
38 Šamšī-Adad I, RIMA 1, A.0.39.11.
39 Salmānu-ašarēd III, RIMA 3, A.0.102.54.
40 Salmānu-ašarēd III, RIMA 3, A.0.102.99.
41 Aššur-aḫu-iddina, RINAP 4, 57, vii 24 – vii 25.
42 Aššur-aḫu-iddina, RINAP 4, 77, 4.
43 Tukultī-apil-Ešarra III, RINAP 1, 47, 34′.
44 For more on the final formula, cf. Lackenbacher 1982: 145–167.
45 Schaudig 2011: 153–154.
46 Aššur-aḫu-iddina, RINAP 4, 76.
47 ▸ **1.4.2.b.**
48 SAA 12, 28.
49 Compare these royal creations with the golden table of Marduk "that Šarru-ukīn made" (*ša Šarru-kēn ēpušūni*)" for the temple of Nabû, and which the controversial priest Pūlu is having reworked according to a report addressed by an official to Aššur-aḫu-iddina/Aššur-bāni-apli (SAA 13, 134).

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ample, the king is asked whether beams of very thin *meḫru*-wood are to be used whole or cut in half.[50] Assyrian kings' also controlled the artistic creativity of their workmen. Nabû-ašāred of the Aššur temple informs the king (Aššur-aḫu-iddina or Aššur-bāni-apli) that he is sending him a sketch for a royal statue executed by himself, as well as an example of a statue in the round (*kabbusite*)[51] fashioned by sculptors.[52] The king must choose which one he prefers. Nabû-ašāred writes: "Let the king pay attention to the hands, the chin, the hair".

7.3 Administrative and advisory powers: magnates, provincial governors and scholars

This class of personnel is barely ever mentioned in the building accounts of royal inscriptions, probably because in that context their role was not "dramatic" enough, in the sense that it did not convey particularly vivid imagery and therefore would not bring much to Assyrian propaganda.

The state archives reveal a different picture however. Šarru-ukīn's correspondence indicates that high-ranking officials all across the Assyrian empire were involved in building projects and maintenance, as administrators and/or advisers.

7.3.1 The magnates and provincial governors: administrators

It is clear from available reports that the most common building tasks falling under the responsibility of the magnates (*rabûti*) involved administering the transport of raw and processed materials, mainly wood (logs/beams/panels) and stone (slabs/blocks/hewn colossi). The building tasks most distinctive of the magnates, however, were the *pilku*-duties which consisted in supervising the construction (bricking) of specific sectors of royal building projects.[53] In addition to this, the magnates could also be in charge of overseeing the regular maintenance and renovation works necessary to conserve the temples and palaces across the empire.

Šarru-ukīn's governors (*bēl pāḫiti*) appear to have been very active in building the empire. They corresponded regularly with the king to keep him informed of their progress and requirements. Amongst the governors who produced building-related correspondence figure (from most to least prolific based on extant records): Ṭāb-ṣill-Ešarra (governor of Aššur), Nasḫir-Bēl (governor or Amedi and Sinabu), Aššur-bāni (governor of Kalḫu), Šamaš-bēlu-uṣur (governor of ad-Dair), Ša-Aššur-dubbu (governor of Tušḫan).

As governor of the province Aššur, the heartland, Ṭāb-ṣill-Ešarra was involved in multiple and varied building-related activities. These include sorting out burnt and preserved beams from a fire[54], supervising the Itu'eans who are to build the palace of the queen in Ekallāte[55], cutting timber[56], putting carpenters to work[57], supervising the courses of bricks laid for a ziqurrat[58], supervising five *šeleppāyu*'s (architects?) received from the governor of Kalḫu.[59] Aššur-bāni the governor of Kalḫu was also active in different areas. He raises materials for the temple of Ištar, the Kidmūri temple and the Sebetti temple[60], supervises the renovation of a royal bath house[61], helps the official Aššur-šumī-ke'in load bull colossi on a boat[62].

In contrast, the extant correspondence of Ša-Aššur-dubbu, governor of Tušḫan operating toward the periphery of the empire in Bīt-Zamāni at the frontier of Šubria, yields only one building related letter reporting the felling of wood for beams in Urarṭu.[63] Strategically, governors at the periphery would have been especially important in terms of their military duties, but they would also have been valued for their key positions to obtain exotic goods. This was the case of Nasḫir-Bēl, governor of Amedi and Sinabu also at the frontier of Šubria. His preoccupations were mainly military, the building projects they involved were therefore essentially protective such as building a fort.[64] He was nevertheless actively contributing to the construction of Šarru-ukīn's new capital through the procurement of wood as evidenced in numerous letters[65], and the transport of stone objects (bull colossi and slabs) from their quarries in the mountains down the rivers to the heartland.[66] Šamaš-bēlu-uṣur, governor of ad-Dair on the frontier with Elam, also fits in this category. His correspondence mentions building a fort in ad-Dair[67] as well as transporting wood and stone materials from the hinterland[68].

50 SAA 5, 295.
51 As seen previously, the exact reading and meaning of *kabbusite* are unclear. Translation according to Cole/Machinist (1998), based on context.
52 SAA 13, 34.
53 ▸ **1.4.2.b.**
54 SAA 1, 100.
55 SAA 1, 99.
56 SAA 1, 98.
57 SAA 1, 96.
58 SAA 1, 78.
59 SAA 1, 95.
60 SAA 1, 114.
61 SAA 1, 121.
62 SAA 1, 119.
63 SAA 5, 33.
64 SAA 5, 15.
65 SAA 5, 4 + 7 + 8 + 9.
66 SAA 5, 17.
67 SAA 15, 113.
68 SAA 15, 123.

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In addition to their role as administrators of the building operations, the governors also acted as physical leaders of the men engaged in the works. When the builder Paqāḫa complains that there are no "leaders" (*radiāni*) to help him direct a hundred workmen for a month, he mentions the governor of Talmusa, as a potential candidate capable of leading.[69]

The Chief Treasurer (*mašennu*) of the empire had a crucial role in the administration of building projects since he controlled the resources of the treasury, which were constantly needed for the work, and was therefore also often in charge of allocating work assignments to governors. Ṭāb-šar-Aššur and his successor Aššur-dūr-pānīya, were both heavily involved in construction works, notably for Dūr-Šarrukīn, a building project which would have demanded ample supplies of materials and labour.

Amongst Ṭāb-šar-Aššur's activities figure: ferrying on six boats stone steps and thresholds for the watchtowers (of Dūr-Šarrukīn, presumably)[70], dealing with stone engravers (*kabšarru*)[71], supervising the dragging of bull colossi[72], inspecting timber with Kiṣir-Aššur the governor of Dūr-Šarrukīn[73], towing logs from Aššur to Nīnawā (presumably aiming for Dūr-Šarrukīn)[74], allocating work assignments to the governors of Kalḫu and Arrapḫa[75], attending the builder Paqāha in charge of digging the ditch (for foundations at Dūr-Šarrukīn?)[76], liaising with the artisans in charge of casting lion statues for the *bīt ḫilāni* palaces whilst supervising the making of doors for the temples of Sin, Šamaš and Ningal/Nikkal in Dūr-Šarrukīn[77], dealing with the bathroom door of the great *bīt ḫilāni* palace[78], supervising the designing of houses in Kalḫu[79], supervising the cutting of basalt slabs for the bathroom of a god in Nīnawā[80], supervising work on the ziqurrat of Anu in Aššur[81].

Less correspondence is available for Aššur-dūr-pānīya, treasurer who succeeded Ṭāb-šar-Aššur, but his important involvement in building activities is clear from two letters, one about assigning junior and senior master builders to the magnates [82], the other dealing with the transport of bull colossi[83].

Also participating in the supervision of building works were the lower ranking officials whose precise functions are not specified in the letters. Although they are likely to have been subordinate to provincial governors, they were still communicating directly with Šarru-ukīn. Such officials include Amar-ili who digs foundations for a palace[84] and reports that a wall in a temple of Ištar which caved in is being repaired by master builders[85], Nabû-dūru-uṣur who was posted in Babylonia and informs Šarru-ukīn that he will build brick towers in ad-Dair if the king comes[86], and Aššur-šumi-ka''in in charge of bull colossi and other statues for the gates of Dūr-Šarrukīn[87]. Note that the quantity of letters relating Aššur-šumi-ka''in to bull colossi and lion statues suggests he must have been assigned to that specific sector, namely statuary for gates. Lower ranking officials would have been more likely to specialise in specific sectors since this implied less overarching power.

7.3.2 The scholars[88]: advisers

As seen previously, scholars played an important role advising the king about the appropriateness of building projects, especially in matters of favourable timing.[89] In addition to providing such "technical" expertise, scholars would also advise the king regarding building activities in their capacity as agents: across the empire knowledgeable scholars served as informers, analysing situations and reporting them to the king. A good example of such a scholar is Mār-Issar, one of Aššur-aḫu-iddina's agents in Babylonia[90].

Mār-Issar provides information related to building on two levels, the technical and the strategic. He possesses enough expertise to judge the quality and advancement of works, and through a very good knowledge and understanding of political affairs is able to treat building projects within the more general perspective of the empire. He is involved in many different building contexts, from temples to quay walls, dealing with various matters. Mār-Issar reports on the construction of the temple of ad-Dair, warning the king that it is being neglected and is thereby at risk of falling into the hands of the king of Elam who has been sending his own cor-

69 SAA 1, 65; ▸ **1.4.2.a**.
70 SAA 1, 56.
71 SAA 1, 59 + 60.
72 SAA 1, 61.
73 SAA 1, 62.
74 SAA 1, 63.
75 SAA 1, 64.
76 SAA 1, 65.
77 SAA 1, 66.
78 SAA 1, 67.
79 SAA 1, 72.
80 SAA 1, 58.
81 SAA 1, 71.
82 SAA 5, 56.
83 SAA 5, 57.
84 SAA 1, 137.
85 SAA 1, 138.
86 SAA 15, 129.
87 For example, SAA 1, 150 + 66 + 119.
88 This category is here taken to include not only highly qualified general agents but also diviners of sorts (astronomers/astrologers, extispicers, etc.), doctors, scribes, etc.
89 ▸ **1.1.2.a.**
90 Mār-Issar's exact function is not explicit in the sources, but it is clear that he was a highly educated individual strongly involved in advising the king on matters of state, qualities by which he may qualify as scholar.

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vée workers on site undoubtedly as a manoeuvre to gain control over the area **SAA 10, 349**.[91] Mār-Issar also supervises minutely the renovation works of Ezida and Esagil, commenting on materials needed and foundation deposits, which indicates he was well versed in ritual traditions. He notes that due to the waters rising the quay wall of Ezida should be bricked up and suggests the work be done by the oblates of Išum.[92] Mār-Issar is equally present in Akkad, checking that the inhabitants are moulding and firing bricks.[93] A letter from Šumu-iddina (probably a high-ranking member of the Esagil temple) to Aššur-aḫu-iddina reports that Mār-Issar is inscribing a pedestal, indicating Mār-Issar was also physically involved in building works as scribe.[94]

According to Parpola it is probable that Mār-Issar was replaced by an individual named Urdu-aḫḫēšu in the first years of Aššur-bāni-apli's reign.[95] Urdu-aḫḫēšu's activities are similar to those of Mār-Issar. He reports most notably on the renovation of Esagil. For example, one letter reveals he was in charge of laying the foundations of Esagil with Dīdî, a *šeleppāyu*.[96] A memorandum by Urdu-aḫḫēšu **SAA 13, 166** is exactly the type of document one can imagine Mār-Issar would have been capable of writing.[97] It lists a variety of matters to be discussed with the king[98], which reflects the expeditor's broad knowledge and great range of competence.

Some building activities were considered unsuitable for high-ranking scholars. The astrologer Ṭābiya writes to Šarru-ukīn in despair, shocked to have been assigned corvée work (bricking), he remarks:

> (…) *anāku ūmussu ana ēli bubūtīya šarru amaḫḫar u enna ana libitti ittaskinni umma libitti libin šarru bēlīya lā umaššarannīma lā amaṭṭi*
>
> Every day due to hunger I appeal to the king, and now he imposes bricks upon me, saying: "Mould bricks!" May the king my lord not forsake me so that I should not deteriorate! [99]

7.3.3 The priests: in situ managers

Letters from the correspondence of Aššur-aḫu-iddina reveal that priests were at the forefront of building activities, especially in Babylon where temples were being rebuilt as part of Aššur-aḫu-iddina's renovation programme. For example, in a letter to Aššur-aḫu-iddina, the priest/astrologer Rāšil comments on how he and others are rebuilding Babylon.[100]

Temples were sacred and as such required special care. It surfaces from letters that priests were also actively involved in the maintenance of these buildings, informing the king about renovation work to be carried out. For example, Taqīša, priest of Aššur in Aššur, writes to the temple steward Aššur-šarru-uṣur so that he may instruct the carpenters regarding work to be performed on the pipes of the temple of Adad and Baba.[101]

7.4 Learned and skilled personnel

šipir išippūti, *nēmeq kakugallūti*, *kalû*

Building projects involved rituals that had to be carried out by specialists. Sīn-aḫḫē-erība lays the foundations of his new *akītu* temple with the skill of the purification priest's craft (*šipir išippūti*), the knowledge of exorcism (*nēmeq kakugallūti*).[102] It was essential to exorcise any potential source of evil from a new building (site). Purifying the building (site) could involve burning old occupational layers, performing ritual libations, and also reciting incantations to communicate with gods and demons as the foundations were laid. The *kalû* priest intervened for the recitations during the foundation process.[103] Sīn-aḫḫē-erība appoints an *āšipu* priest and a *kalû* priest for the construction and opening of his "Sīn-aḫḫē-erība Canal". [104]

ummânu/*ummianu* (LU_2.UM.ME.A)[105], *mār ummâni*[106], *šipir*/*šipar itinnūti, šitimgallu*

Skilled artisans[107] are indispensable to any building project, raw manpower and scholarly or theoretical understanding alone do not suffice.

Assyrian kings surrounded themselves with artisans, establishing a strong connection with them. This was essential in order for kings to partake in

91 SAA 10, 349.
92 SAA 10, 364.
93 SAA 10, 368.
94 SAA 13, 178.
95 Parpola 1983: 283.
96 SAA 13, 161.
97 ▸ **1.4.2.c**.
98 Topics included: the doors of Esagil; beams for roofing temples of Babylonia; the wine of Assyria; sheep offerings from the Halmaneans; the tax of oxen and sheep for Bēl, Nabû, Nergal; Bēl-le'i the *zazzaku*; the king of Babylon.
99 SAA 8, 442; line r. 6 read *la a-ma-ṭi*$_3$.
100 SAA 13, 173.
101 SAA 13, 40.
102 Sîn-aḫḫē-erība, RINAP 3/2, 168, 30–31.
103 ▸ **2.2.2.b**.
104 For context RINAP 3/2, 223, 28.
105 To be distinguished from *ummānu* (ERIM), "military force " or "work force".
106 A distinction is established between *ummânu*, the master craftsman, and *mār ummâni,* the simple (apprentice) craftsman.
107 This term includes here all specialists of the building trade. For more on Neo-Assyrian craftsmen more generally see Gross 2018.

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the creative process. Tukultī-apil-Ešarra III "thought out skilfully (the design of his palaces) with the help of all the clever artisans" (*gimir mār ummânī ḫassūti nakliš ukaṣṣipma*).[108] For the renovation of Esagil, Aššur-aḫu-iddina remarks: "I mustered all of my artisans" (*gimir ummânīya*), thereby insisting on the strong relationship determined by ownership.[109] Tukultī-apil-Ešarra III and Aššur-aḫu-iddina are two of the rare Assyrian monarchs to praise a specific category of artisans. Tukultī-apil-Ešarra III states that in order to enhance the appearance of the clamp locks on his palace gates he fashioned (them) [with?] stones from the work of the stonecutters (*abnē šipir purkullūti*).[110] Aššur-aḫu-iddina remarks that he carved the interior of his palace through the work of the stone-cutter's craft (*ina šipir urrākūti*) **RINAP 4, 1, vi 29**.

It appears artisans could be organised around cities. Aššur-aḫu-iddina puts great care into choosing the city that will provide the artisan workshop (*bīt mumme*)[111] in charge of renovating the divine statues of Esagil.[112] He subjects the matter to divine approval through divination. Three cities are proposed to Šamaš and Adad, namely Aššur, Babylon and Nīnawā. Aššur wins. Specific workshops and artisans are appointed in accordance with divine instructions. Interestingly, Aššur-aḫu-iddina describes the skilled artisans as "people who are deaf and blind, who do not know themselves, whose future is undecided".[113] He prays Marduk and Aššur that they "grant the skilled artisans (*ummâni enqūti*) supreme knowledge like that of the god Ea who created them".[114] In this particular case, the category "skilled artisans" includes carpenters, jewellers, coppersmiths and seal cutters. From blank slates (deaf and blind) these artisans will become fully-fledged artists: they are portrayed as mere vehicles of divine creation, as if the gods had taken possession of them to carry out the tasks. It is also with skilled or capable artisans (*ummâni enqūti*/*lē'ûti*) and capable master builders who establish plans (*šitimgallī le'ūti mukinni gišḫurri*) that Aššur-aḫu-iddina exposed the plan of Esagil, inspected its structure and laid its foundations.[115] The *ummâni* are therefore intrinsically associated with the design and creation of buildings, and it is not inconceivable that they should have belonged to a sort of building "trade".[116]

From Old Assyrian inscriptions onwards it is clear that the concept of building trade existed. Šamšī-Adad I states he methodically (*šuteṣbu*) made the temple of Enlil through the work of the skilled building trade (*ina šipir nēmeq itinnūti*) of the city of Aššur.[117] Tukultī-apil-Ešarra I describes the temple of Anu and Adad he rebuilt in Aššur as the choicest from the building trade (*ina šipar itinnūti ma'diš nussuqu*).[118] Who formed this "building trade" and how it was organised is less clear.[119] The expression does not necessarily denote an economic structure. It certainly does however present building activities as a well-defined category of expertise, which would be composed of skilled/specialised personnel. Any craftsman involved in building works could then be considered part of such a building trade. Building takes the abstract dimension of an "art" with the basic sense of "skill, craftsmanship". Note that the work of artisans could be bound by contracts. In one letter, for example, it is made clear that the king established a contract with the temples which was too limiting and failed to include an artisan who must therefore be paid with grain **SAA 5, 294, r. 4 – r. 7**.[120]

The *šitimgallu* (LU_2.ŠITIM.GAL) is the great/master builder. The term is employed by Šarru-ukīn to describe the god Mušda.[121] Mušda is the master builder of Enlil. Given that life on earth was thought to reflect life in heaven, the special relationship between Enlil and Mušda could be suggesting a similar relationship between the Assyrian ruler and his chief master-builder(s). The term *šitimgallu* is also used by Sîn-aḫḫē-erība and Aššur-aḫu-iddina: both praise the work of the wise (*enqūti*)[122] and capable

108 Tukultī-apil-Ešarra III, RINAP 1, 47, 20′.
109 Aššur-aḫu-iddina, RINAP 4, 104, iii 18 – iii 19.
110 Tukultī-apil-Ešarra III, RINAP 1, 47, 27′.
111 The production and renovation of cult statues took place in temple workshops known as *bīt mumme*. The term translates literally as "house of the life-giving force" and has the Sumerian equivalent e_2-umum-a. The association of the *ummâni* with the concept of *mummu* ("life giving force") indicates that craftsmanship was assigned an esoteric dimension. In addition to being the name of the deity of craftsmanship, Mummu is also an epithet of Ea and Marduk. For more on the *bīt mumme* see Berlejung 1998: 89–93.
112 Aššur-aḫu-iddina, RINAP 4, 48, r. 72 – r. 79.
113 Aššur-aḫu-iddina, RINAP 4, 48, r. 67.
114 Aššur-aḫu-iddina, RINAP 4, 48, r. 70 – r. 71.
115 Aššur-aḫu-iddina, RINAP 4, 54, o. 40′ and RINAP 4, 105, iv 29 – iv 37.
116 For the concept of "guild" as rendered by the Akkadian term *qinnu* in the Neo-Assyrian period see Radner 1999: 26–33.
117 Šamšī-Adad I, RIMA 1, A.0.39.1, 31–34.
118 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.1, vii 94 – vii 95.
119 For an overview of Mesopotamian building professionals based on a broad selection of early first millennium sources see Pientka-Hinz 2014. A building trade, in whatever form it may have come, is likely to have followed the principles of the *qinnu* structure attested for professions such as goldsmithery and understood to have functioned as some sort of guild. For the concept of *qinnu* in the Neo-Assyrian period see Radner 1999: 26–33.
120 As pointed out by Gross (2018 : 379–380), the contract mentioned here could be related to the *iškaru* system according to which raw materials handed out by the palace to groups of craftsmen had to be processed following set quotas and a prescribed time limit.
121 ▸ **7.1**.
122 Sîn-aḫḫē-erība, RINAP 3/1, 22, vi 57.

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(*lē'ûti*)[123] master builders, whose role it was to assist in the construction of the *bīt kutalli* in Nīnawā under Sîn-aḫḫē-erība, and to examine the foundations of Esagil for rebuilding, under Aššur-aḫu-iddina. As pointed out by Walter Farber, the term ŠITIM/ŠIDIM probably derives from the Sumerian expression šu dim_2 ("to create with the hand"), which is employed to designate the activity of the šidim in Sumerian texts dealing with building works.[124] Heimpel proposes a phonetic relationship by way of vowel harmony. The šidim would then be "the one who creates with the hand", meaning the profession of šidim would be defined by its creative aspect.[125] If this is correct, then the term *šitimgallu* should be understood literally as "the great one who creates with the hand", placing much importance on the creative role of the master builder. The hand was clearly emblematic of creativity. This explains why Assyrian kings were keen to be portrayed as partaking in the building process with their "pure hands".[126]

šeleppāyu, rāb etinni, etinnu, naggāru, ṣarrāpu

An interesting function is that of *šeleppāyu*. One individual in particular from the correspondence of Aššur-aḫu-iddina, Dīdî, is referred to as *šeleppāyu* **SAA 13, 161, o. 17′**. His role appears to be that of a master builder, laying foundations. The special title suggests a special rank or status, such as chief master builder. This is all the more likely given that royal orders are transmitted directly to the *šeleppāyu*: Dīdî communicates directly with the palace, without permitting any interferences even from Urdu-aḫḫēšu, the king's agent in Babylonia. He has been appointed to lay the foundations of Esagil but will only do so with explicit orders from the palace. A letter from the reign of Šarru-ukīn, probably related to building works at Dūr-Šarrukīn mentions the employment of five *šeleppāyu*'s in conjunction with that of thirty carpenters, which gives an indication of the authority enjoyed by the *šeleppāyu* since, in this case, it appears only one *šeleppāyu* is necessary for every six carpenters.[127]

Helmut Freydank argues convincingly that the term *šeleppāyu,* attested mainly in the Neo-Assyrian period, must be derived from *šalimpāyu*, the *nisba* rendering of the title *Šalim-pî-Ea* (lit. "Good is the instruction of Ea"), encountered in Middle-Assyrian administrative texts.[128] The title *Šalim-pî-Ea* seems to have designated artisans of the highest calibre, typically experts in the building crafts. The reference to Ea suggests it must have been not only a professional title but also an honorary one awarded only to the most distinguished master builders, those who had been instructed in the lore of Ea.[129] This interpretation works well with the role assigned to the *šeleppāyu* Dīdî in the aforementioned letter. As remarked by Stefan Jakob, whilst the (*rab*-)[130] *etinnu* was mainly in charge of supervising the flow of work, the *šeleppāyu* would be responsible for conceiving the project, which included theoretical planning and surveying the building site.[131] A *šeleppāyu* could therefore qualify as a modern-day engineer or architect.

The term *šitimgallu* (LU_2.ŠITIM.GAL) attested mainly from literary texts and encountered in the royal inscriptions appears related in meaning, if not synonymous, with *rab etinni* (LU_2.GAL.DIM_2), master builder. This is suggested by lexical lists that equate |DIM_2|, read *ši-ti-im* (ŠIDIM), with *itinnu*, so that ŠIDIM.GAL would translate great/master builder.[132] The lexical nuance is that *rab etinni* is the "chief of the builders", whilst *šitimgallu* is the "great builder": one is relative, the other absolute, so to speak. This relates *šitimgallu*, "the great builder", to *šeleppāyu*, "the architect". Moreover, it seems likely that as an appellation of Ea-Mušda[133], patron of builders, the term *šitimgallu* would have acquired a divine flavour, making it perhaps a divine and royal equivalent of *šeleppāyu*.

A distinction may be established between the *rab etinnu* (LU_2.GAL.TIN), master builder, and the simpler *etinnu* (LU_2.TIN), ordinary builder. It is suggested by one letter that master builders were employed to preside the key phases of the building process, such as laying the foundations: a *rab etinnu* is chosen specifically to lay the foundations of the queen's palace in Kilīzi.[134] Ordinary builders (*etinnāni*) were used in great numbers for general mass work. Aššur-dūr-pānīya, the treasurer, informs Šarru-ukīn that he needs each one of his sixteen builders to brick his *pilku*-assignment, he cannot give any away. As for the builders' sons, they are only apprentices, it is not within their understanding, all they can do is carry chests.[135] The main experienced builders are distin-

123 Aššur-aḫu-iddina, RINAP 4, 54, o. 40′ and 105, iv 29 – iv 37.
124 Farber 1989: 143.
125 Heimpel 2009: 237.
126 See "clay hands" ▸ **6.5.1**.; see also ▸ **7.2** sub *lipit qātīya*.
127 SAA 1, 95.
128 Freydank 1985.
129 Note there is an intriguing phonetic similarity between *šeleppāyu* architect, and *šeleppû*, turtle, the emblematic animal of Ea. The term *šeleppû* is attested already in the Old Akkadian period so it could not be derived from *šeleppāyu* which itself appears to be derived from *Šalim-pî-Ea*. It is not inconceivable, however, that the development from *šalimpāyu* to *šeleppāyu* would have been influenced in part by a desire to match the term designating the building profession with the emblem of Ea.
130 Author's specification.
131 Jakob 2003: 464.
132 See for example the gloss [lu_2]-$^{ši\text{-}ti\text{-}im}DIM_2$ = *i-tin-nu*, etc. in Erim-ḫuš = *anantu* III 5 (cf. MSL 17).
133 Cf. CT 25 48:9: ^{d}ŠITIM = *Ea ša itinnū*.
134 SAA 16, 111.
135 SAA 5, 56.

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guished from their apprentice sons (*talmidāni*). This provides evidence that builders formed kin groups; the profession was passed on from father to son.[136] In parallel to the kin groups, which we can assume were natives of the places they worked at (thereby easily qualifying as "Assyrian"), there is evidence that individual builders identified by their (non-Assyrian) ethnicity circulated across the empire under the authority of particular magnates. An official informs Šarru-ukīn that he is in the presence of the "runaway" Kassite builder (*etinnu ḫalqu kaššaya*), who should be returned to his master.[137] The official makes a distinction between his own builders and the "Kassite builder".[138]

The carpenters (*naggārāni*) are the only artisans other than builders consistently mentioned in the Assyrian state archives. This is no surprise. Wood was one of the most fundamental materials of Assyrian architecture, second only to clay. Whilst practically no prior knowledge was needed to fashion clay into bricks, handling wood, from the felling to the carving into beams and panels, required a certain level of expertise. The important role of carpenters is clearly expressed in an omen from *Šumma ālu:* "If in a city there are many carpenters (var. reed workers/builders) the heart of that city will be happy".[139]

Carpenters were in high demand so there was a large supply of them. This meant they could be pooled from anywhere in the land and made to travel across the empire. Šarru-ukīn orders that carpenters working in Ṣupat (probably modern day Homs[140]) be sent back to Dūr-Šarrukīn.[141] An official under Šarru-ukīn (possibly Šarru-emuranni) orders the Samarian sheikhs to send all their carpenters and potters to Dūr-Šarrukīn.[142] It appears different carpenters had different relationships with the authorities, depending on their level of expertise and the social prestige they gained from it. The carpenters working in Ṣupat ran away from the official Bel-liqbi, an act of disobedience against the authorities, prompting Bēl-liqbi the governor of Ṣupat to complain to Šarru-ukīn that he is losing artisans.[143] Inversely, the governor of Aššur, Ṭāb-sill-Ešarra, reports to Šarru-ukīn that one of the carpenters he is supervising who has been auditioned by the king has told him that they (the carpenters) will be going to Sapirrutu "by the order of the king himself" (*issu pî ša šarrimma*).[144] The carpenters pride themselves to be in direct contact with the king and will do whatever he demands, regardless of intermediary officials. Carpenters could be under very tight control. Taqiša the priest of Aššur informs the temple steward Aššur-šarru-uṣur that the Palace has sent orders for the carpenters to start working on the (offering) pipes of the temple of Adad and Bābu on the first of *Šabaṭu* (XI).[145] The carpenters must perform the work quickly. Aššur-šarru-uṣur is to instruct the carpenters about the woods that have been selected and he must "measure the space between their eyes" (*birti ēnātīšunu maddid*) meaning he must make sure they follow the instructions very carefully by giving them strict orders.

Very few mentions are made of metalsmiths, at least in relation to building activities. One letter to Šarru-ukīn from an unidentified official regarding building works in a temple reports: "The goldsmiths say: let them supply us more gold!" (*ṣarrāpū mā ḫurāsu luraddûnnâši*) **SAA 5, 294, o. 18′ – o. 19′**.

It is interesting that mentions of carpenters and builders should be practically absent from the royal inscriptions whilst so prominent in the state archives. This is further evidence for the fact that artisans, although in practice absolutely essential to the creation of buildings, were in theory considered as only instrumental to the greater act of divine and royal creation.

7.5 Mass labour and its symbols

ummānu (ERIM), *urāsu, ḫubtu, allu, marru, tupšikku, kudurru*

Of course, Assyrian rulers could not have built their empires without relying on an immense pool of corvée workers. They recruited mass labour from all corners of their empire, as tribute or war captives. Entire populations were enslaved and deported where needed. Whilst women and children were most likely to land in domestic circuits, men were typically mustered into the military as soldiers or used as work force in building projects. Deportees constituted the backbone of the Assyrians' colossal building entreprises. For example, without enlisting deportees, who could be sourced in unlimited numbers, it would not have been possible to build the gigantic site of Kalḫu in the span of just twenty years.[146] Assyrian citizens could also be summoned to work for royal building projects, as a form of *ilku*-service.[147] Troops of men working on build-

136 For a discussion of the profession of builder in Mesopotamia see Sievertsen 2014.
137 SAA 15, 151, b.e. 20 – r. 2.
138 SAA 15, 151, r. 2 – r. 4.
139 *Šumma ālu* I, 141–143.
140 Cf. Parpola/Porter 2001: map 8.
141 SAA 1, 179, r. 13 – r. 15.
142 SAA 15, 280.
143 SAA 1, 179, r. 18 – r. 21.
144 SAA 1, 96.
145 SAA 13, 40.
146 See Sievertsen 2014: 195.
147 Tukultī-apil-Ešarra III prides himself on imposing on captives the *ilku*-service and the *tupšikku*-corvée "just like that imposed on the Assyrians" (cf. Rost 1893: 26 +149). Years later Šarru-ukīn boasts he abolished the

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ing projects were typically referred to as *ummānu* (sing.)/*ummanāti* (pl.), a term which was also commonly used to refer to armies or the common people. This term is phonetically very close, if not identical, to the term *ummânu* (sing.)/*ummânāti*/*ummanū* (pl.), "artisan" discussed in the previous section, which could say something about the technical capacities of these workmen.

Foreign work forces were particularly valued assets so they would be targeted as forms of spoil: they would more often than not have brought with them the knowledge or at least the sensitivity necessary to reproduce in Assyria the artistic peculiarities of the world at the periphery of the empire. Reducing the outside world into an aspect of Assyria helped to foment the illusion that Assyria captured the essence of the universe. Sîn-aḫḫē-erība thus describes Nīnawā as a place which contains "artwork from across the empire" (*šipir nikilti gimir bēlūte*).[148] Elsewhere he boasts that he scooped "the entirety of the work force (*ummānu*), as many as there were" as part of his booty gained from defeating Marduk-apla-iddina and the armies of Elam on the plain of Kish.[149] Aššur-aḫu-iddina also lists work forces (*ummānī*) among the different professionals (militaries as well as farmers, shepherds, gardeners, etc.) he won off the king of Šubria.[150] Similarly, following his victory against the Elamite king Ummanaldašu, Aššur-bāni-apli adds Elamite bowmen, shield-bearers, work forces (*ummānī*) and military engineers (*kiškittû*) to his royal contingent. [151] These listings indicate the *ummānu*'s belonged to neither soldiers nor peasants, as "work forces" they constituted a third basic category of commoners.

The term *urāsu* refers to workmen in general, typically corvée workers, as opposed to specialised builders. The activity *urāsūtu* is often translated as "corvée work" because it designates compulsory building work performed for the crown. The *urāsē* workmen could include Assyrian citizens so as a category they should be distinguished, in theory at least, from non-Assyrian mass labourers without a proper social status such as deportees and other captives who were also employed in building works, and are more likely to have been designated by the term *zābil tupšikki* (see further down). This is not to say the *urāsu* category could not contain non-Assyrians/deportees/captives, but simply that being designated as an *urāsu* supposed a higher level of social integration than just being considered a deportee/captive. The good integration of the *urāsu*'s is illustrated by a letter from Ṭāb-ṣill-Ešarra to Šarru-ukīn informing the king that the mayors, *urāsu*'s and elders of the Inner City (Aššur) have been consulted regarding building works.[152] Listing the *urāsu*'s on a par with the mayors and elders of the city indicates these workmen enjoyed a special social status.

Due to the nature of their work, the *urāsu*'s were typically employed in large numbers. One interesting letter from the reign of Šarru-ukīn contains a message from the king addressed to a hundred *urāsu*'s **SAA 1, 25**. An administrative document from the North-West Palace at Kalḫu mentions the employment of four hundred *urāsu*'s to make bricks.[153] Because large numbers of strong men were required for *urāsūtu* work, the *urāsē* were commonly recruited from the army. A letter from Issar-dūri informs Šarru-ukīn that, in accordance with royal orders, the *raksū* (horse trainers?[154]) of the Chief Eunuch have not been taken to Dūr-Šarrukīn for corvée work (*urāsūtu*).[155] Another letter, from the reign of Aššur-aḫu-iddina, indicates that *urāsu*'s were recruited from the "many" *kallāpu*'s (regular Assyrian infantry/unarmoured cavalry[156]) and from the *zūku*'s (heavy infantry[157]).[158]

The Aramaic tribe of the Itu'eans appears to have been very active in the army mainly as auxiliary archers[159], representing a substantial source of manpower, which is probably why they are also frequently mentioned in relation to building works. For example, Nasḫir-Bēl the governor of Amedi and Sinabu reports to Šarru-ukīn that he sent Itu'eans with the village inspector to get the beams held back in Eziat.[160] The beams were moved through by fighting, which suggests the Itu'eans were employed as soldiers. Another letter, from Issar-Dūri governor of Arrapḫa informs Šarru-ukīn that the Itu'eans are working in Dūr-Šarrukīn.[161]

Captives (i.e. deportees and prisoners of war) could be employed in any sector of building enterprises. For example, a letter to Šarru-ukīn informs us that captives (*ḫubtē*) are to be directed by carpenters and potters for work at Dūr-Šarrukīn.[162] This suggests that they were not specialised in the crafts but were simply being used as manpower.

Building projects on colossal scales only become possible in the Neo-Assyrian period when Assyrian

ilku-service and *tupšikku*-corvée harshly imposed on the citizens of the city Aššur by Salmānu-ašarēd III (cf. "Sargon Charter" in Saggs 1975). This indicates that *ilku*-service and *tupšikku*-corvée in addition to being essential building instruments had significant political implications.

148 Sîn-aḫḫē-erība, RINAP 3/1, 1, 65.
149 Sîn-aḫḫē-erība, RINAP 3/1, 22, i 33 – i 34.
150 Aššur-aḫu-iddina, RINAP 4, 33, r. iii 17′.
151 Aššur-bāni-apli, RINAP 5, 11, vii 2 – vii 5.
152 SAA 1, 77.
153 Parker 1961: ND.2705, Pl. 23.
154 Cf. Fales 2009: 80, fn. 14.
155 SAA 15, 15.
156 For latest discussion of military terms see Fales 2009.
157 Fales 2009.
158 SAA 16, 90.
159 See Dezsö 2006: 91–95.
160 SAA 5, 3.
161 SAA 15, 14.
162 SAA 15, 280.

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power is at its apogee with extensive human resources to draw from. Mass deportations with the aim of building an empire nevertheless take off already in the Middle-Assyrian period as the Assyrians start to rise. They are most clearly attested in the inscriptions of Salmānu-ašarēd I but already portended in the inscriptions of his father Adad-nērārī I. The first mention of forced labour for the purpose of an Assyrian building project is found in the inscriptions of Adad-nērārī I who imposes "pickaxe, spade and earth basket" on the surviving troops of the king of Hanigalbat whose rebellion he crushed:

> *u šittāt ummānātīšu alla marra u tupšikka ēmid*
> And I imposed pickaxe, spade and earth basket on the remainder of his troops. [163]

Corvée work is typically symbolised by such tools. Starting with Tukultī-Ninurta I, primacy is given to the concept of *tupšikku* (earth/brick basket): Tukultī-Ninurta I reports imposing the earth basket on subdued people to signify their enrolment in the corvée of construction. Analogous to the *tupšikku* is the *kudurru* (brick hod) encountered in the expression *zābil kudurri* ("carriers of the hod"). Aššur-nāṣir-apli II lists "carriers of the hod" as part of the tribute exacted from the inhabitants of the land Nirbu: they are listed after horses, mules, oxen, sheep and wine.[164] This can be compared with the troops (*ummānāti*), *zābil tupšikki*, chariot, tools and vessels that the fearful Dilmunites sent as tribute to Sîn-aḫḫē-erība after the sack of Babylon.[165] An inscription by Aššur-bāni-apli makes it clear that although *tupšikku* and *kudurru* are used to evoke similar imagery they are different instruments: the kings of the Arabs must carry the hoe (*allu*)[166], the *tupšikku* (earth basket) and *kudurru* (brick hod) in order to build Aššur-bāni-apli's *bēt redûti*.[167] The term *kudurru* appears to be preferred to *tupšikku* in ceremonial contexts, such as when kings perform the act of carrying the basket with the special brick(s) on their heads.[168] This suggests *kudurru* is more intimately connected to finished bricks (as opposed to raw earth) than *tupšikku.*

Coercing peoples from the "four quarters of the world" into building the Assyrian empire contributed to the image of greatness the Assyrian kings wished to convey. The more foreign resources were enumerated, the better. As discussed by Mario Liverani, the ideology of the Assyrian empire supposed that the level of exotic possessions was a function of the strength of power.[169] Aššur-bāni-apli has people from his land make bricks for his *bēt redûti* that the Arab kings will work on, and he has the bricks transported to Nīnawā with chariots taken as spoil from Elam.[170] In a similar spirit Sîn-aḫḫē-erība claims to have deported "people from the land of Chaldea, Arameans, (people from) the land Mannāya, the land of Que, the land of Ḫilakku, the land of Philistia and the land of Tyre", and to have had them carry the brick basket (*tupšikku*) and make bricks, as well as transport heavy colossi.[171] This can be related to another statement by Sîn-aḫḫē-erība according to which he had the foreign/enemy populations (*tenēšēt nakiri*) which his hands had conquered carry the basket and make bricks.[172] It should be noted, however, that Sîn-aḫḫē-erība never led a campaign against the Manneans who became allies of Šarru-ukīn in 716: it may well be then that Sîn-aḫḫē-erība was actually employing and remunerating these foreign artisans but described them as captives for the sake of his royal narrative.[173] It was not uncommon for the royal narrative to magnify reality. In doing so it also brought to the fore the aspirations of Assyrian monarchs. For his palace in Nīnawā, Aššur-aḫu-iddina summons twenty-two kings of Ḫatti (including the coastal areas and Cyprus) requesting from them large beams, tall columns, planks of cedar and cypress, colossi of *pendû*-stone, female *lamassu*'s and *apsasītu*'s, slabs, paving stones, slabs of *gišnugallu*-limestone, (raw) *pendû*-stone, breccia, dolomite, *girimhilibû*-stone.[174]

Not only were these foreign people obliged to build the Assyrian empire, but according to the Assyrian kings they were also doing so joyfully, which of course rounds up perfectly the image that Assyrian kings were keen to convey: Assyrian power was not only the awe-inspiring formidable authority no one would dispute, but also the most fulfilling blessing anyone could ever dream of. Sîn-aḫḫē-erība gathers "people from foreign regions and men from hidden mountains" to quarry bull colossi in the land of Balaṭai, and he then has the bull colossi "dragged joyfully" (*ḫadîš ušaldada*) to Nīnawā.[175] As pointed out by Daniel Luckenbill "transporting these huge colossi may have been a picnic for Sîn-aḫḫē-erība, but the pictures we have of such activities (…) do not indicate that it afforded much pleasure to the captives who pulled the sledges." [176] Aššur-aḫu-iddina too embraces the optimism stating how, to build

163 Adad-nērārī I, RIMA 1, A.0.76.3, 43–45.
164 Aššur-nāṣir-apli II, RIMA 1, A.0.101.17, ii 34.
165 Sîn-aḫḫē-erība, RINAP 3/2, 168, 42–43.
166 *allu* applies to tools with one or more teeth, i.e. pickaxes or hoes (cf. Salonen 1972: 71)
167 Aššur-bāni-apli, RINAP 5, 11, x 91–93.
168 Cf. CAD: *tupšikku* and *kudurru* B.
169 Liverani 1979.
170 Aššur-bāni-apli, RINAP 5, 11, x 85.
171 Sîn-aḫḫē-erība, RINAP 3/1, 1, 71.
172 Sîn-aḫḫē-erība, RINAP 3/2, 43, 6–7.
173 This idea was put forward by Andreas Fuchs (personal communication). Of course, not all artisans worked under constraint. As seen above (▸ **7.4**), their work could be bound by contracts.
174 Aššur-aḫu-iddina, RINAP 4, 1, v 54 – vi 1.
175 Sîn-aḫḫē-erība, RINAP 3/2, 73 and 74.
176 Luckenbill 1924: 126, fn. 1.

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Ešarra, the "people of the lands (and?) the makers of brick" (*nišī mātāti lābin libitti*), made bricks for one year "with pleasure, joy and jubilation" (*ina ulṣi ḫidâte u rīšāte*).[177] Also in a cheery mood, Aššur-bāni-apli claims about the Arab kings who worked on his *bīt ridûti* that the one who moulds his bricks and the one who carries his earth basket "with cheerful songs and musical celebrations passed their time" (*ina elēli ningûti ubbalū umšun*).[178] He adds: "In joy and jubilation (*ina ḫidâte rīšāte*) I renovated it (the *bīt ridûti*)."[179] It cannot be discarded that singing and rhythmical movements would have been encouraged by Assyrian supervisors in order to structure the workflow and thereby improve the pace of production. It is not inconceivable that musical entertainment would also have been provided since it was propitious for a building if the workforce was happy.[180]

177 Aššur-aḫu-iddina, RINAP 4, 57, iv 41 – v 1.
178 Aššur-bāni-apli, RINAP 5, 11, x 94 – x 95.
179 Aššur-bāni-apli, RINAP 5, 11, x 96.
180 For comparison, it is also important for the workforce to be happy in the Standard Babylonian Epic of Gilgameš XI, 75, where the workmen celebrate the building of the ark "as on the feast days of the New Year itself".

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8 THEMES AND CONCEPTS OF SPACE
How Ancient Assyrian Perceptions of Space Fit in the Modern World*

8.1 Principles of analysis and methodology

The data analysed in the previous chapters reveals that the Assyrian royal inscriptions and state archives coincide substantially in the ways they integrate information related to building practices and ideologies. Based on the points of intersection between the two different types of discourse represented by our sources, it is possible to sketch a general picture of the Assyrian, and more broadly Mesopotamian, *Weltanschauung* ("worldview") relatively to space. This opens up a discussion of building themes and concepts, which will assume full meaning when considered in relation to modern theories of space and architecture, where architecture could be described as the "conglomerate" or "crystallised" form of space. Approaching ancient data from a modern perspective implies studying it from within a modern framework. Attempting to understand the ancient world in terms of itself is essential but the historian can only achieve this by fully embracing the modern reality.

A historian's task is to reconstruct the ancient framework but (s)he will necessarily always do so from his/her modern framework since the ancient framework is not his/hers by definition. We may consider then that a historian's *raison d'être* is to account for what *was* in terms of what *is* and vice versa. The social, and arguably most *useful,* function of the past is to inform our understanding of the present, so we shall focus here on what can be said of what *is* from what *was.* In the words of the Roman architect Vitruvius, we will be looking at *quod significatur et quod significat* ("what is signified and what signifies")[1]*,* taking present knowledge as *signified* and past knowledge as *signifier* to use Ferdinand de Saussure's terminology.[2]

The questions that will be addressed here are determined by the nature of the materials under study. It goes without saying that ancient materials cannot be subjected to just any type of modern question because our understanding of the ancient world evolves in a framework of many unknown parameters. The questions identified reflect two different aspects of perception: views *of* space (objective) and views *on* space (subjective). The views *of* space is what can be said of what *was*, whilst the views *on* space is what can be said of what *is.* Through the views *of* space we shall zoom into the views *on* space.

For today's historian, ancient Mesopotamia consists of texts and material culture[3], which have become the objects of two intrinsically connected disciplines, philology and archaeology respectively. It is therefore essential when embracing either discipline to do so in full consideration of the other. In order to bring to the fore an archaeological venue of investigation, the views *of* space have been organised into categories of analysis taken directly from the archaeological field so as to constitute an archaeological framework.[4] Spatial markers will be analysed with regard to questions of:

1. form (shape/appearance of building units/components/features, includes plan and elevation)

2. location (building sites, situation of building units/components/features)

3. utilitarian function (practical purpose of building units/components/features)

4. symbolic function (ideological value of building units/components/features)

* In this chapter "modern" is used in its popular/original sense to mean "actual/current/recent". It does not refer to the modern/postmodern debate.

1 See Vitruvius, Book I, Chapter 1, Section 3, in Rowland/Noble Howe 1999.

2 The approach adopted here should not be taken as a structuralist stance. Structuralist concepts are used here as tools to structure thought, not as a finality.

3 Note that material culture encompasses the full range of human artefacts, which includes textual artefacts (i.e. written documents) as well as architectural artefacts (i.e. architecture).

4 These categories expand and adapt to our textual sources the analytical classification propounded by Meijer 1989: 222. Note that these categories are not watertight. They are organically connected and there is substantial overlap in the significance of the materials they cover. The ambiguity means particular materials can be assigned to particular categories for the sake of convenience.

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5. agency (production and usage of space, as determined by the action of humans)

Overarching these considerations are archaeological concerns about the functional *organisation* and *use* of space, questions typically raised in the field by ground plans and room contents (i.e. artefacts, osteological and botanical remains). Although such information can be implicit in our written sources, it is rarely spelled out. Moreover, due to the nature of our sources, the archaeological framework will apply essentially to monumental architecture, that is, temples and palaces. Whilst archaeological evidence demands that questions relative to the class of buildings (temple, palace, private house, tomb, etc.) be part of the basic enquiry, our textual sources provide this information by definition since the purpose of writing is to provide a descriptive record.

Within each category of the archaeological framework different views *on* space will be explored from the interconnected realms of philosophy, anthropology and sociology. These realms of thought are representative of current discursive trends about space, which have been evolving on three levels: from the more general (philosophy) to the more particular (sociology), through the study of humanity (anthropology)[5]. To put it very schematically, we may say that philosophy offers approaches (e.g. structuralism, phenomenology), anthropology provides the cases (e.g. embodied space), and sociology problematizes states of affairs (e.g. dynamics of power). These are the principal analytical tools used in conceptual studies of archaeology and architecture.

8.2 Answering the questions: what did they say and what can we say?

8.2.1 Form

8.2.1.a Levels of planning

In the context of building and architecture, space is first formalised through plans. **Chapter 1** ("Planning") was based on three different sources (royal inscriptions, state archives, omen series) to account not only for the two distinctive intellectual approaches to planning represented by our ideological and mundane sources, but also to account for the *process* of planning as a socio-cultural enterprise, which becomes apparent when considering sources that bridge the ideological and the mundane, promoting dynamics of change, such as the omen series. Planning revealed itself on three levels of action:

1. conceptualisation (mainly discernible in royal inscriptions), involves turning ideas into designs (in the full sense of the term)

2. integration (mainly discernible in omen series) involves methods by which designs (in the full sense of the term) are adjusted to reality

3. realisation (mainly discernible in state archives), involves organising labour and specifying technical requirements

With these three levels of planning can be associated three types of material or graphic plans archaeologically recovered from Mesopotamia across different time periods. These will be described here as symbolic plans, estimates and architect plans.[6]

Rather surprisingly, neither estimates nor architect plans are available for the Assyrian period.[7]

Symbolic plans are the only type of graphic plan recovered from Assyria so far. They are aerial views of architectural structures, which seem designed not to record spatial information but rather to encode ideas of space.

For comparison, the Neo-Assyrian symbolic plan from the Balāwāt Gates **[FIG. 37]** is reminiscent in

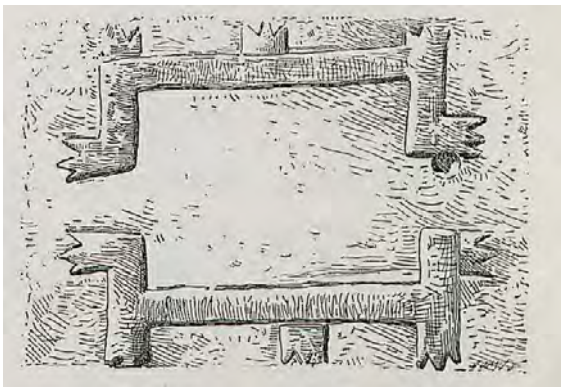

Fig. 37: Symbolic plan of an enclosure.
Detail from the bronze Balāwāt Gates of Salmānu-ašarēd III (Perrot/Chipiez 1882: 341).

5 Bear in mind that in the same way the aforementioned categories of space are not watertight, these fields of enquiry should not be taken as mutually exclusive or independent from other fields of enquiry. Their sole purpose here is to serve as discursive anchor points.

6 For an overview of Mesopotamian building plans see Bagg 2011. Bagg distinguishes three categories of plans *bemaßte Bauzeichnungen* ("measured plans"), which give measurements, *beschriftete Bauzeichnungen* ("written plans"), which give no measurements but include room labels, and *stumme Bauzeichnungen* ("silent plans"), which include neither measurements nor room labels.

7 As remarked by Heisel (1993: 38), this could point to the use of perishable writing supports; clay plans would then have been reintroduced in the Neo-Bablyonian period. The Neo-Babylonians may have been eager to reconnect with traditions.

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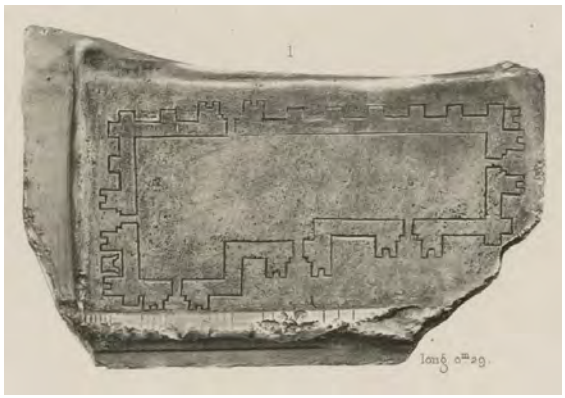

Fig. 38: Gudea's symbolic plan of the Eninnu (L. 0.29 cm). Detail from a diorite statue of Gudea known as "L'architecte au plan" (DE SARZEC 1884: Plate 15).

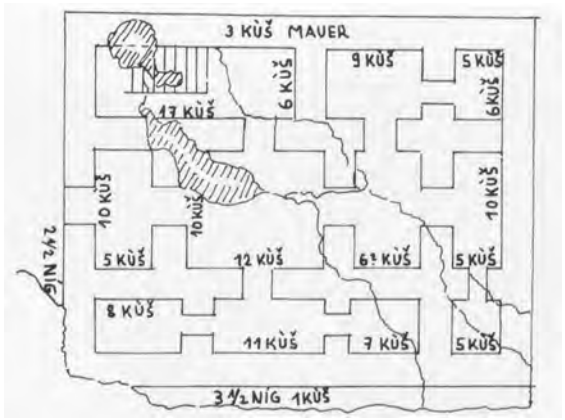

Fig. 39: Ur III/Isin temple estimate (HEINRICH/SEIDL 1967: 32).

Fig. 40: Neo-Babylonian "architect plan" of a temple, obverse and reverse (L. 31; W. 21 cm), BM 68841+ 68843 + 68845 (+) 68840 (© Trustees of the British Museum); tablet also published in CT 22: Plate 50.

style to this symbolic plan of a temple on "Statue B" of the Neo-Sumerian ruler Gudea **[FIG. 38]**.

Estimates are technically more accurate than symbolic plans **[FIG. 39]**. They are "first jots" aimed at recording qualitative and quantitative information. The drawings, although not always very precise, are nevertheless associated with realistic dimensions. Note how the realistic dimension of 5 $KUŠ_3$ is not drawn the same length for all walls in this estimate:

Architect plans accurately match drawings with specifications. Only one plan from the Mesopotamian evidence would qualify as such, this very precise Neo-Babylonian representation of a temple **[FIG. 40]**.

Now, three Akkadian terms are encountered in the royal inscriptions and state archives to denote plans: *iṣrātu*, *līṭu*, *gišḫurru*. Based on the contexts in which these terms occur it is possible to refine our understanding of their respective meanings. Interestingly, rather than being synonyms they seem to correspond to different types of plans based on distinctions similar to those previously identified among the clay tablets from various time periods.

iṣrātu (< *eṣēru*, "to draw") is used by Aššur-aḫu-iddina in his inscriptions to refer to a drawing (*iṣrātu*) he made of Esagil "according to its writing" (*tamšil šiṭrīšu eṣṣira iṣratsu*) **RINAP 4, 116, r. 16**. The laconic formula "according to its writing" [8] suggests the drawing is based on considerations of a higher order. A symbolic type of plan easily comes to the mind.

līṭu appears in a letter by the official Nabû-šumu-iddin to Šarru-ukīn II in which the former informs the latter that he has drawn a sketch (*līṭu*) of a fort on leather.[9] Leather is the material support that would have lent itself best to sketches, and sketching is the representational style most adapted to approximate drawing. What comes to the mind then is the idea of a plan as estimate. In this particular case, the building already existed and the plan was needed for strategic military purposes.

8 ▸ **1.2.1**.
9 SAA 15, 136, r. 15 – r. 16.

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gišḫurru occurs often in the inscriptions of Aššur-aḫu-iddina. Aššur-aḫu-iddina measures out the foundation of Nabû's temple Eniggidrukalamasuma according to its previous plan (*gišḫurru*), without adding a single brick.[10] In the same way he laid the foundation of Esagil over the previous foundation stones so that in accordance with its previous plan he did not diminish it by one cubit or increase it by half a cubit.[11] Babylon's wall Imgur-Enlil is also measured out in accordance with the previous plan.[12] The type of plan that comes to the mind here is a precise architect's plan. Whilst it is possible that such plans may have been simply suggested to Aššur-aḫu-iddina by the ruins of the temple and city wall, it is also conceivable that they should have been preserved in the form of ancient documents, on clay tablets similar to the ones we know of, for instance.

Although there is not sufficient evidence to exactly match each Akkadian term with one of the graphic types identified or even prove that each term designates a very distinctive object, the simple existence of three different Akkadian terms to signify "plan" in nuanced contexts confirms that the act of planning was perceived as a multidimensional process reflective of at least three levels of understanding.

8.2.1.b Levels of meaning

The architect Amos Rapoport distinguishes three levels of meaning in the built environment, namely "high", "middle" and "low" meanings.[13] These meanings tie in with the three dimensions of planning identified here. The high-level meaning is addressed to the educated minority in the know, typically reflecting cosmological concerns. It is often the most culturally constructed. The middle-level meaning conveys messages about identity, status and power. The low-level meaning is what can be inferred from the ways behaviour and movement are channelled, it must be present if the environment is to work for the majority not in the know. Rapoport's model reads as follows in our classification of plans: symbolic plans (high-level meaning) are less explicit and comprehensible than architect plans (low-level meaning) in which space is precisely specified, whilst estimates (middle-level meaning) represent the stage in planning when dynamics of space are negotiated.

The archaeologist Michael Smith adopts Rapoport's model of meanings in his treatment of ancient urban planning. He argues, however, that high-level meaning has so far been granted too much importance, demonstrating how, from an archaeological point of view, planning is often better approached as operating on the middle- and low- level meanings.[14] Smith's discussion suggests that it is not only dangerous to seek high-level meaning in archaeological evidence without sufficient textual evidence to corroborate it, but also perilous, when there is textual evidence for high-level meaning, to force the textual evidence into our interpretation of the archaeological evidence since the ancient builders did not necessarily intend to match *in reality* their urban planning to their beliefs. Smith's remarks refer to urban planning in general but they can be extended to architecture more specifically.

Taking Smith's idea into consideration, it is possible to show very simply that Rapoport's three levels of meaning are to various degrees discernible in Mesopotamian architecture. For example, Sîn-aḫḫēerība's Palace Without a Rival in Nīnawā was decorated in its interior with inscriptions which only a select few would read (high-level meaning), its monumentality, however, was a message of power addressed to all (middle-level meaning), and, the fact that it stood on a mound would have constrained even the less receptive audiences into dynamics of power, imposing a physical obstacle between them and the monarch (low-level meaning). The high and middle levels of meaning are typically corroborated by texts, the lower level of meaning is more rarely so. Whilst archaeological evidence is the main source of low-level meaning, textual evidence is the main source of high-level meaning. Let us then examine more closely the high-level meaning distinctive of our sources.

In recent years, anthropologists have begun to study space in relation to the body. Through this approach they developed the notion of "embodied space". As described by the anthropologist Setha Low, "embodied space is the location where human experience and consciousness take on material and spatial form"[15]. It is possible to identify a form of embodied space in the Assyrian sources.

For a start, in Akkadian, space was typically defined in relation to the human body. Akkadian uses body standards as units of length. For example, length measures attested in Assyria and Northern Mesopotamia include *ubānu* (finger), *pušku* (palm), (*r*)*ūṭu* (handspan?), *kabistu* (step/footprint), *kimṣu* (shin bone)/*eṣemtu* (bone), *ammatu* (forearm, ie. cubit), *purīdu* (leg).[16] This corroborates the idea put forward by the architect Christian Norberg-Schulz that 'scale' is "usually employed to designate the relationship of the sizes of a building to man himself"[17]. Aside from the use of body standards in the measurement of space, Mesopotamian buildings also appear to have developed a "corporality" of

10 Aššur-aḫu-iddina, RINAP 4, 113, 25–16.
11 Aššur-aḫu-iddina, RINAP 4, 104, iii 43 – iii 46.
12 Aššur-aḫu-iddina, RINAP 4, 116, r. 17.
13 Rapoport 1990: 221–225.
14 Smith 2007: 30–41.
15 Low 2003: 10.
16 Cf. Powell 1987–1990: §IA.
17 Norberg-Schulz 1965: 103.

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their own: the content (human) found echo in the container (house).[18]

Buildings typically embodied divine or royal presences. In the Assyrian inscriptions, the Akkadian term *irtu*/GAB (lit. "breast") is often used as spatial marker. Although, by analogy, *irtu* can be translated as "surface" or "flank" when applying to non-human entities, its original meaning gives it a distinctive bodily connotation. Šarru-ukīn II fixes the foundation of Eanna on the breast (*irtu*) of the netherworld (*kigallu*) like a mountain[19], whilst Aššur-bāni-apli secures the foundation of the (E)gigunu ziqurrat of Nippur on the breast (*irtu*) of the *apsû*[20]. Similarly, Sīn-aḫḫē-erība opens a new gate in Eḫursaggalkurkurra towards the breast of Aššur (*ana irat Aššur*) **RINAP 3/2, 166, 16.** The buildings are made to be in direct physical contact with what could be described as divine living space. Also to be mentioned here is the marked tendency of naming gates and walls, thereby personifying them.[21] Buildings could also be personified. The Assyrian royal inscriptions describe temples as being "clad" (*labāšu*) with gold and silver.[22] This custom of personifying temples can be traced back to an early Sumerian tradition best exemplified by the so-called "Sumerian Temple Hymns" from the late third millennium BCE, which were composed in praise of temples treated as living entities.[23]

The ideal of the royal persona as bodily entity was integrated into the architecture, through reliefs and statues.[24] The expression *ṣalam šarri* ("image/form of the king") was typically employed to refer to royal depictions. The concept of royal form (*ṣalam šarri*) did not imply any determined representational genre, it could apply to both two-dimensional and three-dimensional depictions, as obvious from letter SAA 5, 15.[25] Through the concept *ṣalam šarri* it is not the artistic medium that was emphasised but really the subject matter as human form. The human body was the main prism through which space was envisaged.

For practical purposes however, ordinary buildings were valued more for their constitutive parts than as whole "organic" entities. It is clear from a series of contracts for the purchase of houses dating from the late 8th early 7th century Nīnawā that the beams, doors, courtyard and location constituted the most distinctive and characteristic aspects of a house, and it is usually in that order that they are listed. For example, SAA 6, 142 concerning a house purchased by an Egyptian scribe in Nīnawā, lists a built house with its beams, doors, and a courtyard in Nīnawā, adjoining the house of Mannu-kī-aḫḫē, the house of Ilu-issīya, and the street. Then SAA 6, 42 concerning a house purchased from Dusî by Šumma-ilāni chariot driver, lists a built house with its beams, with its doors, a sleeping room, its courtyard, its bathroom, servants' quarters, two thirds of the main building, an upper floor, a storehouse, and a wing with a tomb in it. Radner points out that the term *ūru* (roof) is never mentioned in house contracts and represented instead by its main components, the beams, *gašūru*.[26] In the context of economic transactions, houses were valued more for their constitutive parts than as holistic entities we could call "homes": their market value was highly materialistic.

8.2.1.c Principles of elevation: from form to function

What remains of the mud brick dominated architecture of ancient Mesopotamia today consists mainly of foundations, i.e. ground plans. The question of elevation is therefore often quite tantalising for Mesopotamian archaeologists. In order to reconstruct what a building would have looked like in elevation, it is not uncommon that one should rely quite heavily on related iconography (seals, reliefs)[27] and textual evidence, when available. The Assyrian royal inscriptions and state archives are the textual sources of choice to reconstruct what Assyrian temples and palaces may have looked like and what this might say about their symbolic and, to a lesser degree, utilitarian functions.

It appears that form achieves symbolic function through two dynamics of artistic communication, namely style (set/constructed codes) and impression (improvised/intuitive codes).

Our sources seldom articulate questions of style, meaning it is not always obvious what was considered the norm, what was considered a derivation from the norm. Only one style receives enough attention as such in the Assyrian sources to warrant discussion here, the *bīt ḫilāni* structure from the land of Ḫatti. Whilst its ideological significance in the ancient Assyrian context has already been treated in **chapter 1** ("Planning"), we shall consider here its broader social significance from a modern perspective.

In **chapter 1** ("Planning"), we examined the relevance of the *bīt ḫilāni* from the land of Ḫatti to Assyrian royal ideology. By integrating this foreign

18 In fact, the Akkadian term used to designate the most basic building structure, *bītu* (building/house/room) can be related to the verb *biātu* (Ass. *biādu*), "to spend the night". The underlying idea would be that the basic purpose of a building is to provide shelter for the night, which ties in with the concept of building as "container".

19 Šarru-ukīn, RIMB, B.6.22.3, i 39 – i 40

20 Aššur-bāni-apli, RIMB, B.6.32.15, 15.

21 ▸ **4.1.1.a**.

22 ▸ **6.2**.

23 Cf. Sjöberg/Bergmann 1969.

24 ▸ **6.2.3.b**.

25 ▸ **6.2.3.b**.

26 Radner 1997: 259.

27 For an iconographic study of Neo-Assyrian architecture see Gillmann 2016.

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element into the architecture of their palaces, Šarru-ukīn and Sîn-aḫḫē-erība asserted their power of dominion. Through a simple stylistic form they folded the outskirts of their empire into the inner core, thereby strengthening their claims to universal rule. As noted by Diederik Meijer, the *bīt ḫilāni* model[28] would have been more at home in the West, where the climate is milder and the mountain winds refreshing, than in northern Iraq where hot winds hardly ventilate but rather blow in dust.[29] Meijer concludes that it is clear the model was borrowed not for its utilitarian function but for symbolic function.[30]

Style is a socially bound dynamic. It is intrinsically linked to what the Marxist philosopher Henri Lefebvre describes as "production of space". Lefebvre argues that space is a social product in its capacity as a means of control, domination, power.[31] This idea certainly finds resonance in Assyrian architecture. Šarru-ukīn and Sîn-aḫḫē-erība's use of the *bīt ḫilāni* style is a perfect example of control through spatial strategy.

Although Assyrian sources are rather laconic regarding the *styles* displayed by buildings, they easily communicate, through rich imagery, the *impressions* that would have been conveyed by buildings. Such impressions typically relate to size and decoration. As seen in **chapter 1** ("Planning") there was a tendency from one Assyrian ruler to another to increase the size of temples and palaces, even though the plans of new temples were often made to match those of previous temples whenever available. When Aššur-aḫu-iddina prides himself that he did not diminish the foundation plan of Esagil by one cubit nor increase it by half a cubit[32], he is implicitly suggesting that increasing the size of the monument was a more significant and loaded act than decreasing it. The different margins of error provided for each case (one cubit vs. half a cubit) suppose the acts of increasing and decreasing were not equally valued: only half a cubit was enough to make the plan feel too big, whereas you needed a full cubit to make it feel too small.

As for decoration, we shall consider it here in its connection to nature, since the decoration of Assyrian temples and palaces was strongly inspired by and representative of nature. The ancient Mesopotamian world was in many ways constructed on human relations to nature. Nature was referential. Nature is understood here as anything which is not manmade. There is no Akkadian term corresponding to our category "nature", probably because it was an overarching force, too essential to be categorised at the time. In a similar way we may imagine thought-categories which do not exist today but will in the future.[33]

There were different dimensions to nature. Nature was an essential aspect of the cosmos as the most tangible source of divine manifestations. Nature was also the land on which humans built their societies, hence the ultimate fundament of territoriality. Finally, nature was the wildlife beyond cities, whatever had not been domesticated, an opposing force to human development. In every case, nature was the canvas against which identities and beliefs were negotiated.

For comparison, nature today, although still essential to individual lives, has been relegated by Western-style societies to a secondary plan. It has been objectified as something to care about. With the rise of cyberspace, nature has become an alternative. The canvas against which lives are negotiated is no longer nature alone but nature as a backdrop to cybernetic networks. Whilst nature was the main space of ancient Mesopotamia, the space against which all social activities were conceptualised, nature in Western-style societies today is constructed as one of many different social space types, alongside cyberspace.

As seen in **chapter 6** ("Decor"), Assyrian temples were made to emulate the beauty of heaven, a fundamental cosmological entity. At the same time, temples were often described as founded on the *apsû,* another fundamental cosmological entity. Through temples, nature as the upper and lower domains of the cosmos was integrated into the built environment. Palaces contained reliefs depicting the king's activities, which included scenes of him ruling and worshipping, fighting, hunting. Palaces represented the empire as an expansionist, conquering and ultimately universal force. Through palaces, it is nature as conquered territory and wildlife that was integrated into the built environment. Nature provided a locus for humans in the cosmos. It also provided the geographical and biological grounds for humans to measure themselves, which led them to appropriate and mimic it. These ideas are contained in a letter to Aššur-aḫu-iddina. The exorcist Adad-šumu-uṣur writes to Aššur-aḫu-iddina to congratulate him upon the promotion of Aššur-bāni-apli. He praises the king for having done upon earth (*ina kaqqiri*) what has not been done in heaven and (further down in the text) hopes that his sons will rule over all countries like grass seed (*kī zēr šamme*).[34]

By encapsulating elements of nature the architecture was externalised, it unfolded beyond human creation. As manmade object *par excellence*, architecture found its greatest rival in nature which was

28 ▸ **1.2.2**.
29 Meijer 1989: 225.
30 This idea finds support in Kertai's hypothesis that the *bīt ḫilāni* actually belonged to the interior space of Assyrian palaces (Kertai 2017) ▸ **1.2.2**; ▸ **5.3**.
31 Lefebvre 1991: 26.
32 ▸ **1.2.3**.
33 For example, when (if!) humans start inhabiting other planets life on earth could be referred to as "earthality".
34 SAA 8, 185, 5–6 + r. 1 – r. 2.

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everything but manmade. Humans, although themselves products of nature, have often, ironically, harboured somewhat of a "complex" about nature. In this perspective, buildings are certainly the way to rise highest, but it is not without risk. The danger with constructions, once they are completed, is entrenchment leading to confinement. The Assyrians defied this by ensuring that their heavy, closed, monumental buildings would always trigger reminiscences of what lay beyond, that is, nature.

No doubt forms reminiscent of nature were also appreciated for their aesthetic quality. For example, vegetal elements often inspired the basic forms of decorative motives[35]. The motives were developed quite abstractly, indicating that they were not only conceived as figural representations of nature but also sought to reproduce something of the essential harmony of nature. Although their world was already inherently natural, it appears that the Assyrians were turning to nature "as the exemplar for action and outcome" which, as remarked by the architect Paul-Alan Johnson, "has been a tactic of designers and architects for centuries".[36] It is clearly in admiration of nature (either of the dimensions evoked earlier could be implied) that Salmānu-ašarēd I consolidates the foundations of Eḫursagkurkurra in strong stone "like the bedrock of a mountain" (*kīma kiṣir šadi*)[37], whilst Aššur-aḫu-iddina strengthens the foundation of Babylon's wall Imgur-Enlil "like the substructure of a mountain" (*kīma šupuk šadi*)[38] and raises the top of Eanna like a mountain[39], to give but a few examples.

With the admiration of nature came a desire to tame it, and architecture, which was imposed spatially and was built with materials borrowed from nature, provided all the elements to do so. Emulating the Assyrians' custom of naming their palaces with grandiloquent names, the Neo-Babylonian king Nabû-kudurrī-uṣur II chose as one epithet for his Southern Palace "place where the savage are tamed" (*ašar kadrūtim uktannašū*).[40] The savage enemies belong to the wild nature: making them bow down is one step towards the taming of nature. A passage from Aššur-aḫu-iddina's inscriptions is evocative of this desire to subsume ideas of nature to those of the empire, and the physical contrivance it requires. Aššur-aḫu-iddina extorts tribute from twenty-two kings, and has the kings "drag with much trouble and effort" all the tribute as "requirement (*ḫišiḫtu*)" for his palace, "from the midst of the mountains their place of origin" (*ultu qereb ḫuršānī ašar nabnītēšunu*) to Nīnawā, his capital city".[41]

35 ▸ **6.2**.
36 Johnson 1994: 93.
37 Salmānu-ašarēd I, RIMA 1, A.0.77.1, 133.
38 Aššur-aḫu-iddina, RINAP 4, 115, r. 18.
39 Aššur-aḫu-iddina, RINAP 4, 133, 33.
40 Cf. George 2004: 2.
41 Aššur-aḫu-iddina, RINAP 4, 1, v 81 – vi 1.

8.2.2 Location

It is clear from the Assyrian royal inscriptions and archives that the locations of temples and palaces were rarely (if ever!) fortuitous. As seen in **chapter 2** ("Site selection and foundation"), building sites were carefully chosen based on both practical and ideological criteria. Location is typically the first[42] physical parameter determining the existence of a building, followed by materials, size and finally shape. As such it is also the only one that can almost always be assumed to be intentional. Whilst new sites were typically chosen for their strategic value, old sites were appreciated for their symbolic value.

Buildings are connected to their location through their foundations. Foundation rituals played an important role in asserting the location of buildings, mainly through foundation deposits. Foundation deposits provided a permanent link between the different "existences" of a building. Because mud brick was bound to disintegrate, the material permanence of a building could not even be warranted for the span of a human lifetime. This made it necessary to define permanence not in terms of endurance (where objects are composed only of spatial parts) but in terms of perdurance (where objects are composed of spatial parts and temporal parts), to use modern philosophical terminology. A building's existence was not limited to the materiality of its spatial existence, it extended through time in different "parts" such that every new form of the building (brought about by destruction and reconstruction) was always the same building only in a different time frame. Indexing the building to a location was essential to reference its temporal existence in relation to its spatial existence. This attitude was amenable to the distinctively eternalist (as opposed to presentist) Mesopotamian worldview: the past, the present and the future were treated as part of the same reality, no primacy was assigned to the present.[43]

Eternalism supposes full acceptance of transience as the defining characteristic of the present because the present is not a default mode taken for granted in a temporal vacuum. It appears that the Mesopotamians not only embraced the transience of the present but also somewhat promoted it. This is evidenced architecturally in their predilection for the ephemeral mud brick. As observed in **chapter 3** ("Materials"), the brittle sun dried mud brick was even preferred over its stronger version, the kiln-fired brick. This suggests that mud bricks were not only appreciated for their material value (clay) but

42 Chronologically.
43 For comprehensive definitions of the terms "endurance", "perdurance", "eternalist" and "presentist" see the article "temporal parts" in The Stanford Encyclopedia of Philosophy, available online at <plato.stanford.edu/entries/temporal-parts> [accessed 17.08.2018].

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also for their immaterial potential (disintegration). Although economic and pragmatic factors would also have played a role in the choice of mud brick over kiln-fired brick, the power of tradition should not be underestimated. Unlike kiln-fired brick, mud brick was not *final*, it could be recycled and reshaped, which was fundamental to the Mesopotamian building ideology. As pointed out by Lackenbacher, the Assyrians were consciously building monuments which would not last *pour toujours*; they were, however, writing about their monuments *pour l'éternité.*[44] This is reflected not only in their penchant for grandiose yet formulaic and sometimes very vague descriptions which conferred on their monuments a *valeur universelle*, but also in the highly literary language they used to keep the narratives *hors du temps.* In a way, the mud brick was serving the narrative more than the architecture since its fragile nature made it possible to keep the architecture itself *hors du temps.*

8.2.3 Utilitarian function

An important aspect of function typically investigated in archaeology is its relation to form.[45] The relation between function and form was briefly touched upon earlier. It is clear that which one determines the other not only depends on the case but often also on the point of view.

Our textual sources provide indications mainly about the process from form to function because they typically depart from the form and are therefore especially focused on explaining function (in the most general sense) as finality. The functions of a building are not necessarily always perceptible and written explanations are needed to voice meaning where it is hidden. In contrast, the form of a building is by definition perceptible at all times. Written explanations of the form are therefore typically redundant of the material reality, at best they will be auxiliary to it. For comparison, archaeology, which deals with the material reality, is more informative about the process from function to form because it focuses on explaining the form.

Let us then examine what our sources tell us about the process from form to function, starting with *utilitarian* function.

Two cases are attested in the Assyrian royal inscriptions where the utilitarian function of structures is clearly articulated. Both cases concern palaces no doubt because human concerns about utility would have been more relevant to places used by humans (e.g. palace) than places used by the gods (e.g. temple).

One such case consists in the recurring explanation *ana multa"ī/ûtīya* ("for my leisure/pleasure"). From Tukultī-apil-Ešarra I to Aššur-bāni-apli, Assyrian kings mentioned leisure/pleasure as the main function of their palaces. For example, Tukultī-apil-Ešarra I builds eight palatial halls of various woods for the dwelling of his kingship (*šubat šarrūtīya*) and the pleasure of his lordship (*multa"īt bēlūtīya*).[46] Symbolically, the palace provides a residence for his royal persona, but effectively it functions as a source of enjoyment for his lordly existence. Whilst kingship is evocative of magnificence, lordship connotes power. By tying *multa"ītu* with *bēlūtu* it is made clear that the leisure enjoyed by the king in his palace is afforded to him by his power. The palace was the place where pleasure and power met. The expression *multa"īt bēlūtīya* encapsulates this notion. More specific actions could be performed within the building context for pleasure. Šarru-ukīn opens up an air vent (*bāb zīqi*) in a palatial hall of Kalḫu for his pleasure[47], whilst Aššur-bāni-apli surrounds his *bīt redûti* palace in Nīnawā with gardens for his pleasure.[48]

Another case where the utilitarian function of a building is articulated clearly is the remark by Sîn-aḫḫē-erība that the *ekal kutalli* ("Rear Palace") in Nīnawā, which he describes (and later Assyrian kings exclusively refer to) as *ekal māšarti* ("Review Palace", i.e. arsenal), was built by his predecessors "for the ordering of the camp, the guarding of the horses, and the controlling of whatever (is needed)".[49] Sîn-aḫḫē-erība observes that the building had no terrace, the grounds had become too small to put horses to gallop (*ana šušmur sisê*) and the gates were not large enough, which prompted him to undertake enlargement works. The same would be claimed later by Aššur-aḫu-iddina who inherited the building. The building appears to have gained extra functions in the meantime and its description is more vivid. Aššur-aḫu-iddina explains his renovation works on the *ēkal māšarti* of Nīnawā as follows: "the *ekal māšarti* – which the kings who came before, my fathers, had built to maintain the camp, to keep the thoroughbreds, mules, chariots, military equipment, implements of battle, and the plunder of the enemies, everything that the god Aššur, king of the gods, gave me as my royal share – had become too small for the horses to go wild (*ana šitmur sisê*) and the chariots to fly (*ana šitamduḫ narkabāti*)."[50] The complex clausal embedding easily achieved in Akkadian seems to be used here as a stylistic effect to emphasise the importance of the building and reflect

44 Lackenbacher 1990: 182–183.

45 For a discussion of function in Assyrian architecture, more specifically palaces, see Kertai 2015.

46 Tukultī-apil-Ešarra I, RIMA 2, A.0.101.2, 58, iv 32 – iv 43.

47 ▸ **5.2.2**.

48 Aššur-bāni-apli, RINAP 5, 11, x 103 – x 105.

49 Sîn-aḫḫē-erība, RINAP 3/1, 34, 55–56. A similar description of the *ēkal māšarti* is provided later by Aššur-aḫu-iddina in RINAP 4, 1, v 40 – v 45.

50 Aššur-aḫu-iddina, RINAP 4, 2, iv 32 – iv 53.

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the need to enlarge it: it is as if even the sentence has to push its limits in order to contain a description of the building. Affording a palace dedicated entirely to the administration of conquest must have been a subject of pride for the Assyrian kings. The fact that this building was in constant need of enlargement testified to the success of the Assyrian Empire.

It appears then that those cases where the utilitarian function of buildings is specified all relate to royal privileges. By associating basic utility with luxury, the Assyrian kings raised their standards above the ordinary. Symbolism became utilitarian. The form defined the function.

The data available from the state archives provides very little information regarding the utilitarian function of buildings or building features mentioned, apart from the self-evident purposes often contained in the names of the buildings or features themselves (e.g. *bīt ramāki,* lit. "room of washing", i.e. "bathroom"[51]). Most of the utilitarian information relates to the procurement and processing of materials in very punctual terms, often without mention of underlying purposes relative to the broader picture. The strength of materials, and their suitability for building works, may sometimes be evoked.[52]

8.2.4 Symbolic function

Both the royal inscriptions and the state archives are very much geared towards symbolic meaning, that is, forms derived from ideologies. This is not surprising given the written nature of these sources. Writing is the medium of choice to encode and record ideas because it provides flexible storage space. By fixing words, which would otherwise be lost to time, writing makes them amenable to negotiation. Moreover, because writing is a medium of standardised/formalised structure (unlike painting, for example), it can be endlessly reproduced without losing any meaning, it can be deconstructed and reconstructed without losing any substance. Its content may transform but no potential will be lost because the number of ways in which ideas can be written is finite. Therefore, not only does writing facilitate the communication of ideas but it also promotes it.

Now, communicating ideas is in many ways analogous to disseminating visions of the world. Whilst an individual is able to process multiple visions of the world as independent ideas which (s)he activates and connects as necessary, a group of individuals thinking together (i.e. a society) will only be able to make sense of multiple visions of the world coherently by accepting them in a set format, an ideology. Accordingly, the Assyrian royal inscriptions and state archives communicate ideas of space based on the ideational and ideological matrix which would have been used within Assyrian society.

Symbolic function can be traced in our sources through ideologies based on order, direction and metaphor, applied physically and metaphysically. The main idea symbolised is always that of power, be it that of the gods/nature[53] or humans. Power is not only expressed in its "social form" – a *strength* involving various types of forces – but also in its much more "primitive" original sense of *potentiality*.[54]

8.2.4.a Order

Order will be defined here as harmony. It is whatever combination of elements a given public recognises as basic and referential, appreciating in it an intrinsic familiarity suggestive of universality (i.e. what everyone should understand). Order is typically constructed in relation to and against disorder. In Mesopotamia, principles of order and disorder (chaos) permeated the foundations of primeval culture as the main tenets of the mythological discourse. Unsurprisingly, principles of order are essential to the conceptual fabric of our sources, most notably in the context of architecture.

Architecturally, order could symbolise strength through practically any medium, be it the plan, the choice of materials, the structure, the dimensions, or the general style, simply because order is a ruling principle of strength, regardless of appearances. It helps to understand strength in terms of its physical definition, that is, resistance to deformation. In material science, resistance to deformation highly depends on crystallographic orientation. The strength of a texture (a distribution of crystallographic orientations) depends on the percentage of crystals having the preferred orientation. In other words, the more orderly the texture, the stronger. Similarly, the more orderly the architecture, the stronger it will feel. It follows that, aesthetically, crystals are to materials what motifs (physical and metaphysical) would be to architecture.

Repeating motifs in time and space creates an acute impression of order because it multiplies the moments and places of reference. In a way, repeti-

51 See for example SAA 1, 67 about the bathroom of Šarru-ukīn's *bīt ḫilāni* palace.

52 For example: SAA 1, 98 refers to strong good looking timber; SAA 1, 248 is about trunks suitable for work.

53 For the dichotomy between theism (dependency on the gods) and holism (dependency on nature) in Mesopotamia see van Binsbergen/Wiggermann 1999.

54 Strength here denotes a state that is finite and fixed, essentially aesthetic, whereas potentiality denotes a state that is indefinite and dynamic, more than aesthetic or creative. From this point of view, strength is the external, narrative manifestation of power; potentiality is silent, it is power at its core. Architecturally, the language of strength reveals how things *must* be, the language of potentiality suggests what they *could* be, both thereby conditioning human action.

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tion is what makes tradition, which is what provides stability to a social system. Since repetition is self-perpetuating only a disruption will allow the tradition to develop for better. A disruption in tradition can be described as innovation: innovation is therefore what gives the best control over tradition. Order is a subtle balance between tradition and innovation. This was the case in Assyria and is perceptible in our sources. Whilst the repetition of motifs established the tradition, introducing new motifs was the driving force of the tradition. The repeated use or novel introduction of motifs such as the ancestral tripartite plan (in various forms), luxury materials (e.g. precious woods and metals), exoticism (e.g. *bīt ḫilāni* borrowing) or simply monumentality, created the order of strength upon which royal ideology was founded.

Order was capable of formalising the space occupied by invisible forces (e.g. deities). Formalising the invisible expresses potentiality. Apotropaic architecture, so popular in Mesopotamia, is an example of what we shall call "potential architecture": through such architecture the present could be optimised in order to negotiate the future. This was the point where rationality gave way to magic.

Magic[55] can be described here as the science of the occult. The term "magic" is chosen for its transformative connotations. Magic was the tool used to adjust the present to the future, to control what is in appearance uncontrollable. It offered securities. It was the choice method for what may conveniently be designated as *Zukunftsbewältigung* (∼"management of the future"), a term coined by Stefan Maul as title for his work on *namburbî*-rituals. Maul investigates the Mesopotamians' use of magic, in the form of *namburbî*-rituals, to fashion their future and overcome what would otherwise be their impending fate.[56] As we shall see, magic could come in different forms. It was not limited to language, written or spoken (cf. spells, incantations, talismanic texts). It could also be spatially defined.

Spatially, magic supposed the existence of what is today referred to as liminality (< Lat. *limen*, "threshold"), the state of in between: a threshold of uncertainty separated the space of the invisible forces from the space of the visible forces in which humans lived. Magic was the commuting transitional force that permitted navigation from one side to the other. It broke through uncertainty by warding off evil and attracting good fortune, providing at once a shield of protection and a course of well-being. In that sense, magic was itself spatially constructed. It was a mechanism of order.

An example of magical architecture produced by the Assyrians are the apotropaic colossi and other statues placed on the sides of palatial entrances. An inscription by Aššur-aḫu-iddina is revealing: "To the right and the left of their (the palatial halls') gate, I had place *šēdu*'s and *lamassu*'s of stone who, as testified by their appearance, repel (lit. "turn the chest against") evil things, guardians of the walk and protectors of the path of the king who created them. (…) I set inside it (the palace) twin copper *lamassu*'s, each pair looking both forwards and backwards."[57] The *lamassu*'s looking forwards and backwards can be compared to the two *kusarikku*-bisons cast in shining copper, positioned opposite one another "their faces looking forwards and backwards" which Aššur-aḫu-iddina had positioned at the Gate of the Path of Enlil to bear the columns that supported the crossbeams serving as cornice to the entrance.[58]

The colossi and other statues are vectors of magic. The double dimension protection/well-being previously mentioned is clearly perceptible in their description. The fact that they can look both forwards and backwards is compatible with the idea of magic as commuting transitional force. In Mesopotamia, the directions forwards and backwards were associated with past and future, respectively.[59] Deconstructing the movement of looking into its two aspects of forwards and backwards is expressing potentiality. Also symbolic of potentiality because it inspires uncertainty is the ambiguous nature of the colossi, which also places them in the no man's land of liminality. Not only are the colossi both human and animal, but their gender may also have been equivocal at times.[60]

Decorative writing, although of linguistic value, was another spatially defined form of magic. Writing the king's name all over temple and palace walls/floors/foundations as well as on related foundation deposits in order to affirm the connection between the deed and the man, afforded the king protection from the gods in the near future and a glorious reputation before his descendants in the distant future. This is an example of what anthropologists today refer to as "inscribed space", when space transforms into place by receiving new meanings. Writing gave new meanings to space, not only through its content, but also through the sheer significance of its form.

Another form of magical architecture is when architectural choices were adapted to omens. For a discussion of this topic see ▸ **1.7**.

55 For a discussion of the concept of magic in relation to Mesopotamia and reasons to keep using this "misnomer" see Schwemer 2011: 418–420.

56 Maul 1994.

57 Aššur-aḫu-iddina, RINAP 4, 2, v 27– v 39.

58 Aššur-aḫu-iddina, RINAP 4, 60, r. 29′ – r. 31′.

59 The past is associated with the concept *pānu*(*m*) ("face") and the future with the concept (*w*)*arkatu*(*m*) ("reverse"). For a discussion of this question see Maul 2008.

60 Cf. "sphinxes" whose features are reminiscent of eunuch portraiture, i.e. feminised males ▸ **6.2.3.a**

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8.2.4.b Direction

Direction refers here to movements and orientation implicit in positioning. Direction is what situates architecture in relation to the greater environment or cosmos. By stipulating a movement or an orientation, direction draws correspondences between built and imaginary structures. In Mesopotamia, direction was most strongly expressed in the treatment of doors, gates and entrances. The reason for this is probably that such places were not only symbolic of arrival and departure, thereby imparting a sense of temporality to space, which reinforces its ideological resonance, but, as seen previously, they were also understood as liminal zones, the places where demons and deities meet their human counterparts, where the material reality (what you feel) is negotiated against the immaterial (what you suppose). "Directional architecture", as we shall call it, was symbolic of strength because it channelled movement, monitoring the flow of peoples' activities. It acted upon what Lefebvre would call "spatial practice." It was also symbolic of potentiality because it projected lived space onto ideas of space. Here again, Lefebvre's terminology is applicable, since lived space and ideas of space would correspond to what he termed "representational space" and "representations of space", respectively.

The sun was very significant to notions of direction, most notably in terms of temporality and liminality. Through its apparent movement, the sun arrived and departed in time and space, whilst through its deification it belonged, in spite of being an object, to the immaterial dimension of reality[61]. The directions east and west were symbolic of beginning and end. In this respect, the east was of special importance. This is clear from the emphasis Sîn-aḫḫē-erība places on his opening of a new gate "toward the rising sun, facing the east wind" in temple Eḫursaggalkurkurra temple.[62] The association of Eḫursaggalkurkurra with the sun is carried out further by Aššur-aḫu-iddina who compares the movement of the gods' statues from Eḫursaggalkurkurra to Esagil with that of the sun rising out of the earth to shine onto the land. He says "they moved forward (*innešrū*) and from within Eḫursaggalkurkurra, like Šamaš, they came out (*ittaṣû*) radiantly onto the land".[63] Eḫursaggalkurkurra symbolises the earth, the land of the living. It then becomes essential to fix it on the solar axis in order to establish a connexion between the land of the living and the heaven of the gods.

Also to be pointed out is the positioning of colossi and other statues. These could look back and forth, as mentioned previously, and they are also often described in relation to buildings and entrances in terms of right and left. Whilst forwards and backwards would have been evocative of past and future, right and left appear to have symbolised south and north. Together, the future, the past, the southern and northern hemispheres, cover the totality of the universe, temporally and spatially.

Starting in the Middle Assyrian period, Tukultī-apil-Ešarra I places statues of a *nāḫiru* and a *burḫiš* to the right and left (*imna u šumēla*) of the royal entrance of his palace in Aššur.[64] Sîn-aḫḫē-erība sets *šēdu*'s and *lamassu*'s of white limestone to the right and left of his palace's gates (lit. "lock/bolt", *šigaru*).[65] Aššur-aḫu-iddina is the most fond of right/left imagery, notably in the context of Eḫursaggalkurkurra mentioned earlier. He places golden statues of *apsû* creatures to the right and left of Aššur's *bīt papāḫi* and places twin deluge monsters cast of shining *zaḫālu*-alloy to the right and left of the temple's Gate of Kingship.[66] In his palatial halls at Nīnawā he places to the right and left of the gates (small?) *šēdu*'s, *lamassu*'s and *apsasītu*'s of *pindû*-stone, large stone *šēdu*'s and *lamassu*'s, lions facing one another, *apsasītu*'s facing one another, female *lamassu*'s cast in shining copper, as well as *šēdu*'s and *lamassu*'s of white limestone.[67]

The emphasis on the directions right and left suggests they must have had a special significance in this context. Based on letters from the state archives, Parpola points out that right and left are used to designate Babylonia and Assyria respectively, which supposes the left signified north, the right, south, presumably in accordance with the positions of the right and left hands when facing east.[68] This can be related to Huxley's argument that for the Assyrians the north was symbolic of kingship, the seat of which was traditionally associated with Assyrian capitals in north Mesopotamia.[69] Huxley's idea finds resonance in the numerical link between the values 3,20 (symbolic of kingship) and 2,30 (symbolic of the left) discovered by Jean Nougayrol[70] who draws inspiration from an article by Labat.[71]

61 The fact that the sun god's name, Šamaš (lit. "Oh sun!") is the vocative form of the word for sun, *šamšu*, indicates that the immaterial and material forms of this entity were differentiated: Šamaš the god, was the sun as superior force, not simply the object itself. He could therefore be spoken independently of and in reference to the object, the object being an attribute of the subject.

62 ▸ **1.1.2.c**.

63 Aššur-aḫu-iddina, RINAP 4, 60, r. 42′.

64 Tukultī-apil-Ešarra I, RIMA 2, A.0.87.4, 67–71.

65 Sîn-aḫḫē-erība, RINAP 3/1, 22, vi 64 – vi 65.

66 Aššur-aḫu-iddina, RINAP 4, 60, o. 25′ + r. 32′ – r. 33′.

67 Aššur-aḫu-iddina, RINAP 4, 1, vi 15 – vi 21.

68 Parpola 1983: 117.

69 ▸ **5.2.2.a**.

70 Nougayrol 1972.

71 Labat 1965. Labat notices that Akkadian divination texts from Susa alternate between the values 3,20 and 2,30 to symbolise the king, and between the values 2,30 and 16 to symbolise the left. He describes the change from 3,20 to 2,30 as an odd innovation, leaving scope for interpretation. Nougayrol posits a scholarly play on

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Although mentions of right/left in our sources do not necessarily designate the south and north, the left, at least, could be mentioned to evoke kingship/Assyria, and the south, possibly Babylonia. In this case, mentioning right and left would be a merism, symbolising totality and the empire. It is also probable that the deities assigned to protect architectural structures were understood as the same that protected human bodies. Protective personal deities (for humans and gods) were typically associated with the right and the left, the front and the back. Evidence for this is available from Babylonian and Sumerian sources. A prayer to the goddess Ištar describes her as preceded by a *šēdu* and followed by a *lamassu*.[72] Gudea too is described as preceded by a *šēdu* and followed by a *lamassu*.[73]

Because they symbolised liminality[74], thresholds were considered special places and probably for this reason threshold slabs were treated as architectural features in their own right. This is obvious from the categories established for materials in letters from the state archives dealing with the procurement of materials. (Thresholds) slabs, (roof) beams and stone colossi monopolise much of the attention, to the point that they appear, retrospectively, symbolic of Assyrian building enterprises. The size and weight of these materials set them apart, contributing to their importance. They were trademark features of Assyrian architecture. Threshold slabs marked the passage from one space to another. In that sense they are key directional elements. The idea of passing is contained in the etymology of the logogram NA_4.I.DIB since the Sumerian verb dib means "to pass, crossover, go through". Apotropaic figurines and foundation deposits were therefore often placed under threshold slabs to protect the building from comings and goings.

8.2.4.c Metaphor

Metaphors permeated visions of space and therefore had an influence in the architectural output.[75]

We have seen in previous paragraphs the importance of nature. Nature was a prime source of metaphors. As mentioned already, temples could be as tall as mountains and their foundations as strong as bedrock. Overlaid on the imagery of mineral firmness was that of vegetal prolificity. Not only does one term for foundation, *išdu* (SUḪUŠ), also mean "root (of plant)"[76], but ruins of old buildings are typically described as being "torn out" (*nasāḫu*) of sites to clear the grounds for new buildings, an action typically applied to roots. Ceilings were naturally likened to the sky (cf. *ermi anim*), walls and doors were decorated to remind of the sky and stars, with lapis lazuli blue, gold and silver as dominant colours.

Metaphors of knowledge were also prevalent. Building was considered a highly creative and inspired act. For example, in order to build a terrace in Esagil for the shrines of Marduk, Zarpanītu and Nabû, Aššur-aḫu-iddina digs 16 cubits down to reach the ground waters, so that the foundations of the building would reach Nudimmud (Ea) who lives in the sweet ground waters of the *apsû*.[77] It is as if the building act were grounded in the wisdom of Ea.

8.2.5 Agency

As seen in **chapter 7** ("Actors") building enterprises involved many different actors. The royal inscriptions, highly ideological, place an emphasis on the most symbolically charged actors, namely the gods and the king. The letters from the state archives, although produced from within the ideological framework of the state, were not designed with ideological intentions, but as a simple matter of pragmatic necessity stemming from daily activities. They therefore inform us mainly about the roles of the most active individuals, the subjects and authors of the letters, from manual workers to administrative personnel.

Questions of agency with regard to building should here be understood by the modern reader as evolving in two dimensions, the tangible and the intangible, both carrying as much weight in the Assyrian imaginary. The actions of administrative personnel and manual workers always appear tangible since these individuals were in charge of actually constructing the buildings or at least getting them constructed. The actions of the gods and king appear, unsurprisingly, less tangible since the king was more often than not only indirectly involved and the gods were fundamentally abstract entities even though they could manifest themselves in various terrestrial forms. A genuine fear of the gods and of the king, who not only represented the gods on Earth but was also the most powerful man in the empire, would easily have convinced the average Assyrian worker that his/her actions were only aspects of a greater overarching act of creation, depriving him/her of any sentiment of personal achievement.

Administrative personnel and manual workers were only instruments of what was sometimes described as "the work of the king" (*dullu ša šarri*)[78].

numbers, remarking that if the digits are multiplied, 180 × 20 and 120 × 30, both values equal 3600, which is read *šar*(*u*) in Akkadian, a term homonymous with *šarru*, "king".

72 KAR 250: 12.

73 Gudea, Cyl. B, ii 9 – ii 10.

74 ▸ **5.2.1.a**.

75 For the use of metaphors in everyday life and its study known as "metaphor analysis", see Lakoff/Johnson 2003.

76 Cf. CAD: *išdu* 3e.

77 Aššur-aḫu-iddina, RINAP 4, 105, v 23 – v 32.

78 For more on this topic see Baker/Gross 2015.

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It is clear from the tone of the letters written by the rulers' closest officers, that even high-ranking personnel could work in complete subservience of the greater royal cause. For example, in a letter to Aššur-bāni-apli, Šamaš-šumu-lešir moans that he perishes at his work like a dog (*ina ēli dullīya akī* [*kalbi*] *amaqqut*), complaining that he was never granted an audience with the king[79], which indicates that the personal satisfaction he could derive from his work is entirely based on the king's satisfaction. On the lower echelons it is also clear that workers saw beyond their work the greater work of the king and the gods he represented. An administrative official under Šarru-ukīn reports he overheard corvée workers commenting merrily (and perhaps ironically?): "This work is most pleasing to Bēl. The king is going to live long!" **SAA 5, 294, o. 4′– o. 6′**.[80] When the official asked the corvée workers what they were talking about, the corvée workers would not answer. As remarked by Heather Baker and Melanie Gross, it is interesting that the workmen should subvert key elements of royal ideology (pleasing the gods; king's life determined by his actions) into their gossip.[81] What this implies is that the workmen perceived their work as merely auxiliary to divine and royal affairs.

The tendency to exalt the agency of gods and kings, which manifests itself on all levels of society, can be read in the context of the hegemonic process described by Binsbergen and Wiggermann.[82] Binsbergen and Wiggermann identify two dimensions in the Mesopotamians' approach to ideology: the hegemonic theism of the rulers and the holism of the people. Our sources inform us about Assyrian realities through the lenses of the state apparatus that was producing the hegemonic theism. Seldom do we get a glimpse of what the ordinary citizens were thinking. One rare example is the aforementioned letter that quotes corvée workers. The fact that the corvée workers would not answer the official when questioned (perhaps out of fear or embarrassment) suggests they may indeed have been ironic, if not about their ideological beliefs (they probably did not question the existence of Bēl and his influence on the king), at least about their judgement (pretending the work is ideologically sound when actually it is not). This suggests a potential tension between what the dominating powers commanded and how the executing subjects responded. Such a tension, which one may only suppose existed, could be released by enforcing to a maximum the principles of hegemonic theism in the working ethics of the state apparatus. The number one code of conduct would have been to express total subservience to the king and the gods, a behaviour that could only reinforce true belief in the ruling powers since it yielded benefits.

Binsbergen and Wiggermann draw attention to the series of magical prescriptions EGALKURA "Entering the Palace" which were designed to assist the ordinary citizen in the ordeal of entering the palace, see of the hegemonic powers upon which (s)he depended, when appealing for a cause.[83] They point out that these prescriptions read "as if the subject rejects the ideological idiom of the <state apparatus> including its theistic overtones", citing prescriptions involving a thread thrice twined to bind the mouth of the opponent in court, a salve of powdered metals and stones to enhance the strength of the citizen, and an amulet of *asḫar*-stone that is expected to turn away the adversary and appease his anger.[84] Using the concept "entering the palace" to designate the instance of dealing with authorities demonstrates not only that power was constructed as a space materialised in palatial architecture, but also that the palace as seat of power was considered a world in itself, a place external to the daily lives of the majority, governed by different laws. A strictly codified space was produced by the elites and the ordinary citizen who did not know the rules had to use magic in order to enter that space and survive the experience.[85]

The highly hierarchised division of labour under Assyrian rulers accentuated the social codification of space. Not only did different spaces belong to different social groups (e.g. the palace to the elite) but the *production* of space itself was divided into various aspects that were assigned to different social groups according to the individuals' social power and influence. When Ṭābīya complains to the king that he is losing his influence, it is no surprise that his greatest fears should be to be downgraded to the status of a simple mason making bricks.[86] On the other hand, when Assyrian kings compare their building abilities to that of the gods, they are elevating themselves to a divine level.

8.3 Significance of the results

A philological analysis of building-related data from the Assyrian royal inscriptions and state archives necessarily takes us beyond the discipline of Assyriology proper. The topic of 'building', especially when applied to ancient Mesopotamia, is just as abstract than it is tangible. From our modern point of view, it is clear that buildings were the most substantial ma-

79 SAA 13, 190.
80 ▸ **1.4.1.b**.
81 Baker/Gross 2015: 86.
82 Binsbergen/Wiggermann 1999.
83 For examples of EGALKURA prescriptions see Stadhouders/Panayotov 2018.
84 Binsbergen/Wiggermann 1999: 31.
85 Royal prerogatives on space are also clear from the omen series ▸ **1.7**.
86 SAA 8, 442.

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terial expression of Mesopotamian civilisation and we find that they are often the main archaeological evidence we have left of human occupation in Mesopotamia; yet Mesopotamian mud brick architecture is typically recovered in poor state of preservation and it takes some imagination, best informed by ancient texts and imagery, to understand what it may have been like in its full form. From the ancient Assyrian point of view, the material pervasiveness of 'built space' meant that it was perceived as a constitutive element of life (and death), inspiring scholarly treatments on many different levels, but these were never formally integrated into a homogenous vision or *theory* of space because the aim was not so much to reduce the built world into a synthetic system of concepts, but rather to reproduce the complexity of that built world as simply as it comes and with as many meanings as possible.

The physicality of built objects required that their linguistic rendering be either very accurate, in order to be applicable to the physical reality (cf. *uššu*), or else that it completely surpass the physical reality to create an ideal (cf. *temennu*). The perception of space revealed by the royal inscriptions and state archives is coherent and converges towards a unique *Weltanschauung*, but it is composite and does not respond to any standard values. The Assyrians have left us no texts reflecting *directly* and *explicitly* on the actual meaning of 'building' because this would have been incompatible with their multifaceted experience of space. We have seen in this chapter that it is possible to reconstruct ways in which the Assyrians could have perceived space by piecing together different approaches to key issues, making sure that they account for the general coherence across texts. The result of this analysis is a multidimensional model of interpretation, based on texts, structured according to archaeological realities, and adapted to modern concerns. The advantage of this model is that it allows for analyses to be developed in different directions concurrently.

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9 CONCLUSION

Through their treatment of building-related notions, the Assyrian royal inscriptions and state archives reflect a single coherent vision of the world in which the linguistic expressions of ideologies and practices are not independent and mutually exclusive, as one might expect from a culture that preceded the "rational revolution" of the Classical Age, but intrinsically connected and complementary, revealing an intellectual disposition that was capable of integrating short term concerns about everyday life with long term visions on the significance of life and its aftermath. If being 'modern' is the capacity to project not only oneself but also one's world into the future, then we can say that, in their relationship to space, the Assyrians[1] were modern.

The Assyrians had no specific term exactly equivalent to 'space', or 'time' for that matter. However, as the results of this study demonstrate, it is undeniable that, building on the legacy of their cultural predecessors, they had conceptualised a *sense* of 'space' which went beyond the simple *experience* of space. Space was articulated linguistically through a multifarious but coherent architectural terminology. Today we would describe space as a boundless three-dimensional extent, which combined with the dimension of 'time' forms a single four-dimensional continuum, spacetime.[2] Although the Assyrians may not have conceived of 'space' in such terms, their intellectual approach to building as act, activity and object, was compatible with that modern definition: they adjusted the material reality of their buildings (length/width/height; area/volume; plan/elevation) to the "passing" of time. A consciousness about time is reflected in the spatial terminology: different terms (technical/specific and literary/abstract) appear to correspond to different temporal phases in the physical and intellectual processing of space. Although the Akkadian language lacked the exact terms to express our concepts of space and time, the chances are Assyrian scribes, at the very least, would have had little to no trouble understanding these concepts since the language they were using relied heavily on the spatio-temporal balance.

A few key terms selected from the first seven chapters may serve to illustrate the intrinsic connection between Akkadian space-related terminology and concepts of time.

1 "The Assyrians" are here understood as heirs and promotors of a long-standing Mesopotamian tradition.

2 In fact, from a purely physical perspective we can be sure that space and time combined determine the mental *constructs* derived from and productive of physical *constructions*, forming what we could today describe as the "tesseract" of human experience.

9.1 Planning

We have seen that the royal inscriptions and state archives employ different terms to designate plans and that these terms correspond to different "levels" of the planning process (▸ **8.2.1.a**). Each of these levels of planning would have been significant to the writers of both sources, but we find that they are not evenly expressed across the sources. For example, *gišḫurru* figures in the royal inscriptions but not in the state archives; inversely *līṭu* is only attested in the state archives. Whilst the negative evidence could reflect a bias in the archaeological discoveries (absence of evidence is not evidence of absence), the repeated occurrences of the terms in parallel contexts are nonetheless significant (▸ **1.2.1**; ▸ **1.3.1**). The different levels of the planning process suppose a temporal progression, which becomes meaningful when related to specific spatial contexts. For example, *līṭu* is used to describe the sketch of a fort or the illegal sketch made by a lamentation priest of the interior decorations of a temple, whilst *gišḫurru* typically designates the original plan of a temple (▸ **8.2.1.a**): different words are necessary to account for the same procedure (planning) because it is taking place in different spatial contexts. *līṭu* would suppose a relatively swift action adapted to military strategy or clandestine activities; *gišḫurru* brings to mind a slower action adapted to religious tradition. Two aspects of planning are contained in these terms, on the one hand there is the instantaneity of recording, on the other its durable purpose.

9.2 Site selection and foundation

The terms *uššu* and *temennu* offer another example of spatial objects with a temporal dimension. *uššu,* attested in both the royal inscriptions and state archives, represents the ephemeral aspect of foundations; *temennu*, attested only in the royal inscriptions, represents the eternal one (▸ **2.2.1.a**). The foundation process was the most temporally significant phase in the life of a building. Because mud brick architecture needs to be constantly renewed, the symbolic permanence of the foundations was essential to the lasting identity of a building. It was important to treat new temples as "regenerations" rather than imitations of older ones; similarly, new palaces, even when built on virgin soil, were always conceived of in a genealogical perspective inclusive of ancestral achievements (▸ **2.1**). Foundations were *uššē* (typically in the plural) on an everyday basis but they were thought of as *temennu* (typically in

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the singular) when the building was projected into the future.

9.3 Materials

Here the material that comes first to mind is clay. Whilst mud brick architecture is not eternal because clay is brittle, mud bricks can be endlessly recycled because clay is also malleable. The physical properties of clay were essential to the development of Mesopotamian architecture; accordingly, much of the "metaphysical" significance of clay was transferred on to the symbolic meaning of Mesopotamian architecture (▸ **8.2.2**): something which can only be experienced on the short term, but is designed to endure on the long term. We find that *libittu* (SIG_4), the sun-dried brick, was on the whole more popular than the more resistant *agurru*/*ebirtu* (SIG_4.AL.UR_3.RA), kiln-fired brick. Economic factors would sometimes have played a role in this preference since sun-dried bricks were less expensive than kiln-fired bricks. The traditional character of sun-dried bricks was nonetheless determining (▸ **3.1**). *libittu* enjoyed a symbolic permanence that was materialised through the more resistant *agurru*/*ebirtu* (SIG_4.AL.UR_3.RA).

9.4 Structure

Walls reflect well the contrasting aspects of space in relation to time. Walls, alone, are symbolic of buildings, of which they are the most substantial and visible elements. A building consists essentially of walls and the space between them. The state of the walls determines the state of the building. If the walls are new, the building will be considered new; if they are old, the building will be considered old. Walls therefore function as temporal markers. The terms *igāru* (wall of building), *dūru* (inner fortification wall) and *šalḫû* (outer fortification wall) are frequently used in both the royal inscriptions and state archives (▸ **4.1**), which is not surprising given the ideological and practical importance of these architectural elements. The terminological homogeneity across our sources testifies to the very tangible nature of walls: they were physically perceptible throughout the existence of a building because they *were* the building. Technical terminology was enough to render the temporal aspect they embodied. Abstract terminology was not necessary but could be employed to bring out the more literary dimension. The term *aduššu* appears to have first denoted the lower town of a city, a meaning which expanded to encompass the lower retaining wall of the city. Through this metaphorical procedure, *aduššu* became a literary term to designate a lower wall as guarantor of the existence of a lower town. The term *aduššu* is only attested once in the royal inscriptions in the name assigned to the *šalḫu* of Dūr-Šarrukīn, most likely to designate the lower town (although lower wall would be implied) in its most lasting form as a construction with firm foundations that will endure "till far off days" (▸ **4.1.1.a**).

9.5 Openings

Doors and gates are prevalent in both the royal inscriptions and state archives. The most common terms designating them are *daltu* and *bābu* used with the same frequency across our sources. Their temporal component is contained in their primary function which is to facilitate the movement of people in space, hence also in time, since movement (i.e. change) is the material manifestation of time. This "kinetic" aspect of doors and gates is perceptible in descriptions involving them: they are presented as zones of transit: the doors (*dalātu*) of cedar and cypress in Tukultī-apil-Ešarra III's palace grant health to "those who enter them" (▸ **6.3.1**); *bābu* is used interchangeably with *nērebu* (< *erēbu*, "to enter"), gates serve "for entrance and egress" (▸ **5.4**). Thresholds, which embody the notion of transit (▸ **8.2.4.b**), figure prominently in the state archives related to construction work at Dūr-Šarrukīn (▸ **5.2.1.a**).

9.6 Decor

Akkadian has two verbs meaning "to decorate", *usāmu* and *za'ānu.* These verbs alone place decoration in a temporal dynamic. *usāmu* is common in the royal inscriptions, it conveys the idea of decoration as something appropriate; *za'ānu* is used in the state archives to render the luxurious aspect of decoration (▸ **6.1**). Given that tradition is attached to the notion of appropriateness, *usāmu* situates decoration in a durable perspective adapted to the ideology of the royal inscriptions. The luxury connoted by *za'ānu* situates decoration in a more ephemeral perspective: the aesthetics of decoration provoke instantaneous sensorial pleasure and it is this sensorial pleasure which inspired the standards of quality followed by the artisans and officials who oversaw building works on a daily basis.

9.7 Actors

The royal inscriptions present a more general picture of the actors involved in the building process than the state archives. The terminology of the royal inscriptions conveys idealised concepts that are to pass the test of time: the king is the main "builder" and he has indistinct artisans (*ummânī*) work under his authority (▸ **7.2**; ▸ **7.4**). The term *šitimgallu* is

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employed to refer to master builders in a somewhat honorary fashion that obscures their actual roles. The focus is on the king who vouches for the durability of his dynasty and country. The multiple roles taken on by the personnel are more apparent in the state archives which were produced simultaneously with the work they describe. For example, *šeleppāyu* designates the architect, *etinnu* the builder, *urāsu* the workman (▸ **7.5**).

***

In summary, space related vocabulary was developed in a distinct temporal framework in which immediacy and eternity, so to speak, were realities. On the one hand, space was deconstructed into parts corresponding to concepts which were expressed through a very precise terminology that could be used according to the imperatives of daily life. On the other hand, space was considered as a whole affected by the passing of time and for which a more abstract terminology capable of accounting for a certain spatial permanence was developed.

Was the "semantic dynamic" described here consciously processed by the Assyrians or is it something which can only be inferred retrospectively from our current point of view? Only an Assyrian could answer that question, of course. It is however undeniable that the Assyrians had developed interrogations about the effects of time on space. Suffice is to mention the concern expressed about the fate of their architectural legacy. From this perspective, a semantic conflation of time and space concepts is not inconceivable. At the core of the Assyrians' relationship to space lies the question of construction and destruction, which could have inspired a conscious temporal treatment of space. The Assyrians professed the importance of building but typically achieved this through preliminary destructions, which were either pragmatic and ritualised, when for example temples had to be razed in order to be rebuilt, or militarily and economically motivated, when entire areas were aggressively spoiled of their riches to engross imperial building projects, an attitude vividly summarised by Liverani as *panuššu ālumma arkišu tillu* ("before him a city, behind him a heap of ruins")[3].[4]

An ambivalence towards the act of construction is clear throughout Mesopotamian history. The destructive aspect of construction, at least when it came to replacing old structures by newer ones, is well acknowledged in the sources. As seen previously, the acts of building and rebuilding were highly sensitive and perceived as a risk by the rulers who always feared that a change in the order of things could displease the gods.[5] A fitting allegory of the ambivalence surrounding construction and destruction are the characters of Kulla and Mušdama, deities in charge of building activities. Once a building had been built, it was of the utmost importance to chase Kulla and Mušdama out of the building through rituals.[6] Although Kulla and Mušdama were necessary to carry out the building work and were as such considered beneficent, their role was also to accompany the ruler and workers in a delicate and dangerous mission meaning they equally represented that danger, hence the need to evict them. A balance had to be found between the positive and negative aspects of the building act. Rituals were not the only way of fighting off the negative consequences of destruction. What could be described as an "ideology of eternity" was developed and aspects of the language adapted to it. The physical realities of destruction were counterbalanced by the idealisation of "productive"[7] destruction as a pre-requisite for eternal reconstructions.[8] Different registers of language were used to express what happened in daily life and what occurred on the timeless plane.

Just as space develops through construction, we could say that time develops through destruction: to create new spaces it is necessary to build, and witnessing the passing of time is therefore akin to accepting the loss of the old. Our sources demonstrate that the Assyrians were deeply aware of this state of affairs. If they were able to unify their perceptions of space across different domains of life it is perhaps because, beyond the construction of space, they were aiming for the recovery of time: they strove to conciliate the daily with the eternal. By building and rebuilding relentlessly the same palaces and temples, by copying over and over again the same inscriptions, the Assyrian kings challenged the passing of time on an unprecedented scale. They reached a paradox however. Construction meant destruction. In order to fuel exponential building activities they had to exploit their human and natural environments without more concern for destruction than their own survival. Victory after victory they sowed the seeds of defeat. And slowly their empire fell, the first of many to come...

3 Aššur-aḫu-iddina, RINAP 4, 98, r. 13.
4 Liverani 2017: 149.
5 ▸ **1.1.2.a**.
6 See for example Ambos (2004: 87–116) for a first millennium building ritual to exorcise Kulla from a house. For comparison, already in the earlier third millennium Sumerian inscriptions of Gudea, the ruler makes sure Mušdama leaves the new temple before the god Ningirsu's arrival (cf. E3/1.1.7 Cyl. B, iii 16 – iii 17).
7 To be distinguished from the "sterile" destructions brought about by hostility.
8 Another type of "productive destruction" would be the "destruction and reconstruction" discussed by Liverani (2017: 149ff.) who uses as guiding principle of his discussion the concept šuddû u šūšubu ("Tearing down and resetlling"), from Aššur-aḫu-iddina, RINAP 4, 1, ii 30 – ii 31.

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urkiūte lū kī pāniūte
"the future is like the past"

(Oracle of encouragement to Aššur-aḫu-iddina, "from the mouth of the woman Bayâ", SAA 9, ii 37′)

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10 APPENDIX

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Note: The translations proposed here may differ from those provided in the editions used as reference.

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A. Royal Inscriptions (by ruler)

Erišum

RIMA 1, A.0.33.1, 19–23

19. (…) *šu-ma be-tum e-na-aḫ-ma*
20. LUGAL *šu-um-šu ša ki-ma ia-ti$_2$ be-tam$_2$*
21. *e$_2$-pa$_2$-aš$_2$ si$_2$-ka$_3$-tam$_2$ ša am-ḫa-ṣu$_2$-u$_2$*
22. *la$_2$ u$_2$-ra-a-ab$_2$ a-na iš-ri-ša-ma*
23. *lu-ta-e-er* (…)

(…) If the house should become dilapidated and a king whose name is like mine builds the house (again), the peg which I struck — may he not replace (it), to its place may he return (it) (…).

Šamšī-Adad I

RIMA 1, A.0.39.1, 37–48

37. E$_2$ GIŠ.ʿEREN'
38. *u$_2$-ṣa-li-il*
39. *i-na* E$_2$.MEŠ
40. GIŠ.IG.MEŠ GIŠ.EREN
41. *ša* MUL-*ši-na* KU$_3$.BABBAR *u$_3$* KU$_3$.GI
42. *uš-zi-iz*
43. *i-ga-ra-at* E$_2$
44. *i-na* KU$_3$.BABBAR KU$_3$.GI
45. NA$_4$.ZA.GIN$_3$ NA$_4$.GUG
46. I$_3$.GIŠ.EREN I$_3$.SAG
47. LAL$_3$ *u$_3$* I$_3$.NUN
48. *ši-la-ra-am a-ši-il*

I roofed the building with cedar. I set in the rooms doors of cedar whose stars were of silver and gold. The wall of the building I smeared with a paste/mortar of silver (dust), gold (dust), lapis lazuli (dust), carnelian (dust), cedar oil, fine oil, honey and ghee.

Tukultī-Ninurta I

RIMA 1, A.0.78.11, 82–90* (postscript)

82. *i-na u$_4$-me-šu-ma i-na šur-ru* LUGAL-*ti-ia*
83. ^{d}INANNA NIN E$_2$ *ša$_2$-na-a ša$_2$ el maḫ-ri-i*
84. E$_2$.AN.NA-*ša$_2$ qu-šu-du i-ri-ša$_2$-ni-ma*
85. E$_2$ TIL *šu-bat* ^{d}INANNA NIN-*ia ša$_2$ i-na pa-na* E$_2$
86. *e-de-nu-u$_2$-i-ša$_2$ il-ti-nu-u$_2$ a-na ri-mi-it* ^{d}INANNA *ku-un-nu-ma u$_3$* E$_2$ *ša$_2$-ḫu-ru i-na pa-ni-šu$_2$ la ep-šu*
87.*[1] *an-ḫu-su*
88.* *u$_2$-ne$_2$-kir$_6$*
89.* *dan-na-su*
90.* *ak-šud*

At that time, at the beginning of my sovereignty, the goddess Ištar my mistress requested from me another temple which would be holier than her previous shrine, and so the old temple — the dwelling of the goddess Ištar my mistress, which previously was her only temple, the only one designated as the abode of the goddess Ištar and before which no room of the *šaḫūru* had been built — I cleared its ruins, reached its foundation pit.

Tukultī-apil-Ešarra I

RIMA 2, A.0.87.1, vii 71 – vii 75 + viii 17 – viii 24

vii 71. *i-na šur-ru* LUGAL-*ti-ia* ^{d}*a-nu*
vii 72. *u$_3$* ^{d}IŠKUR DINGIR.MEŠ GAL.MEŠ EN.MEŠ-*ia*
vii 73. AG$_2$-*mu* SANGA-*ti-ia*
vii 74. *e-pa-aš$_2$ at-ma-ni-šu-nu*
vii 75. *iq-bu-ni* (...)

(...)

viii 17. *ki-ma a-na-ku* E$_2$KU$_3$ *at-ma-na ṣi-i-ra*
viii 18. *a-na mu-šab* ^{d}*a-nim u$_3$* ^{d}IŠKUR DINGIR.MEŠ GAL.MEŠ
viii 19. EN.MEŠ-*ia ak-pu-du-ma la a-par$_2$-ku-u$_2$*
viii 20. *a-na e-pe-ši a-ḫi la-a ad-du-u$_2$*
viii 21. *ḫa-an-ṭiš u$_2$-šek$_2$-li-lu-ma*
viii 22. *lib$_3$-bi* DINGIR-*ti-šu-nu* GAL-*ti*
viii 23. *u$_2$-ṭi$_2$-bu* ^{d}*a-nu u$_3$* IŠKUR
viii 24. *ki-ni-iš li-saḫ-ru-ni-ma*

In the beginning of my kingship, Anu and Adad, the great gods my lords, who love my priesthood, commanded me to build their cellas. (...) Because the pure temple, the exalted shrine, for the abode of the gods Anu and Adad the great gods my lords I planned without ceasing, because I was not slack in the work and had it quickly completed, because it pleased their great divinity, may the great gods Anu and Adad faithfully turn to me!

1 Cf. lines 35–38 of edition.

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RIMA 2, A.0.87.4, 79–89

79. (…) *ki-i pi-i* E_2.GAL.MEŠ-*ma maḫ-ra-a-te ša* NUN.MEŠ
80. *a-lik pa-ni-ia* ⌜*i*⌝-[*n*]*a* MAN.MEŠ-*ni la-be-ru-t*[*e a-d*]*i muḫ-ḫi-ia ša* E_2.GAL.MEŠ-*ma*
81. *er-ṣi-pu-ma a-na* [*šu-ba*]t MAN-*ti-šu-nu* [...]-u_2 *i-na i-si-na-at* URU-*šu-nu*
82. ⌜^{d}⌝*a-šur* EN u_3 DINGIR.M[EŠ GAL].MEŠ *a-na lib*$_3$*-bi-*⌜*ši-na*⌝ *i-qa-ru-u*$_2$*-ma* UDU.SISKUR.MEŠ
83. [*i*]*-na-qu-u*$_2$ [...]-⌜u_2⌝ E_2.GAL.MEŠ *ši-na-ti-na la qa-šu-da-ma a-na šu-bat* DINGIR-*ti*
84. [*la*] *ša-ak-na* [...] E_2.GAL-*la e-pu-šu* DINGIR.MEŠ-*nu-šu a-na lib*$_3$*-be*$_2$ *il-lu-ku*
85. UDU.SISKUR.MEŠ [*ana* D]INGIR.MEŠ-*ni i-na lib*$_3$*-bi-ma i-ša-kan k*[*i*]*-i pi-i* E_2.GAL.MEŠ-*te-ma*
86. *ma-da-a-te* [LUG]AL.MEŠ *a-lik pa-ni-ia la u*$_2$*-qa-ši-d*[*u*]*-ši-na-ma a-na šu-bat* DINGIR-*ti*
87. *la iš-ku-nu* [...] ⌜E_2⌝.GAL GIŠ.*e-re-ni ša-a-ti* MU 1.KAM E_2.[GAL ^{d}*a*]-*šur* EN u_3 DINGIR.MEŠ GAL.MEŠ
88. [*rab* ?] *da-ru-u*$_2$ UDU.SISKUR.MEŠ *a-na pa-ni-šu-nu i-*[*na-qu*]-u_2 E_2.GA-*lum ši-i*
89. [*la qa-š*]*u-da-at* ⌜*a-na*⌝ [*šu-bat i-lu-*]*ti la ša-ak-na-at* LUGAL ⌜u_3⌝ [...].⌜MEŠ⌝-*šu* ⌜*i-na lib*$_3$*-bi aš*$_2$⌝*-bu*

(This cedar palace I built) like the former palaces into which, during the festivals of their cities, the princes who came before me (who from the old kings down to me, constructed palaces and as seat of their kingship [*made them befitting*]) would invite Aššur the lord and his great gods and make sacrifices […]. These palaces were not sacred and [not] consecrated as divine residences. [*When a king/prince*] built a palace, his gods would come inside, he would present sacrifices to the gods therein. Like the many palaces which the kings who came before me did not make sacred and did not consecrate as divine résidences […], this cedar palace once a year became the palace of Aššur the lord and his great gods. [*Managers* (?)] of the sheep offerings (?) made sacrifices before them. This palace was [not] sacred, it was not consecrated as divine [residence]. The king and his […] live therein.

Aššur-nāṣir-apli II

RIMA 2, A.0.101.1, ii 131 – ii 134

ii 131. (...) URU.*kal-ḫu ina eš-šu*$_2$*-te aṣ-bat* DU_6 *la-be-ru*
ii 132. *u*$_2$*-na-kir*$_7$ *a-di* UGU A.MEŠ *lu-u*$_2$ *u*$_2$*-ša*$_2$*-pil*$_2$ 1 ME 20 *tik-pi a-na muš-pa-li lu-ṭa-bi* E_2 ^{d}MAŠ EN-*ia ina qe*$_2$*-reb-šu*$_2$ *lu-u*$_2$ *ad-di e-nu-ma*
ii 133. ALAM ^{d}MAŠ *šu-a-tum ša*$_2$ *ina pa-an la-a* GAL_2-u_2 *ina ḫi-sa-at lib*$_3$*-bi-ia* ^{d}LAMMA DINGIR-*ti-šu*$_2$ GAL-*te ina du-muq* NA_4 KUR-e u_3 KU_3.GI *ḫu-še-e lu-u*$_2$ DU_3-*ni*
ii 134. *a-na* DINGIR-*ti-ia* GAL-*te ina* URU.*kal-ḫi lu-u*$_2$ *am-nu-šu i-si-na-te-šu*$_2$ *ina* ITI.ZIZ_2 u_3 ITI.KIN *lu-u*$_2$ *aš*$_2$*-kun* E.KUR *ši-i na-la-ba-na lu ak-ṣur*

(…) I seized Kalḫu for renovation. I cleared away the old ruin mound. I dug (a foundation trench) to water level and sank (it) to a depth of 120 layers of bricks. The temple of Adad my lord I founded therein. At that time, this statue of Ninurta which had not existed previously, through the understanding of my heart, as a representation of your great divinity, with the best mountain stone and red gold did I build. I counted it as my great divinity in the city of Kalḫu. I appointed its festival in the months of *Šabāṭu* (XI) and *Ulūlu* (VI). This temple I consolidated all around.

Tukultī-apil-Ešarra III

RINAP 1, 47, 18′ + 26′ – 30′

r. 18. u_3 E_2 *ḫit-la-an-ni tam-šil* E_2.GAL KUR.*ḫat-at-ti a-na mul-ta-ʾu-ti-ia ina qe*$_2$*-reb* URU.*kal-ḫi* DU_3-*uš*

(…)

r. 26′. GIŠ.UR_3.MEŠ GIŠ.EREN *še-ḫu-u*$_2$*-ti ša ki-i e-ri-iš* GIŠ.*ḫa-šur-ri a-na uṣ-ṣu-ni ṭa-a-a* ⌜*bu tar*⌝*-bit* KUR.⌜*ḫa*⌝-[*ma*]-na KUR.*lab-na-na* u_3 KUR.*am-ma-na-na*
r. 27′. *u*$_2$*-ṣa-lil-ši-na-ma a-na kun-ni-i u*$_2$*-ša*$_2$*-lik a-na ṣur-ru-uḫ si-ma-a-ti ša* ⌜GIŠ.*ši*⌝*-gi-*⌜*ri*⌝-[x] x NA_4.MEŠ *ši-pir* LU_2.*pur-kul*$_2$*-lu-ti ab-ni-ma us-si-ma* KA_2
r. 28′. GIŠ.IG.MEŠ GIŠ.EREN GIŠ.ŠUR.MIN_3 *tu-ʾa-ma-te mu-na-aḫ-ḫi-ša*$_2$ *e-re-bi-ši-na* ⌜*e*⌝*-ri-*⌜*si*⌝*-na i-ziq-qu lib-bu*
r. 29′. *i-na me-ser*$_2$ *za-ḫa-le-e* u_3 *<eš-ma-re-e> eb-bi u*$_2$*-rak-kis-ma e-ma* KA_2.MEŠ-*ni u*$_2$*-rat-ti* UR.MAḪ.⌜MEŠ⌝ ^{d}ALAD.MEŠ ^{d}LAMMA.MEŠ *ša bi-na-te ma-aʾ-diš*^{ḫ} *nu-uk-ku-lu ḫi-it-lu-pu ku-uz-bu*
r. 30′. *ne*$_2$*-re-bi u*$_2$*-ša*$_2$*-aṣ-bit-ma a-na tab-ra-a-te u*$_2$*-ša*$_2$*-az-zi-iz* KUN_4.MEŠ IM.BABBAR NA_4.*pa-ru-ti i-na* KI.TA-⌜*šu*$_2$⌝*-nu aṣ-li-ma u*$_2$*-nam-me-ra mu-ṣu-u*$_2$

And a *bīt ḫilāni,* equivalent to a palace from the land of Ḫatti, I built for my pleasure in Kalḫu.

(…)

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With long beams of cedar which, like the scent of *ḫašūru* wood a product of Mount Amana, Mount Lebanon and Mount Ammanāna, is sweet to smell, I roofed them, and I provided for their care. In order to make shine the attributes of the locks … I fashioned stones of the sculptor's craft and made (them) appropriate. Twin doors of cedar and cypress which grant health to those who enter them and whose fragrance wafts into the heart — with bands of pure silver alloy and <gold alloy> I bound them and in every doorway I fixed them. Lion colossi, *šēdu*'s and *lamassu*'s whose forms were very skilfully crafted and which were clad with attractiveness, I installed in the entrances, for wonderment I had them stand. Threshold slabs of gypsum and *parūtu*-limestone below them I laid and so brightened the exits.

Šarru-ukīn

Fuchs 1994, Zyl. 49 + 57–61 + 65

49. *a-na šu-šu-ub* URU *ša*$_2$*-a-šu*$_2$ *zuq-qu*$_2$*-ur* BARA$_2$.MAḪ-*ḫi at-ma-an* DINGIR.MEŠ GAL.MEŠ *u*$_3$ E$_2$.GAL.MEŠ *šu-bat be-lu-ti-ia ur-ra u mu-ša*$_2$ *ak-pu-ud aṣ-rim-ma e-pe-šu aq-bi*

(...)

57. *i-na* ITI.*ṣi-i-taš* ITI *bi-in* ^{d}*dara*$_3$*-gal* KUD-*is* EŠ.BAR *mu-šak-lim ṣa-ad-di* ^{d}*nanna* AN-*e* KI-*tim qar-rad* DINGIR.MEŠ ^{d}ZU.EN
58. *ša i-na ši-mat* ^{d}*a-nim* ^{d}*en-lil*$_2$ *u*$_3$ ^{d}*e*$_2$*-a* ^{d}*nin-ši-ku*$_3$ *a-na la-ba-an* SIG$_4$.MEŠ *e-peš* URU *u*$_3$ E$_2$ ITI ^{d}*kulla na-bu-u*$_2$ *šum*$_3$*-šu*
59. *i-na* UD.EŠ$_3$.EŠ$_3$ *ša* DUMU ^{d}EN *igi-gal*$_2$*-li pal-ke-e* ^{d}AG *ṭup-šar gim-ri mu-ma-ʾi-ir kul-lat* DINGIR.MEŠ *u*$_2$*-šal-bi-na lib-na-as-su*
60. *a-na* ^{d}*kulla* EN *uš-še li-bit-te u*$_3$ ^{d}*mušda šitim-gal-lum ša* ^{d}*en-lil*$_2$ UDU.SISKUR *aq-qi*$_2$ *ser*$_2$*-qu as-ru-qu-ma at-ta-ši* ŠU.IL$_2$.KAM$_2$
61. *i-na* ITI NE.NE-*gar* ITI *a-rad* ^{d}*gibil*$_6$ *mu-uš-pil am-ba-te ra-ṭu-ub-te mu-kin te-me-en* URU *u*$_3$ E$_2$ *uš-še-e-šu*$_2$ *ad-di-ma u*$_2$*-kin lib-na-su*
62. *par-rak-ki ra-aš*$_2$*-du-ti ša ki-ma ki-ṣir ge-en-ni šur-šu-du a-na* ^{d}*e*$_2$*-a* ^{d}30 *u*$_3$ ^{d}*nin-gal* ^{d}IŠKUR ^{d}UTU ^{d}MAŠ *e-pu-ša*$_2$ *qer-bu-uš-šu*$_2$
63. E$_2$.GAL ZU$_2$ AM.SI GIŠ.ESI GIŠ.TUG$_2$ GIŠ.*mu-suk-kan-ni* GIŠ.EREN GIŠ.ŠUR.MIN$_3$ GIŠ.*dap*$_2$*-ra-ni u*$_3$ GIŠ.*bu-uṭ-ni ina qi*$_2$*-bi-ti-šu*$_2$*-nu ṣir-te a-na mu-šab* LUGAL-*ti-ia ab-ni-ma*
64. E$_2$ *ḫi-la-an-ni ta-an-ši-il* E$_2$.GAL KUR *ḫat-ti mi-iḫ-ret* KA$_2$.MEŠ-*šin ap-tiq-ma* GIŠ.UR$_3$.MEŠ GIŠ.EREN GIŠ.ŠUR.MIN$_4$ *u*$_2$*-kin ṣe-ru-uš-šin*
65. ŠAR$_2$ ŠAR$_2$ ŠAR$_2$ ŠAR$_2$ GEŠ$_2$+U GEŠ$_2$+U GEŠ$_2$+U 1 UŠ 3 *qa-ni* 2 KUŠ$_3$ *ni-bit* MU-*ia mi-ši-iḫ-ti* BAD$_3$*-šu aš*$_2$*-kun-ma* UGU NA$_4$ KUR-*e zaq-ri u*$_2$*-šar-ši-da te-me-en-šu*

For the settlement of this city, I strove to plan day and night and ordered that be executed the erection of pre-eminent sanctuaries, cella of the great gods, and of palaces, the seat of my lordship. (...) In *Simānu* (III) month of the son of Daragal the arbitrator, who makes manifest the signs, Nanna of the sky and earth, hero of the gods, Sîn; (a month) the name of which is, through the will of Anu, Enlil and Ea-Niššiku for the moulding of the bricks, the building of the city and house, "month of Kulla"; on the holiday of the son of Bel of broad wisdom, Nabû, the scribe of the whole world, ruler of all the gods, I had its bricks made. For Kulla, lord of foundations and brick, and Mušda, great master builder of Enlil, I made animal sacrifices, presented strewn offerings and performed a *šu'illaku*-prayer. In *Abu* (V), month of the descent of Gibil who brings down the fresh reed beds, who establishes firmly the foundation of city and house, I laid its foundations and made fast its brickwork. Firmly founded sanctuaries, which are so firmly founded as mountain bedrock, for Ea, Sîn and Ningal, Adad, Šamaš, Ninurta, I built within it. A palace of ivory, ebony, boxwood, sissoo, cedar, cypress, *daprānu*-juniper and terebinth I built upon their supreme command as seat of my lordship. 16280 cubits — the spelling of my name — I established as length of its fortification wall and over massive bedrock I fastened its foundation.

Fuchs 1994, Prunk. 158–161

158. (...) E$_2$.GAL ZU AM.SI GIŠ.ESI GIŠ.TUG$_2$ GIŠ.*mu-suk-ka-ni* GIŠ.EREN GIŠ.ŠUR.MIN$_3$
159. GIŠ.*dup-ra-ni* GIŠ.LI *u*$_3$ GIŠ.*bu-uṭ-ni e*$_2$*-gal-gaba-ri-nu-tuku-a a-na mu-šab be-lu-ti-ia qer-bu-uš-*[*šu*] *ab-ni*[1]*-ma e-li* M[U.S]AR-[*re-e*] KU$_3$.GI KU$_3$.BABBAR NA$_4$.ZA.GIN$_3$ NA$_4$.*aš-p*[*e*]*-e*
160. NA$_4$.*pa-ru-tum* URUDU.MEŠ AN.NA AN.BAR A.BAR$_2$ *u*$_3$ *ḫi-biš-ti* ŠIM.MEŠ *uš*[1]*-ši-šin*[2] *ad-di-ma li-bit-ta-šin u*$_2$*-kin-na* GIŠ.UR$_3$.MEŠ GIŠ.*ere*-IGI GAL.MEŠ *e-li-šin u*$_2$*-šat-ri-ṣa*
161. GIŠ.IG.MEŠ GIŠ.ŠUR.MIN$_3$ GIŠ.*mu-suk-kan-ni me-se-er* URUDU *nam-ri u*$_2$*-rak-kis-ma u*$_2$*-rat-ta-a ne*$_2$*-reb-šin* (...)

A palace of ivory, ebony, boxwood, sisoo, cedar, cypress, juniper, *burāšu*-juniper and pistaccio, the Egalgabarinutukua I built therein as seat of my kingship. Over inscriptions of gold, silver, lapis la-

2 Paul-Émile Botta has DU.NU-*šin* in his copy of the inscription in room X, and [...]-*ši-ši* in copies of variant inscriptions from rooms IV, VII, VIII. As pointed out by Fuchs, DU.NU-š*in* is probably a misreading of *uš-ši-šin*.

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zuli, jasper, *parûtu*-limestone, bronze, tin, iron, lead and fragrant aromatic woods I laid their[3] foundations and I made their brickwork firm. With great beams of cedar I roofed them. I bound door leaves of cypress and sissoo with bands of shining bronze and I fixed them at their entrances.

Fuchs 1994, Go. 9–36

9. (...) *i-na*
10. *bi-bil* $ŠA_3$-*ia* <*ina*> GIR_3
11. KUR.*mu-uṣ-ri* KUR-*i*
12. URU DU_3-*ma* URU.BAD_3-[*šarru*]-GIN
13. *az-ku-ra ni-bit-su*
14. *šu-bat* ^{d}[*sîn*]
15. ^{d}UTU ^{d}IŠKUR *u* ^{d}MAŠ
16. *i-na qer-bi-šu*$_2$ *ad-di*
17. *bu-un-na-ne*$_2$-*e*
18. DINGIR-*ti-šu*$_2$-*nu* GAL-*te*
19. ^{d}*nin-ši-ku*$_3$ *ba-an*
20. *mim-ma u*$_2$*-lid-ma*
21. *ir-mu-u pa-rak-ki*
22. E_2.GAL.MEŠ ZU_2 AM.SI
23. GIŠ.ESI $GIŠ.TUG_2$ GIŠ.MES.MA.KAN.<NA>
24. GIŠ.*ere*-IGI $GIŠ.ŠUR.MIN_3$ GIŠ.*dap*$_2$-*ra-ni*
25. GIŠ.LI *u* GIŠ.*bu-uṭ-ni*
26. *i-na qer-bi-šu*$_2$ DU_3-*ma*
27. E_2 *ḫi-la-an-ni*
28. *tam-šil* E_2.GAL KUR.*ḫat-ti*
29. *me-eḫ-ret* KA_2.MEŠ-*šin*
30. *ap-tiq-ma* GIŠ.UR_3.MEŠ
31. GIŠ.*ere*-IGI $GIŠ.ŠUR.MIN_3$ *u*$_2$*-kin*
32. *ṣe-ru-uš-šin ina* DUB $KU_3.SI_{22}$
33. KU_3.BABBAR URUDU AN.NA $A.BAR_2$ $ZA.GIN_3$
34. GIŠ.NU11.GAL *ni-bit*
35. MU-*ia aš*$_2$*-ṭur-ma*
36. *ina uš-še-šin u*$_2$*-kin*

(…) According to my heart's desire at the foot of Mount Muṣri I established a city, I named it Dūr-šarru-ukīn. Residences for Sîn, Šamaš, Adad and Ninurta I established therein. Ninšiku, creator of everything, produced representation sof their great divinity and they occupied their sanctuaries. A palace of ivory, ebony, boxwood, sissoo, cedar, cypress, *duprānu*-juniper, *burāšu*-juniper and pistaccio I built therein. A *bīt ḫilāni,* equivalent to a palace of the land of Ḫatti, I fashioned before their entrances and I set beams of cedar and cypress on top of them[4]. On tablets of gold, silver, bronze, tin, lead, lapis lazuli and gišnugallu-limestone I wrote the calling of my name and I set them in their[5] foundations.

Fuchs 1994, Stier 67–79

67. E_2 *ap-pa-ti tam-šil* E_2.GAL KUR.*ḫa-a-ti ša ina li-ša*$_2$*-an*
68. KUR MAR.TU.KI E_2 *ḫi-la-ni i-ša*$_2$*-as-su-šu*
69. *u*$_2$*-še-pi-ša*$_2$ *me-eḫ-ret* KA_2.MEŠ-*ši-in*
70. 8 UR.MAḪ *tu*$_2$-*ʾa-a-me šu-ut* 1 $ŠAR_2$ $GEŠ_2$.U 6 UŠ 50 AM_3 GUN
71. *mal-tak-ti* URUDU *nam-ri ša ina ši-pir* ^{d}*nin-a*$_2$*-gal ip-pat-qu-ma*
72. *ma-lu-u*$_2$ *nam-ri-ri* 4 *tim-me* GIŠ.*eri*-IGI *šu-ta*$_5$*-ḫu-te ša* 1 NINDA $TA.AM_3$
73. *ku-bur-šu-un bi-ib-lat* KUR.*ḫa-ma-ni* UGU *ur-maḫ-ḫe-e*
74. *u*$_2$*-kin-ma dap*$_2$*-pi ku-lul ba-bi-ši-in e-mid*
75. UDU.MEŠ *šad-de* ^{d}LAMMA MAḪ.MEŠ *ša*$_2$ NA_4.KUR-*i eš-qi*
76. *nak-liš ap-tiq-ma a-na er-bet-ti ša*$_2$*-a-ri u*$_2$*-ša*$_2$*-aṣ-bi-ta*
77. SI.GAR-*ši-in as-kup-pi* NA_4.*pi-li* GAL.MEŠ *da-ad*$_2$*-me*
78. *ki-šit-ti qa-ti-ia ṣe-ru-uš-šin ab-šim-ma a-sur-ru-ši-in*
79. *u*$_2$*-ša*$_2$*-as-ḫi-ra a-na tab-ra-a-ti u*$_2$*-ša*$_2$*-lik* (…)

A *bīt appāti* modelled upon a palace from the land of Ḫatti, which they call *bīt ḫilāni* in the Amorite language, I had made opposite their entrances. Eight twinned lions of assayed shining copper weighing together 4610 talents (i.e. 576.25 talents each), were cast through the work of Ningal and were full of shininess. Four columns of cedar in pairs, 1 *nindanu* circumference each, produce of the Amana range, on top of the lions I set. I installed a lintel, crown of their entrances. Mountain rams and tall *lamassu* of solid mountain rock I fashioned artistically and placed their locks towards the four winds. On slabs of limestone I depicted the settlements captured by my hands and I had their[6] base courses surrounded. I made (them) a wonder.

Sîn-aḫḫē-erība

RINAP 3/1, 1, 63–65 + 81–86

63. (...) NINA.KI *ma-ḫa-zu ṣi-i-ru* URU *na*-[*ram*] ^{d}*iš-tar ša nap-ḫar ki-du-de-e* DINGIR.MEŠ *u*$_3$ ^{d}IŠTAR.MEŠ *ba-šu-u*$_2$ *qe*$_2$*-reb-šu*

3 Refers to buildings associated with and/or constituting Šarru-ukīn's E_2.GAL.GABA.RI.NU.TUKU.A ("Palace Without a Rival"-concept borrowed by Sîn-aḫḫē-erība) in Dūr-Šarrukīn.

4 Presumably refers to the entrances.

5 Again, presumably refers to the entrances.

6 Refers to the palaces.

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64. *tem-me-en-nu da-ru-u₂ du-ru-uš* ⌜*ṣa-a-ti*⌝*ša ul-tu* ⌜*ul*⌝*-la it-ti ši-ṭir bu-ru-um-me eṣ-rat-su eṣ-ret-ma šu-pu-u₂ ṣi-in-du-šu*
65. *aš₂-ru nak-lu šu-bat pi-riš-ti ša₂* ⌜*mim-ma šum*⌝*-šu₂ ši-pir ni-kil-tim gi-mir pel-lu-de-e ni-ṣir-ti lal₃-gar šu-ta-bu-lu qe₂-reb-šu*
66. *ša ul-tu ul-la* LUGAL.MEŠ*-ni a-*⌜*li*⌝*-kut maḫ-ri* AD.MEŠ*-ia ul-la-nu-u-a be-lu-ut* KUR *aš-šur.*KI *e-pu-uš-ma u₂-ma-*ʾ*e-ru ba-*ʾ*u-lat* ᵈEN.LIL₂
67. *u₃ šat-ti-šam la na-par-ka-a* ⌜*e*⌝*-reb la nar-ba-a-ti* GUN *mal-ki kib-rat ar-ba-*ʾ*i im-da-na-ḫa-ru qe₂-reb-šu*
68. *a-a-um-ma i-na lib₃-bi-šu-nu a-na* E₂.GAL *qer-bi-šu kum₂-mu ri-mit be-lu-tu₂ ša ṣu-ḫur šu-bat-su le-e-su ul id-da-a lib₃-bu-uš ul iḫ-su-us*
69. *a-na šu-te-šur* SILA URU *u₃ šum-dul re-ba-a-ti ḫa-re-e* ID₂ *za-qa-ap ṣip-pa-a-te u₂-zu-un-šu ul ib-ši-ma ul uš-ta-bil ka-ras-su*

(...)

81. GIŠ.IG.MEŠ GIŠ.ŠUR.MIN₃ *ṣi-ra-a-ti ša₂ ina pe-te-e* ⌜*u₃*⌝ *ta-a-ri e-re-sin ṭa-a-bu me-ser₂* ZABAR *nam-ri u₂-šir₅-kis-ma u₂-rat-ta-a ba-bi-šin*
82. E₂ *ap-pa-a-ti tam-šil* E₂ KUR.*ḫat-ti ša i-na li-ša₂-a-ni* KUR.MAR.TU.KI E₂ *ḫi-la-a-ni i-ša₂-as-su-šu a-na mul-ta-*ʾ*u-u-ti be-lu-ti-ia u₂-še-pi-ša₂ qe₂-reb-šin*
83. ⌜8⌝ UR.MAḪ.MEŠ *pe-tan bir-ki šu-ta-tu-ti ša i-na* 11400 GUN URUDU *nam-ru pi-ti-iq* ᵈ*nin-a₂-gal šu-pu-šu ma-lu-u₂ nam-ri-ri*
84. *u₃* 2 *tim-me šu-ta-ḫu-ti ša* 6000 GUN *pi-ti-iq si-par-ri šu-ub-bu-u*ʾ *a-di* 2 *tim-me* GIŠ.EREN GAL.MEŠ UGU *pirig₃-gal-le-e u₂-kin-ma dap₂-pi ku-lul* KA₂*-ši-in e-mid*
85. *er-bet* UDU *šad-di* ᵈLAMMA *ša* KU₃.BABBAR *si-par-ri it-ti* UDU *šad-di* ᵈLAMMA *ša* NA₄ KUR*-i eš-qi₂ nak-liš ab-ni-ma a-na er-bet-ti ša₂-a-ri u₂-ša₂-aṣ-bi-ta* SI.GAR*-ši-in as-mu*
86. *as-kup-pat* NA₄*.pi-i-li rab-ba-a-ti da-ad₂-me na-ki-ri ki-šit-ti* ŠU.II*-ia qe₂-reb-ši-in es-si-ḫa a-sur-ru-ši-in u₂-ša₂-as-ḫi-ra ana tab-ra-a-ti u₂-ša₂-lik*

(...) Nīnawā supreme cultic centre, city beloved of Ištar in which is the entirety of the rites of the gods and goddesses, eternal foundation, base of distant time, of which from of old, with the writing of the firmament, the drawing was drawn, and whose (brick-) binding is resplendent, artistic place, abode of secret in which is studied every work of art, the totality of cultic rites, the secret lore of Lalgar (± the *apsû*[7]), in which since of old the kings who preceded me, my fathers, exercised before me dominion over Assyria and ruled the subjects of Enlil, and wherein annually, without interruption, they received an income unsurpassed in amount, the tribute of the rulers of the four quarters (of the universe)—(although) none of them had paid heed or shown interest in the palace which was inside it, inner sanctum, residence of lordship whose site had become too small (...) High doors of cypress whose fragrance is sweet when opening and closing—with bands of shining bronze I had them bound and I fixed them in their entrances.[8] A *bīt appāti* equal to a palace of Ḫatti, which in the language of Amurru they call *bīt ḫilāni,* for the leisure of my lordship I had made within them.[9] I fixed eight lions *passant* opposite one another, which were made with 11400 talents of shining copper — a casting of Ningal — and were full of awesome radiance, and two matching columns produced from 6000 talents of cast bronze, together with the two great columns of cedar on top of the *piriggalli*-lions. A lintel, crown of their entrances, I installed. Four mountain sheep *lamassu*'s of silver and bronze, with a mountain sheep *lamassu* of massive mountain rock I fashioned ingeniously and in the four directions I had them seize their fitting clamp locks. On large slabs of limestone I carved the ennemy towns, the conquest of my hands. I surrounded their[10] lower courses (with them) and I made them a wonder.

RINAP 3/1, 3, 52, 48–53

48. E₂.GAL.TUR.RA *ša₂-a-tu a-na si-ḫir-ti-ša₂ aq-qur-ma ša* ID₂*.te-bil-ti ma-lak-ša uš-te-eš-na-a ab-bu uš-ṭib-ma u₂-še-šir mu-ṣu-ša₂*
49. *qe₂-reb ka-tim-ti a-sur-rak-ki-ša₂ šap-la-nu* GI.MEŠ *e-la-niš* NA₄.MEŠ KUR*-i dan-ni it-ti* ESIR.UD.A *ak-si-ma* A.ŠA₃ *ul-tu ma-a-me u₂-še-lam-ma na-ba-liš u₂-ter*
50. 7 ME *ina* AS₄.LUM GAL*-ti* UŠ 1 ME 62 *ina* AS₄.LUM GAL*-ti* SAG.KI AN.TA IM.SI.SA₂ 2 ME 17 *ina* AS₄.LUM GAL*-ti* SAG.KI MURUB₄*-tim*
51. 3 ME 86 *ina* AS₄.LUM GAL*-ti* SAG.KI KI.TA IM.U₁₈.LU US₂.SA.DU ID₂.IDIGNA *tam-la-a u₂-mal-li-ma am-šu-uḫ me-ši-iḫ-ta*
52. *la-ba-riš* UD.MEŠ *i-na* ILLU *kiš-ša₂-ti tem-me-en-šu₂ la e-ne₂-ši as-kup-pat* NA₄*.pi-i-li rab-ba-a-ti a-šur-ru-šu u₂-ša₂-as-ḫi-ra u₂-dan-nin šu-pu-uk-šu₂*
53. MU.SAR*-e ši-ṭir šu-mi-ia* 1 ME *60 ti-ib-ki tam-li-i qe₂-reb-šu₂ al-ṭu-ur-ma šap-la-nu i-na uš-ši-šu e-zib aḫ-ra-taš*

That small palace I tore down in its entirety and changed the course of the Tebiltu river. I fixed the swamp and directed its outflow. In the secret of its subterranean waters with bitumen I bound reeds above and strong mountain rock below and

7 See Horowitz 1998: 313ff.

8 Refers to the palaces.
9 Refers to the palaces.
10 Refers to the palaces.

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then I raised the area from the water and turned it into dry land. I filled in and measured a terrace of 700 great *aslu*-cubits along the length, 162 great *aslu*-cubits along the upper northern side, 217 *aslu*-cubits along the central side, 386 large *aslu*-cubits along the lower, southern side off the bank of the Tigris River. Against the weakening of its foundation by the floods at high water, I had its lower course surrounded with great slabs of limestone and so strengthened its base. I wrote inscriptions bearing my name 160 brick courses into the terrace and I deposited them deep down in its foundations forever.

RINAP 3/1, 16, vi 69 – vii 16

vi 69. E_2 *ap-pa-a-te tam-šil* E_2.GAL KUR.*ḫat-ti*
vi 70. *ša i-na li-ša$_2$-a-ni* KUR MAR.TU.KI
vi 71. E_2 *ḫi-la-a-ni i-ša$_2$-as-su-u$_2$-šu*
vi 72. *a-na mul-ta-ʾu-u-ti be-lu-ti-ia*
vi 73. *u$_2$-še-pi-ša$_2$ qe$_2$-reb-ši-in*
vi 74. 12 UR.MAḪ.MEŠ URUDU *nam-ri zi-i-me*
vi 75. *da-aḫ-ru-ti pe-tan bir-ki šu-ta-tu-ti*
vi 76. *ša i-na ši-pir* ^{d}*nin-a$_2$-gal*
vi 77. *nak-liš pat-qu-ma ma-lu-u$_2$ nam-ri-ir-ri*
vi 78. *u$_3$* 2 GIŠ.*tim-me šu-ta-ḫu-ti*
vi 79. *pi-ti-iq* ZABAR *šu-bu-uʾ*
vi 80. *a-di* 4 GIŠ.*tim-me* GIŠ.EREN GAL.MEŠ
vi 81. UGU *pirig$_3$-gal-le-e u$_2$-kin-ma*
vi 82. *dap$_2$-pi ku-lul* KA$_2$.MEŠ-*ši-in e-mid*
vi 83. 10 MUNUS.AB$_2$.ZA.ZA-*a-ti pi-ti-iq u$_2$-ru-de-e*
vi 84. *nam-ri za-ḫa-lu-u$_2$ eb-bu u$_2$-šal-biš-ma*
vi 85. *u$_3$* 10 MUNUS.*ap$_2$-sa$_3$-sa$_3$-a-ti* NA4.GIŠ.NU$_{11}$.GAL
vi 86. 12 MUNUS.AB$_2$.ZA.ZA-*a-ti pi-ti-iq* GU.AN.NA
vi 87. 2 GIŠ.*tim-me* GIŠ.ESI *ṣi-ru-ti*
vi 88. *ša iḫ-zu-šu$_2$-nu pa-šal-lum*
vi 89. *u$_3$* GIŠ.*tim-me* GIŠ.EREN GIŠ.ŠUR.MIN$_3$ GIŠ.*dup-ra-ni*
vi 90. *iḫ-ze-et eš-ma$_2$-re-e*
vii 1. *u$_3$* ZABAR *ṣe-ru-uš-šin ul-ziz-ma*
vii 2. *ša* E_2.GAL.MEŠ *be-lu-*^{r}*ti*^{1}*-ia*
vii 3. *e-mid* GIŠ.ḪE$_2$.DU$_7$.MEŠ-*ši-in*
vii 4. *u$_3$* 12 UDU.MEŠ *šad-di* ^{d}LAMMA
vii 5. *pi-ti-iq u$_2$-ru-de-e nam-ri*
vii 6. *ša gat-tu šur-ru-ḫu šuk-lu-lu mi-na-a-ti*
vii 7. 2 UDU.MEŠ ^{r}*šad*^{1}*-di* ^{d}LAMMA NA4.GIŠ.NU$_{11}$.GAL
vii 8. 1 UŠ 12 UDU.MEŠ *šad-di* ^{d}LAMMA
vii 9. *u$_3$* MUNUS.AB$_2$.ZA.ZA-*a-te* NA$_4$.*pi-i-li pe-ṣe-e*
vii 10. SI.GAR *a-ṣe-e u$_3$ ne$_2$-re-bi*
vii 11. *as-meš u$_2$-*[*ša$_2$*]*-aṣ-bit* NA$_4$.KUN$_4$.MEŠ
vii 12. NA$_4$.TUR.MI.NA.BAN$_3$.DA NA$_4$.GIŠ.NU$_{11}$.GAL
vii 13. *u$_3$* KUN$_4$.MEŠ NA$_4$.*pi-i-li* GAL.MEŠ
vii 14. *da-ad$_2$-me na-ki-ri ki-šit-ti* ŠU^{II}*-ia*
vii 15. *qe$_2$-reb-ši-*^{r}*in*^{1} [*es-si*]-^{r}*ḫa*^{1} *a-sur-ru-ši-in*
vii 16. *u$_2$-ša$_2$-as-*[*ḫi-ra a-na*] *tab-ra-a-ti u$_2$-ša$_2$-lik*

A *bīt appāti* equal to a palace of Ḫatti, which in the language of Amurru they call *bīt-ḫilāni,* for the leisure of my lordship I had made within them (the palaces). I fixed twelve lions of shining copper with ferocious (?) faces, advancing towards one another, which were artistically fashioned through the work of Ningal, full of awe-inspiring radiance, and two matching columns produced in cast bronze, together with the four great columns of cedar on top of the *pirigalli*-lions. A lintel, crown of their entrances, I installed.

Ten *apsasītu*'s in shining cast copper I had covered with pure *zaḫalu*-alloy. Ten *apsasītu*'s (were) of *gišnugallu*-limestone, twelve *apsasītu*'s of cast GU.AN.NA (lead?). I set on top of them two tall columns of ebony whose setting was of *pašallu*-alloy and columns of cedar, cypress, (and) *duprānu*-juniper inlaid with *ešmaru*-alloy and copper. I placed on top the entablatures of the palaces of my lordship.

Twelve mountain sheep and a *lamassu*, of shining cast copper, whose limbs were splendid, whose dimensions were perfect, two mountain sheep and a *lamassu* of *gišnugallu*-limestone, seventy-two mountain sheep, a *lamassu* and *apsasītu* of white limestone, I placed appropriately at the locks of exit and entry.

With slabs of breccia and *gišnugallu*-limestone and great slabs of limestone (depicting) the enemy settlements I tore out with my hands, I surrounded their base courses. I made (them) a wonder.

RINAP 3/1, 17, v 91 – vi 6 + vi 20 – vi 26 + vii 26 – vii 40

v 91. 340 *ina* 1 KUŠ$_3$ UŠ
vi 1. ^{r}289^{1} *ina* 1 KUŠ$_3$ SAG.KI
vi 2. *qaq-qa-ru ul-tu qe$_2$-reb* ID$_2$.*ḫu-su-ur*
vi 3. $^{r}u_3{}^{1}$ *ta-mir-ti* URU
vi 4. *ki-ma a-tar-ti-ma lu aṣ-ba-ta ṣi-ir me-ši-iḫ-ti*
vi 5. *tam-li-i maḫ-re-e lu u-rad-di-ma*
vi 6. *a-na si-ḫir-ti-šu$_2$ ina* 190 *ti-ip-ki ul-la-a ri-ši-šu$_2$*

(...)

vi 20. (...) E_2 *mu-ter-re-ti*
vi 21. *tam-šil* E_2.GAL KUR.*ḫa-a-ti*
vi 22. *me$_2$-eḫ-ret ba-ba-a-ti u$_2$-še-piš*
vi 23. GIŠ.UR$_3$.MEŠ GIŠ.*ere-ni* GIŠ.ŠUR.MIN$_3$
vi 24. *ša e-ri-su-un ṭa-a-bu bi-nu-ut* KUR.*ḫa-ma-nim*
vi 25. *u$_3$* KUR.*si-ra-ra* KUR.MEŠ KU$_3$.MEŠ
vi 26. *u$_2$-šat-ri-ṣa e-li-šin*

(...)

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vii 26. *tim-me* URUDU MAḪ.MEŠ *a-di tim-me* GIŠ.*ere-ni*
vii 27. GAL.MEŠ *bi-ib-lat* KUR.*ḫa-ma-nim*
vii 28. *me-ser* URUDU u_3 AN.NA u_2*-rak-kis-ma*
vii 29. *ṣe-er pirig-gal-le-e ul-ziz-ma*
vii 30. *dap-pi ku-lul* KA_2.MEŠ-*šin e-mid*
vii 31. MUNUS.AB_2.ZA.ZA-*a-te* NA_4.GIŠ.NU_{11}.GAL
vii 32. *a-di* MUNUS.AB_2.ZA.ZA-*a-te pi-ti-iq* u_2*-ru-de-e*
vii 33. *ša*$_2$ *za-ḫa-lu-u lit-bu-ša*$_2$ u_3 MUNUS.AB_2.ZA.ZA-*a-te*
vii 34. *pi-ti-iq* GU.AN.NA
vii 35. *ša nu-um-mu-ru gat-ta-ši-in*
vii 36. GIŠ.*tim-me* GIŠ.ESI GIŠ.ŠUR.MIN_3 GIŠ.*ere-ni* GIŠ.*dup-ra-ni*
vii 37. ŠIM.LI u_3 GIŠ *si-in-da-a iḫ-ze-et pa-šal-li*
vii 38. u_3 *kas-pi ṣe-ru-uš-šin ul-ziz-ma*
vii 39. *ša kum*$_2$*-me mu-šab be-lu-ti-ia*
vii 40. *e-mid* GIŠ.GAN.DU_7.MEŠ-*šu*$_2$*-un*

340 cubits the long side, 289 cubits the front side: land up to the middle of the Ḫusur river and the irrigated fields of the city as an addition did I seize. The edge of the length of the previous terrace verily I increased and I raised its top by 190 layers of brick throughout its circumference (...) A *bīt muterrēti* equivalent to a palace from the land of Ḫatti I had made in front of the gates. Beams of cedar and cypress the fragrance of which was sweet, a produce of the Amanum and Sirara, pure mountains, I stretched over them (the palatial halls). (…) High columns of copper together with great columns of cedar, produce of the Amana mountain, I strapped with bands of copper and tin, and on top of the lions I set (them). A lintel, crown of their entrances, I installed. The *apsasītu*'s of *gišnugallu*-limestone together with the *apsasītu*'s cast in copper which were covered in *zaḫālu*-alloy, and the *apsasītu*'s cast in lead (?) whose limbs shone - I placed columns of ebony, cypress, cedar, *duprānu*-juniper, *burāšu*-juniper and *sindu*-wood plated with *pašallu*-alloy and silver on their backs. I placed on top the entablatures of the chambers of my lordship's residence.

RINAP 3/1, 22, vi 51 – vi 58

51. (...) *ina* ITI *še-me*
52. UD-*mu mit-ga-ri ṣi-ir tam-li-e ša-a-tu*
53. *i-na nik-lat lib-bi-ia* E_2.GAL NA_4*.pi-i-li*
54. u_3 GIŠ.EREN-*ni ne-peš-ti ḫat-ti* u_3 E_2.GAL
55. *ṣi-ir-tu ep-šet aš-šur*.KI *ša*$_2$ UGU *maḫ-ri-ti*
56. *ma-ʾa-diš šu-tu-rat ra-ba-ta* u_3 *nak-lat*
57. *ina ši-pir* LU_2.ŠITIM.GAL-*li-e en-qu-ti*
58. *a-na mu-šab be-lu-ti-ia u*$_2$*-še-piš*

(…) In a favourable month [litt. a month that accepts (prayers)], on an auspicious day, on the top of that terrace, through the ingenuity of my heart, I had build as seat(s) of my lordship, with the work of the wise master builders: a palace of limestone and cedar of Ḫatti workmanship and a splendid palace made (in the style) of Aššur, which was greater than the former one in size, and was skilful.

RINAP 3/2, 43, 20–32

20. (…) E_2.GAL NA_4.DUR_2.MI.NA.BAN_3.DA
21. NA_4.GIŠ.NU_{11}.GAL ZU_2.AM.SI GIŠ.ESI GIŠ.TASKARIN GIŠ.MES.MA_2.KAN.NA GIŠ.EREN GIŠ.ŠUR.MIN_3 ŠIM.LI GIŠ.*e-lam-ma-ku a-na mu-ša*$_2$*-ab*
22. *be-lu-ti-ia ab-ni-ma* E_2 *ap-pa-ti tam-šil* E_2.GAL KUR.*ḫa-a-ti mi-iḫ-rit ba-ba-a-ti u*$_2$*-še-piš* GIŠ.UR_3.MEŠ GIŠ.*ere-ni*
23. GIŠ.ŠUR.MIN_3 *ša i-ri-su-un ṭa-bu-u bi-nu-ut* KUR.*ḫa-ma-nim* KUR.*si-ra-ra* KUR.MEŠ KU_3.MEŠ *u*$_2$*-šat-ri-ṣa e-li-ši-in*
24. GIŠ.IG.MEŠ GIŠ.*eri-ni* GIŠ.ŠUR.MIN_3 ŠIM.LI *me-sir* KI.SAG u_3 URUDU *u*$_2$*-rak-kis-ma u*$_2$*-rat-ta-a ba-bi-šin i-na ba-rak-ki*
25. *ša qe-reb* E_2.PA.PAḪ.MEŠ-*ni ap-ti bi-ir-ri u*$_2$*-pat-ta-a* MUNUS.^{d}LAMMA NA_4.GIŠ.NU_{11}.GAL ZU_2 AM.SI
26. *ša il-lu-ru na-ša*$_2$*-a kit-mu-sa rit-ta-šin bal-tu ku-uz-bu ḫi-it-lu-pa lu-li-e ma-la-a*
27. *i-na* KA_2.MEŠ-*ši-in ul-ziz-ma a-na tab-ra-a-ti u*$_2$*-ša*$_2$*-lik ṣu-lul ta-ra-a-ni ša qe*$_2$*-reb*
28. *ba-rak-ka-ni e-ṭu-su-un u*$_2$*-šaḫ-la-a u*$_4$*-mi*$_3$*-iš uš-nam-mir sik-kat*$_3$ *kar-ri kas-pi*
29. u_3 URUDU *qe*$_2$*-reb-šin u*$_2$*-šal-me i-na* SIG_4.AL.UR_3.RA NA_4.ZU_2 NA_4.ZA.GIN_3 *us-si-ma*
30. *si-il-lum*
31. *ne*$_2$*-be*$_2$*-ḫi*
32. u_3 *gi-mir pa-as-qi*$_2$*-šin*

(…) Palatial halls[11] of breccia, *gišnugallu*-limestone, ivory, ebony, boxwood, sissoo, cedar, cypress, *burāšu*-juniper, *elammaku*-wood, as seat of my lordship I built. A *bīt-appāti* modelled after a palace from the land of Ḫatti against the entrances I had build. Beams of cedar and cypress whose fragrance is sweet, produce of the pure Amana and Sirara mountains, I stretched over them (the palatial

11 E_2.GAL applies to each of the materials listed independently, since Sîn-aḫḫē-erība is referring to various palatial halls. That various palatial halls are meant is suggested by: a) the accumulation of feminine plural possessive markers that would be difficult to relate to other nouns; b) the variant E_2.GAL.MEŠ KU_3.GI KU_3.BABBAR UD.KA.BAR NA_4.^{d}ZA.GUL.ME NA_4.*tur-mi-na-ban-da*, etc. in the "Bull Inscription No 4" (Smith/Sayce 1884), see cuneiform in III R Pl.13, Slab 4, 2–4; c) and in a similar enumeration from the inscriptions of Aššur-nāṣir-apli (RIMA 2, A.0.101.2, 56–57) where E_2.GAL is repeated in front of each material indicating various palatial halls.

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halls). Doors of cedar, cypress and *burāšu*-juniper I bound with bands of KI.SAG-metal and copper, and fixed at their entrances. In the corridors, which are within the sanctuaries, I opened a latticed window. *Lamassu*-sphinxes of *gišnugallu*-limestone and ivory who carry flowers and kneel on their hooves, clad with dignity and allure, full of splendour- at their gates I set and made them a wonder. The ceiling (litt. "canopy of the roof") which is within the corridors whose darkness I brightened (with latticed windows), I had make shine like the day. With cornices of silver and copper I had them (the palatial halls) encircled. With kiln-fired bricks of obsidian and lapis lazuli enamel I decorated the corbel vault, the friezes and all their ledges.

RINAP 3/2, 166, 9–30

09. (…) *i-nu-šu*$_2$
10. *e*$_2$*-ḫur-sag-gal-kur-kur-ra ša*$_2$ *qe*$_2$*-reb e*$_2$*-šar*$_2$*-ra pa-rak* AN.ŠAR
11. EN GAL-i EN-*ia ša*$_2$ *ul-tu* UD.MEŠ ŠU$_3$.MEŠ *si-ma-tu-šu*$_2$ *im-qu-ta-a-ma* KA$_2$*-šu*$_2$
10. ˹*pe*˺*-tu-u a-na* IM.U$_{18}$.LU *ina* IGI^{II} *ra-pa-aš*$_2$*-ti ša*$_2$ ^{d}*e*$_2$*-a iš-ru-*˹*ka*˺
11. ˹*ina igi*˺*-gal*$_2$*-lu-u*$_2$*-ti ša*$_2$ AN.ŠAR *u*$_2$*-šat-li-man-ni ia-a-ši ina ṭe*$_3$*-em ram-ni-ia*
12. *am-tal-lik-ma* KA$_2$ *e*$_2$*-ḫur-sag-gal-kur-kur-ra a-na na-pa-aḫ* ^{d}UTU-*ši me*$_2$*-eḫ-ret* IM.KUR.RA
13. *pe-ta-a-šu*$_2$ *lib*$_3$*-bi ub-la-an-ni ṭe-em* ^{d}UTU ^{d}IM *al-mad-ma a-na ke-e-nu*
14. *i-pu-lu-in-in-ma ša*$_2$ KA$_2$ *šu-a-*[*ti*] *a-na na-pa-aḫ* ^{d}UTU-*ši me*$_2$*-eḫ-ret* IM.KUR.RA
15. ^{d}UTU *u* ^{d}IŠKUR *iq-bu-u pe-*˹*ta-a*˺*-šu*$_2$ *ina u*$_4$*-me-šu*$_2$*-ma* E$_2$.GAR$_8$ *an-da-ak-kis-ma*
16. *a-na* GABA AN.ŠAR$_2$ EN-*ia me*$_2$*-eḫ-ret* IM.KUR.RA KA$_2$ *eš-*˹*šiš*˺ *ap-te-e-ma* KA$_2$ LUGAL[*-ti*]
17. MU-*šu*$_2$ *am-bi* E$_2$ *ša*$_2$*-ḫu-ru eš-šiš e-pu-uš-ma* KA$_2$*-šu*$_2$ ˹*u*$_2$˺*-rap-piš ina* KA$_2$ E$_2$ *ša-ḫu-*˹*ru*˺
18. *šu-a-tu* 4 GU$_4$ DUMU ^{d}UTU ZABAR ḪUŠ.A *e-liš* ŠU^{II}*-šu*$_2$*-nu* ^{d}UTU-*ši na-šu-u*$_2$
19. *u*$_2$*-kal-lu ṣu-lu-lu šap-liš* GIR$_3$*-šu*$_2$*-nu i-na* UGU 2 BARA ZABAR
20. *ša*$_2$ KU$_6$.LU$_2$.U$_{18}$.LU ZABAR *ša*$_2$ SUḪUR.MAŠ.KU$_6$ ZABAR *šur-šu-du gis-gal-la*
21. ZAG *u* GUB$_3$ *ša*$_2$ KA$_2$ UR.IDIM *u*$_3$ GIR$_2$.TAB.LU$_2$.U$_{18}$.LU *kul-lu ši-gar-ri* KA$_2$ *šu-nu-*˹*tu*˺
22. KA$_2$ KASKAL *šu-ut* ^{d}EN.LIL$_2$ *az-za-kar* MU-*šu*$_2$ KISAL-*šu*$_2$ *eš-šiš ab-ni-ma* KISAL *si-dir man-za-az*
23. ^{d}*i*$_2$*-gi*$_3$*-gi*$_3$ MU-*šu*$_2$ *am-bi* KA$_2$*-šu*$_2$ *ša*$_2$ *a-na ṣi-it* ^{d}UTU-*ši a-na* UGU ID$_2$ KA$_2$ *bu-ru-mu*
24. *az-za-qar ni-bit-su* KA$_2$ *ne*$_2$*-re-bi-šu*$_2$ *a-na* ˹KISAL˺ *ne*$_2$*-reb* ^{d}*i*$_2$*-gi*$_3$*-gi*$_3$ MU-*šu*$_2$ *az-kur*
25. KA$_2$ *ša*$_2$ *a-na* IM.U$_{18}$.LU KA$_2$ *kan-su* ^{d}*i*$_2$*-gi*$_3$*-gi*$_3$ MU-*šu*$_2$ *am-bi* KA$_2$ *ne*$_2$*-re-bi-šu*$_2$ *a-na* ˹KISAL˺
26. KA$_2$ *ḫi-*[*ṣib*] KUR MU-*šu az-kur* KA$_2$*-šu*$_2$ *ša*$_2$ *a-na* IM.SI.SA$_2$ KA$_2$ MUL.MAR.GID$_2$.DA MU-*šu*$_2$ *am-bi*
27. KA$_2$ *ne-re-bi-šu a-na* KISAL KA$_2$ BARA$_2$ NAM.MEŠ MU-*šu*$_2$ *az-kur* KA$_2$ *pa-pa-ḫi* E$_2$ *ša*$_2$*-ḫu-ru*
28. E$_2$.GAR$_8$*-šu a-di* KISAL-*šu*$_2$ E$_2$.MEŠ KA$_2$.MEŠ *ul-tu uš*$_8$*-šu*$_2$ *a-di gab-dib-bi-šu*$_2$ *ina ši-pir* ^{d}SIG$_4$
29. *u*$_2$*-šak-lil-šu-ma ki-ma* KUR-*i ri-ši-šu*$_2$ *ul-li ina nik-lat lib*$_3$*-bi-ia ša*$_2$ KA$_2$.MEŠ
30. *u*$_3$ ˹KISAL˺-[*ši*]*-na* MU-*šu*$_2$*-nu am-bi-ma ni-bit-si-na az-kur* (…)

At that time, Eḫursaggalkurkurra, which was within Ešarra, the sanctuary of Aššur my lord, whose (original) characteristics had since distant days fallen (into oblivion), and whose gate was open towards the south — in my broad intelligence bestowed upon me by Ea, through the perspicacity granted to me by Aššur, I took counsel with myself and my heart prompted me to open its gate towards the rising sun opposite the east wind. I learnt the opinion of Šamaš and Adad: they gave me a positive answer. They ordered that the opening of th[at] gate(!) be towards the rising sun opposite the east wind. On that day, I knocked down the wall and towards the breast of Aššur, my lord, opposite the east wind a gate I opened anew and "Gate of King[ship]" I named it.

The *bīt šaḫūru* I made anew and its gate I made larger.

In the gate of this *bīt šaḫūru* 4 (statues of the) bull son of Šamaš (*kusarikku*), of red bronze, lifting their front hooves high in supplication to Šamaš, hold up the roof; their back hooves are on top of two bronze daises of bronze fish-men who are rooted in a bronze carp. Right and left of the gate a rabid dog and a scorpion man hold the cleats of their gate. I named it "Gate of the Path of Enlil".

Its courtyard I built anew. I named it "Courtyard of the Row of the Station of the Sebettu". Its gate which was in the east above the river I named "Gate of Heaven". The gate that opens on to the courtyard I named "Entrance of the Igīgī". The gate which is towards the south wind I named "Gate of the Prostrating Igīgī". The gate that opens on to the courtyard I named "Gate of the Abundance of the Land". Its gate which is toward the north wind I named "Gate of the Wagon Star". The gate that opens on to the courtyard I named "Gate of the Dais of Destinies".

The *papāḫu*-gate of the *bīt šaḫūru*, its wall, together with its courtyard, the rooms, the gates- from its foundations to its parapet- with the skill of the god of brickwork I made (all of) it (the Eḫur-

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saggalkurkurra) perfect and I raised its top like a mountain. With the ingenuity of my heart I named the gates and their [courtyard] (…)

RINAP 3/2, 168, 48–57

48. *ina na-de-e* $UŠ_8$ *ša* E_2 *a-ki-ti na-mur-tu₂ ša* ^{m}*ka-ri-bi*-DINGIR
49. LUGAL KUR.*sa-ba-aʾ* NA_4.ᵀBABBAR.DILIᵀ *ni-siq-ti* NA_4.MEŠ ŠIM.MEŠ DUG_3.MEŠ
50. [*i*]*-qa iq-ba-am-ma iš-tu* lib_3*-bi na-mur-ti šu-a-tu₂*
51. NA_4.MEŠ ŠIM.MEŠ *a-na* $ŠA_3$ $UŠ_8$ *ad-di a-na* $ŠA_3$ $UŠ_8$ E_2 *a-ki-ti*
52. *ša-a-tu* KU_3.BABBAR KU_3.GI NA_4.ZA.GUG NA_4.ZA.GIN_3 NA_4.NIR_2 NA_4.MUŠ.GIR_2
53. NA_4.BABBAR.DILI NA_4.BABBAR.MIN_5 IM.SIG_7.SIG_7 *nap-ḫar* ŠIM.MEŠ *ṭa-bu-tu₂*
54. *ki-*[*ma-*] … *-ḫi* $UŠ_8$ *šu-a-ti* i_3*-gu-la-a* I_3 *ru-uš-ti*
55. *ki-ma* A.MEŠ ID_3 *lu as-lu-uḫ te-me-en-na at-ta*
56. *ša* ^{md}30-PAP.MEŠ-SU MAN KUR aš-šur.KI *ra-im ki-na-a-ti*
57. *e-piš ṣa-lam* AN.$ŠAR_2$ *ba-an* E_2 *da-me-eq-ta-šu₂ a-na* AN.$ŠAR_2$ *qi-bi*

At the laying of the foundation of the *bīt akīti* (I received) an audience gift from Karib-il, the king of Saba: he ordered be brought to me *pappar-dilû*-stone, precious stones, fine aromatics. From that audience gift, stones and aromatics I laid into the foundation. Into the foundation of the *bīt akīti,* like […] I […] silver, gold, carnelian, lapis lazuli, *ḫulālu*-stone, serpentine, *pappardilû*-stone, *papparminû*-stone, red-earth, and all kinds of fine aromatics. I sprinkled that foundation with *igulû*-oil – prime oil – like water from the river. You, foundation (-document?[12]), speak favourably to Aššur about Sîn-aḫḫē-erība, king of Assyria, lover of truth, fashioner of the image of Aššur, builder of the temple!

RINAP 3/2, 223, 50–53

50. (…) URU u_3 E_2.MEŠ
51. *ul-tu* U_8*-šu₂ a-di gab-dib-bi-šu₂ ap-pul aq-qur i-na* ^{d}GIŠ.BAR *aq-mu* BAD_3 u_3 *šal-ḫu-u* E_2.MEŠ DINGIR.MEŠ *ziq-qur-rat* SIG_4 *u* SAḪAR.ḪI.A *ma-la ba-šu-u₂*
52. *as-suḫ-ma a-na* ID_2*.a-ra-aḫ-ti ad-di i-na qe-reb* URU *šu-a-tu* ᵀ*ḫi-raᵀ-a-ti aḫ-re-e-ma er-ṣe-es-su i-n*a A.MEŠ *as-pu-un ši-kin uš-še-šu₂* u_2*-ḫal-liq-ma* UGU *ša a-bu-bu na-al-pan-ta-šu₂* u_2*-ša₂-tir aš-šu aḫ-rat* u_4*-me qaq-qar* URU *šu-a-tu* u_3 E_2.MEŠ DINGIR.MEŠ
53. *la muš-ši i-na ma-a-mi uš-ḫar-miṭ-su-ma ag-ta-mar* u_2*-šal-liš*

(…) The city and the houses from their foundations to their parapets I demolished, I tore down, I burnt with fire. The inner and outer fortification walls, the temples, the ziqurrat, the bricks, the earth-works, all that there was I ripped out and threw into the Arahtu canal. In the midst of that city I dug ditches and its land I laid flat with water. The structure of its foundations I lay waste. I made its devastation[13] greater than that of a flood. So that in days to come the ground of this city and temples should not be distinguishable, I let it dissolve in the water and finished it off (so that it became) like a river flat.

Aššur-aḫu-iddina

RIMB, B.6.32.6, 18–20

18. i-*na* u_4*-me-šu₂-*ᵀ*ma*ᵀ*di-ʿa-ni u* ᵀBARA$_2$.MEŠ-*ša₂*ᵀ *si-*ᵀ*ḫir*ᵀ*-ti*
19. e_2*-sag-*ᵀ*il₂*ᵀ *ki-i* ᵀ*si*ᵀ*-ma-a-ti-šu₂-nu la-bi-ra-a-ti*
20. *ina* $aš_2$*-ri-šu₂-nu lu-u ad-di a-na šat-*ᵀ*ti*ᵀ ^{d}AMAR.UTU EN GAL
21. *ep-še-ti-ia dam-qa-a-*ᵀ*ti*ᵀ *ḫa-di-iš* IGI.BAR-*ma*
22. TI u_4*-me* SU_3.MEŠ *še-be₂-e lit-tu-tu ṭu-ub* UZU
23. u_3 *ḫu-ud* lib_3*-bi li-šim ši-ma-ti*
24. u_3 *ša₂* ^{md}GIŠ.NU_{11}-MU-GI.NA LUGAL TIN.TIR.KI
25. ŠEŠ *tam-li-ia* u_4*-me-šu₂ li-ri-ku liš-bi bu-ʾa-ri*

In those days, the throne platforms and daises of all of Esagil, according to their ancient characteristics, I lay down in their places. For that reason, may Marduk the great lord look upon my good deeds with pleasure and may he determine as my fate a life of long days, fullness of age, physical well-being, joy of heart. Moreover, with regard to Šamaš-šuma-ukīn, king of Babylon, my favourite brother, may his days be long and may he be replete with happiness.

RINAP 4, 1, v 73 – vi 43

v 73. (…) *ka-li-šu₂-nu* u_2*-ma-ʾe-er-šu₂-nu-ti-ma*
v 74. GIŠ.UR_3.MEŠ GAL.MEŠ *tim-me* MAḪ.MEŠ GIŠ.*a-dap₂-pi šu-ḫu-u-ti*
v 75. *ša* GIŠ.EREN GIŠ.ŠUR.MIN_3 *tar-bit* KUR.*si-ra-ra u* KUR.*lab-na-na*
v 76. *ša ul-tu* u_4*-me pa-ni ma-gal ik-bi-ru-ma i-ši-ḫu la-a-nu*
v 77. ^{d}ALAD.^{d}LAMMA.MEŠ *ša* NA_4.^{d}ŠE.TIR

12 Compare with Sîn-aḫḫē-erība, RINAP 3/1, 10, 20–22.

13 *na-al-pan-ta-šu₂* is best interpreted as meaning *našpantašu*. See Frahm 1997: 154.

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v 78. MUNUS.^{d}LAMMA.MEŠ *ša* MUNUS.AB$_2$.ZA.ZA-*a-ti* NA$_4$.KUN$_4$.MEŠ *a-gur$_2$-ri*
v 79. *ša* NA$_4$.GIŠ.NU$_{11}$.GAL NA$_4$.^{d}ŠE.TIR NA$_4$.DUR$_2$.MI.NA
v 80. NA$_4$.DUR$_2$.MI.NA.BAN$_3$.DA NA$_4$.*a-lal-lum* NA$_4$.GI.RIM.ḪI.LI.BA
v 81. *ul-tu qe$_2$-reb ḫur-ša$_2$-a-ni a-šar nab-ni-te-šu$_2$-nu*
v 82. *a-na ḫi-šiḫ-ti* E$_2$.GAL-*ia* GIG-*iš pa-aš$_2$-qi$_2$-iš*
vi 1. *a-na* NINA.KI URU *be-lu-ti-ia u$_2$-šal-di-du-u-ni*
vi 2. *ina* ITI ŠE.GA *u$_4$-me mit-ga-ri* UGU *tam-le-e šu-a-tum*
vi 3. E$_2$.GAL.MEŠ *rab-ba-a-ti a-na mu-šab be-lu-ti-ia*
vi 4. *ab-ta-ni ṣe-ru-uš-šu*
vi 5. E$_2$ LUGAL *ša* 95 *ina* 1 KUŠ$_3$ GAL-*tim* GID$_2$ *ša* 31 *ina* 1 KUŠ$_3$ GAL-*tim* DAGAL
vi 6. *ša ina* LUGAL.MEŠ-*ni* AD.MEŠ-*ia mam$_2$-ma la e-pu-šu$_2$ ana-ku e-pu-uš*
vi 7. NA$_4$.KUN$_4$.MEŠ NA$_4$.GIŠ.NU$_{11}$.GAL *a-sur-ru-šu$_2$ u$_2$-ša$_2$-as-ḫir-ma*
vi 8. GIŠ.UR$_3$.MEŠ GIŠ.EREN MAḪ.MEŠ *u$_2$-šat-ri-ṣa* UGU-*šu$_2$*
vi 9. E$_2$.GAL NA$_4$.*pi-i-li pe-ṣi-i u$_3$* E$_2$.GAL.MEŠ ZU$_2$ AM.SI
vi 10. GIŠ.ESI GIŠ.TUG$_2$ GIŠ.*mu-suk-kan-ni* GIŠ.EREN GIŠ.ŠUR.MIN$_3$
vi 11. *a-na mu-šab* LUGAL-*ti-ia u mul-ta-u-ti be-lu-ti-ia*
vi 12. *nak-liš u$_2$-še-piš-ma* GIŠ.UR$_3$.MEŠ GIŠ.EREN MAḪ.MEŠ *u$_2$-šat-ri-ṣa* UGU-*šu$_2$-<nu>*
vi 13. GIŠ.IG.MEŠ GIŠ.ŠUR.MIN$_3$ *ša$_2$ e-re-si-na* DUG$_3$.GA *me-ser* KU$_3$.BABBAR
vi 14. *u$_3$* URUDU *u$_2$-rak-kis-ma u$_2$-rat-ta-a* KA$_2$.MEŠ-*šin*
vi 15. ^{d}ALAD.^{d}LAMMA.MEŠ MUNUS.AB$_2$.ZA.ZA-*a-ti ša* NA$_4$.^{d}ŠE.TIR
vi 16. *ša ki-i šik-ni-šu$_2$-nu ir-ti lem-ni u$_2$-tar-ru*
vi 17. NA$_4$.^{d}ALAD.LAMMA.MEŠ GAL.MEŠ *ur-maḫ-ḫi šu-ta-tu-u-ti*
vi 18. MUNUS.AB$_2$.ZA.ZA-*a-ti šu-ta-ḫa-a-ti* MUNUS.^{d}LAMMA.MEŠ *maš-ša$_2$-a-ti*
vi 19. *ša* URUDU *nam-ri ap-ti-iq-ma*
vi 20. *u$_3$* ^{d}ALAD.^{d}LAMMA.MEŠ *ša pi-i-li pe-ṣe-e*
vi 21. ZAG *u* GUB$_3$ *u$_2$-ša$_2$-aṣ-bi-ta* SI.GAR-*ši-in*
vi 22. *tim-me* URUDU GAL.MEŠ *tim-me* GIŠ.EREN MAḪ.MEŠ
vi 23. *a-dap$_2$-pi ku-lul* KA$_2$.MEŠ-*šin e-mid si-ḫi-ir-ti* E$_2$.GAL *ša$_2$-a-tu*
vi 24. *ne$_2$-be$_2$-ḫu pa-aš$_2$-qu ša* NA$_4$.ZA.GIN$_3$ *u$_2$-še-piš-ma*
vi 25. *u$_2$-šal-ma-a ki-li-liš si-il-lu u$_3$ mat-gi-qu*
vi 26. *ki-ma* ^{d}TIR.AN.NA *u$_2$-ša$_2$-as-ḫi-ra gi-mir* KA$_2$.MEŠ-*ni*
vi 27. *sik-kat$_3$* KU$_3$.BABBAR KU$_3$.GI *u$_3$* URUDU *nam-ri u$_2$-rat-ta-a qe$_2$-reb-šin*
vi 28. *da-na-an aš-šur* EN-*ia ep-šet ina* KUR.KUR *nak-ra-a-ti e-tep-pu-šu$_2$*
vi 29. *ina ši-pir* LU$_2$.*ur$_5$-ra-ku-ti e-si-qa qe$_2$-reb-ša$_2$*
vi 30. GIŠ.KIRI$_6$.MAḪ *tam-šil* KUR.*ḫa-ma-nim ša$_2$ ka-la* ŠIM.ḪI.A
vi 31. *u$_3$* GURUN *ḫur-ru-šu$_2$ i-ta-a-ti-ša$_2$ az-qu-up*
vi 32. *ki-sa-la-ša$_2$ ma-gal u$_2$-rab-bi-ma tal-lak-ta-ša$_2$ ma-aʾ-diš*
vi 33. *u$_2$-rap-piš a-na maš-qit* ANŠE.KUR.RA.MEŠ *ina qe$_2$-reb-e-ša$_2$*
vi 34. *pat-tu u$_2$-še-še-ram-ma u$_2$-šaḫ-bi-ba a-tap-piš*
vi 35. *ul-tu* E$_2$.GAL *šu-a-tu$_2$ ul-tu* UŠ$_8$-*ša$_2$ a-di gaba-dib-e-ša$_2$*
vi 36. *ar-ṣi-pu u$_2$-šak-li-lu lu-le-e u$_2$-mal-lu-u*
vi 37. *šal-la-ru-ša$_2$ ina* KAŠ.SAG *maḫ-ṣu ba-al-lu$_4$ ka-lak-ku-ša$_2$ ina* GEŠTIN
vi 38. *na-ši* GIŠ.MAR *al-li tup-šik-ki e-piš dul-lu*
vi 39. *za-bil$_2$ ku-du-ur-ri ina e-le-li ul-ṣi ḫu-ud lib$_3$-bi*
vi 40. *nu-um-mur pani ub-ba-lu$_4$ u$_4$-um-šu$_2$-un*
vi 41. *ši-pir-ša$_2$ ina ḫi-da-a-ti ri-ša$_2$-a-ti za-ma-ri tak-ni-i*
vi 42. *ag-mur-ma eš$_3$-gal-šid-du$_3$-du$_3$-a*
vi 43. E$_2$.GAL *pa-qi-da-at ka-la-mu az-ku-ra ni-bit-sa*

(…) To all of them I ordered: large beams, great columns, very long planks of cedar (and) cypress, produce of the Sirara and Lebanon mountains, the form of which from early days becomes thick and tall; *šēdu*'s and *lamassu*'s of *pendû*-stone; *lamassatu*'s and *apsasītu*'s; threshold stones; paving slabs of *gišnugallu*-limestone, *pendû, turminû, turminabandû, alallu, girimḫilibû.* From the midst of the mountains, the place of their origin, as requirement for my palace, I had them drag (these) painfully and with difficulty to Nīnawā, the city of my lordship.

In a favourable month, on an auspicious day on top of that terrace I built great palatial halls for the dwelling of my lordship. A royal house 95 large-cubits long, 31 large-cubits wide, such that none from the kings my fathers had built, I built. I had slabs of *gišnugallu*-limestone surround its base course and I roofed it with great cedar beams. The palace of white limestone together with palatial halls of ivory, ebony, boxwood, *musukkannu*-wood, cedar (and) cypress, as dwelling of my royalty and for the pleasure of my lordship I had build artfully, and I roofed them(!) with great cedar beams. Doors of cypress, the scent of which is sweet, I bound with bands of silver and copper and fixed them at their gates. I set to the right and left of their gates (lit. "locks"): *šedu*'s and *lamassu*'s, *apsasītu*'s of *pendû*-stone who, as apparent from their appearance, repel (lit. "turn their breast against") evil, large stone *šedu*'s and *lamassu*'s, lions facing one another, matching *apsasītu*'s, twin *lamassatu*'s cast in shining copper, and *šēdu*'s and *lamassu*'s of white limestone.

On great columns of copper and high columns of cedar I installed a lintel, crown of their gates. Around

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this palace I had made friezes of KA-stone and lapis lazuli and encircled it as with a wreath. I had a vault and an archivolt surround all the entrances like a rainbow. Nails of silver, gold and shining copper I fixed in them[14]. The strength of Aššur, my lord, (and) the deeds I accomplished in enemy lands I carved in it[15] through the work of the sculptor's craft.

After I constructed that palace from its foundation to its parapet, made (it) perfect (and) filled (it) with splendour, its *šallaru*-mortar was sprinkled with fine beer (and) its *kalakku*-clay was mixed with wine. The bearers of the spade, hoe and hod, (and) the workers who carry the basket, in joyous song, pleasure, happiness of heart (and) radiance of face, they passed their time. I completed its work in rejoicings, exultations and hymns of blandishment, and I named it Ešgalšiddudua, the "Palace that Administers Everything".

RINAP 4, 2, v 27 – v 39

v 27. ^{d}ALAD.MEŠ *u* ^{d}LAMMA.MEŠ *ša*$_2$ NA$_4$.MEŠ
v 28. *ša*$_2$ *ki-i pi-i šik-ni-šu*$_2$*-nu*
v 29. *ir-ti lem-ni u*$_2$*-tar-ru*
v 30. *na-ṣir kib-si mu-šal-li-mu*
v 31. *tal-lak-ti* LUGAL *ba-ni-šu*$_2$*-nu*
v 32. ZAG *u* GUB$_3$ *u*$_2$*-ša*$_2$*-aṣ-bi-ta* SI.GAR-*ši-in*
v 33. E$_2$.GAL NA$_4$.*pi-i-li u* GIŠ.EREN *šu-te-mu-du-te*
v 34. *a-na mul-ta-u*$_2$*-ti be-lu-ti-ia*
v 35. *nak-liš u*$_2$*-še-piš*
v 36. MUNUS.^{d}LAMMA.MEŠ URUDU *maš-ša*$_2$*-a-ti*
v 37. *ša*$_2$ *a-ḫe-en-na-a pa-na u ar-ka*
v 38. *i-na-aṭ-ṭa-la ki-la-ta-an*
v 39. *qe*$_2$*-reb-ša*$_2$ *ul-zi-iz*

šedū and *lamassū* of stone which, according to their appearance, repel evil, guardians of the walk and protectors of the path of the king their creator, I placed to the right and left of their entrances (lit. locks). A palace of interlocked limestone and cedar I had built artfully for the pleasure of lordship. Twin copper *lamassātu*, each pair looking both forwards and backward, I set inside it.

RINAP 4, 57, iii 42 – iii 43 + iv 27 – v 28

iii 42. *a-na ud-du-uš* E$_2$ *šu-a-tu*$_2$
iii 43. *ak-ku-ud ap-laḫ*$_3$
iii 44. *ar-ša*$_2$*-a ni-id a-ḫi*
iii 45. *ina ma-kal-ti ba-ru-u-te*
iv 1. ^{d}UTU *u* ^{d}IŠKUR
iv 2. *an-nu ke-e-nu*
iv 3. *i-pu-lu-ni-ma*
iv 4. *ša e-peš* E$_2$ *ša*$_2$*-a-tu*
iv 5. *ud-du-uš at-ma-ni-šu*$_2$
iv 6. *u*$_2$*-ša*$_2$*-aš*$_2$*-ṭi-ru a-mu-tum*

(...)

iv 27. *a-na-ku* [*re*]*-e-šu*$_2$
iv 28. *mut-nen-*[*nu*]*-u*$_2$ *pa-liḫ-šu*$_2$
iv 29. TUG$_2$.ḪUL MURUB$_4$*-ia*
iv 30. *am-*[*ḫa*]*-aṣ*
iv 31. *ina* ŠU^{II}-[*ia*] KU$_3$.MEŠ
iv 32. *al-bi-*[*na*] *li-bit-tu*
iv 33. *da-na-*[*an*] ^{d}*aš-šur*
iv 34. *be-li*$_2$*-ia*
iv 35. UN.MEŠ KUR.KUR *u*$_2$*-šad-gil*$_2$
iv 36. *ku-dur*$_2$*-ru i-na* SAG.DU-*ia*
iv 37. *aš*$_2$*-ši-ma*
iv 38. *u*$_2$*-ša*$_2$*-az-bil ra-ma-ni*
iv 39. *a-na šup-lu-uḫ* KUR.KUR
iv 40. UN.MEŠ *u*$_2$*-kal-lim*
iv 41. UN.MEŠ KUR.KUR
iv 42. *la-bi-in* SIG$_4$
iv 43. *i-na ul-ṣi ḫi-da-a-te*
iv 44. *u*$_3$ *ri-ša*$_2$*-a-te*
v 1. AD.ME.KAR$_2$ AŠ.AM$_3$
v 2. *il-bi-nu* SIG$_4$
v 3. *i-na* ITI *šal-mi*
v 4. *u*$_4$*-me še-me-e*
v 5. *ṣe-er* KU$_3$.GI KU$_3$.BABBAR
v 6. NA$_4$.MEŠ *gu-uḫ-li*
v 7. *kal* ŠIM.ḪI.A I$_3$.BUR
v 8. I$_3$ DUG$_3$.GA LAL$_3$ I$_3$.NUN.NA
v 9. KAŠ GEŠTIN *uš-še-e-šu*$_2$
v 10. *ina* NA$_4$.*pi-i-li*
v 11. NA$_4$ KUR-*i dan-ni ad-di*
v 12. *it-ti ki-ṣir* KUR-*i*
v 13. *ar-ti* NA$_4$.NA.RU$_2$.A.MEŠ
v 14. MU.SAR-*e ši-ṭir šu-mi*$_3$*-ia*
v 15. *e-pu-uš-ma*
v 16. *qe*$_2$*-reb-šu*$_2$
v 17. *aš*$_2$*-kun*
v 18. *še-la-ar-šu*$_2$
v 19. *ina* I$_3$.GIŠ I$_3$ DUG$_3$.GA
v 20. I$_3$.BUR LAL$_3$ I$_3$.NUN.NA
v 21. UŠ$_2$ GIŠ.EREN
v 22. *ab-lu-ul*
v 23. *a-na ba-laṭ* ZI.MEŠ-*ia*
v 24. GID$_2$.DA UD.MEŠ-*ia*
v 25. SIG$_4$ *maḫ-ri-tu*
v 26. *ina ki-ša*$_2$*-di-ia aš*$_2$*-ši-ma*
v 27. *uš-še-šu*$_2$ *ad-di*
v 28. *u*$_2$*-kin lib-na-as-su*

I throbbed, I was afraid, I faltered about the renovation of that temple. In a divination bowl Šamaš and Adad answered me a firm "yes" and they had the building of that temple and the renovation of

14 Refers to the gates.
15 Refers to the palace.

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its cella written on a liver. (...) I, the pio[u]s [sl]ave who fears him, ti[ed] an apron around my waist. With [my] pure hands I made bricks. The strength of Aššur my lord I showed to the people of the land. I raised a basket on my head and carried (it) myself to reveal the fear of the lands to the people. The people of the lands, the maker of bricks, in pleasure, joy and jubilation, for one year, made bricks. In a favourable month, on a propitious day, over gold, silver, stones, antimony, all kings of aromatics, *pūru*-oil, sweet oil, honey, ghee, beer, wine, I laid its foundations with limestone, a strong mountain stone, with bedrock I fixed (them). I made steles, inscribed documents, the writing of my name, and placed them within. I mixed its mortar/plaster with oil, sweet oil, *pūru*-oil, honey, ghee, cedar resin. For the preservation of my life and the lengthening of my days I carried the first brick on my neck and laid its foundations, I secured its brickwork.

RINAP 4, 60, 21' – 33'

21. TA $UŠ_8$-*šu₂ a-di gaba-dib-bi-šu₂ ar-*ʿ*ṣip u₂*ʾ*-šak-lil* GIŠ.ʿUR_3ʾ.MEŠ GIŠ.EREN MAḪ.MEŠ *ta-bit* KUR.*si-*ʿ*ra*ʾ-[*ra*]
22. *ša₂ ina me-ti-iq* KASKAL-*ia ak-ki-su* UGU-*šu₂ u₂-ṣa-lil* GIŠ.IG.MEŠ GIŠ.ŠUR.MIN_3 *ša₂ i-ri-si-na*
23. *ṭa-a-bu me-ser* KU_3.GI *u₂-rak-kis-ma u₂-ra-ta-a* KA_2.MEŠ-ʿ*šu₂*ʾ *at-man aš-šur* EN-*ia* KU_3.GI *uḫ-ḫi-iz*
24. ^{d}*laḫ₃-me* ^{d}*ku-ri-bi ša₂ ṣa-ri-ri ru-uš-šu₂-u i-di ana i-di ul-ziz* E_2 *pa-paḫ aš-šur* EN-*ia*
25. ALAM.MEŠ KU_3.GI *bi-nu-ut* ZU.AB ʿZAGʾ*u* GUB_3 *ul-ziz* E_2.GAR_8.MEŠ KU_3.GI *ki-ma si-i-ri a-si-ir*
26. $BARA_2$ NAM.MEŠ $BARA_2$ *ṣi-i-ru ša₂* ^{d}*aš-šur ina qer-bi-šu₂ e-ram-mu-*[*u*] *ši-mat* AN-*e u* KI-*tim*
27. *i-ši-mu ša₂* LUGAL.MEŠ AD.MEŠ-*ia a-gur₂-ri šu-pu-šu₂-ma za-ḫa-lu-*ʿ*u lit*ʾ*-bu-šu₂ ina* 3 UŠ GUN [*pi*]-ʿ*ti*ʾ*-iq*
28. *iš-ma-re-e nak-liš u₂-še-piš ṣa-lam* LUGAL-*ti-ia mu-sa-pu-u* DINGIR-*ti-šu₂-un mu-te-riš* $^{ba'}$TI-ia_2
29. u_3 *ṣa-lam* ^{m}*aš-šur*-DU_3-A DUMU *ri-du-ti-ia ab-ta-ni ṣe-ru-uš-šu₂* 2 *ku-sa-rik-ki šu₂-ta-tu₂-te*
30. *ša₂ pa-ni-šu₂-nu pa-nu ar-ka i-na-ṭa-lu a-da-pi ku-lul* KA_2 *na-šu₂-u ša₂* URUDU *nam-ri*
31. *ap-tiq-ma* KA_2 KASKAL *šu-ut* ^{d}EN.LIL_2 *ul-ziz* 2 *a-bu-ub nad-ru-tu₂ ina ši-pir um-ma-nu-te nak-*[*liš*]
32. *u₂-še-piš-*ʿ*ma* KA_2 LUGAL-*ti* ZAGʾ [*u*] GUB_3 *u₂-*ʿ*ša₂-aṣ-bi-ta*ʾ SI.GAR-*ru a-bu-bi maš-še₂-e pi-*ʿ*ti*ʾ*-iq*
33. *za-ḫa-le-*[*e*] ʿ*eb*ʾ*-bi* [...] KA_2 *kam-*ʿ*su*ʾ $^{d}i_2$-gi_3-gi_3 *ul-ziz* (...)

From its foundations to its parapet I constructed it (the temple of Aššur) and made it perfect. I roofed it with beams of tall cedar, produce of the Amana, which I had cut down in the course of my campaign. Doors of cypress whose fragrance is sweet I strapped with bands of gold and placed at its entrances.

The cella of Aššur, my lord, I plated with gold. *laḫmu*-statues and *kurību*-statues of red *ṣāriru*-alloy I set side by side. The *bīt papāḫu* (adyton?) of Ashur- gold statues of creatures from the *apsû* I set to the right and left. The walls I smeared with gold like plaster.

The dais of destiny, the splendid dais in which Aššur resides and (where) they decree the destinies of heaven and earth, which the kings my fathers made of kiln-fired bricks and covered with *zaḫālu*- I had it made skilfully with 180 talents of cast *ešmāru*-alloy. I (then) fashioned on it an image of my royalty, praying to their divinity and supplicating for my life, and an image of Aššur-bāni-apli my crown-prince.

I cast with shining copper two bison statues opposite one another, whose faces were guarding front and back, carrying the lintel, crown of the entrance, and I set them at the "Gate of the Path of Enlil". I had skilfully made through the work of craftsmen two ferocious *abūbu*-monsters and I had them placed at the "Gate of Royalty", to the right and the left of the lock. Lustrous *abūbu*-monsters of pure cast *zaḫālu*-alloy [...] I set at the "Gate of the Prostrating Igīgī". (...)

RINAP 4, 104, iii 41 – iv 1

iii 41. (...) [*ina*] ITU *šal-me*
iii 42. u_4-*me še-me-e ṣe-er*
iii 43. *uš-še-šu₂ maḫ-ru-u₂-ti* 1 $KUŠ_3$
iii 44. *ul a-še-eṭ* ½ $KUŠ_3$ *ul ut-tir*
iii 45. *ki-i* KA GIŠ.ḪUR-*šu₂ maḫ-ri-ti*
iii 46. *at-ta-di te-me-en-šu₂*
iii 47. e_2-*sag-gil₂* E_2.GAL DINGIR.MEŠ
iii 48. *ma-aṭ-lat* ZU.AB *tam-šil*
iii 49. e_2-$šar_2$-*ra me-eḫ-ret*
iii 50. *šu-bat* $^{d}e_2$-*a tam-šil*
iii 51. MUL.AŠ.IKU *ar-ṣip*
iii 52. *u₂-šak-lil-ma ana ni-*[*kil-ti*]
iii 53. *u₂-šak-ki-la u₂-kin*
iv 1. *mit-ḫar-ti* (...)

(...) In a good month, on a day that accepts prayers, against its previous foundations — 1 cubit I did not omit, ½ a cubit I did not add. According to the previous plan I laid its foundation (plan). Esagil, the palace of the gods, image of the apsû, equivalent of Ešarra, copy of the dwelling of Ea, image of the

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constellation 'Field' I built, perfected and made into a work of art. I set the square (…)

RINAP 4, 105, iii 29 – iii 38 + iv 29 – iv 37 + v 16 – v 22 + ix 26 – ix 30

iii 29. (…) *ina* GEŠTU[II] DAGAL-*ti*
iii 30. *ḫa-sis-si pal-ki-i*
iii 31. *ša*$_2$ *iš-ru-ka* ABGAL DINGIR.MEŠ
iii 32. NUN ^{d}*nu-dim*$_2$*-mud*
iii 33. *a-na šu-šu-ub* URU *ša*$_2$*-a-šu*$_2$
iii 34. *ud-du-uš eš-re-e-ti*
iii 35. *nu-um-mur ma-ḫa-zi*
iii 36. *ina* GEŠTU[II]*-ia ib-ši-ma*
iii 37. *uš-ta-bil ka-bat-tu*$_2$
iii 38. *a-na e-peš šip-ri šu-a-ti*

(...)

iv 29. DUMU.MEŠ ˹LU$_2$˺.[*um-ma*]-*ni*
iv 30. *en-qu*-[*te*] [LU$_2$.]ŠITIM.GAL.ME
iv 31. *le-*˹*u-u*$_2$˺*-te*
iv 32. *mu-kin-nu* ˹*giš-ḫur*˺*-ri*
iv 33. *iš-te-niš* ˹*u*$_2$*-paḫ*˺*-ḫir-ma*
iv 34. *a-šar maš-kan* [*e*$_2$]*-sag-il*$_2$
iv 35. *pa-an qaq-*˹*qa-ri*˺*-šu*
iv 36. *u*$_2$*-*˹*pat-ti*˺*-*[*ma ši-kit-ta-šu*$_2$]
iv 37. *a-mur* (…)

(...)

v 16. GIŠ.MA$_2$.KAN.NA GIŠ.˹EREN˺
v 17. GIŠ.*bu-uṭ-ni* GIŠ.MEŠ KU$_3$.MEŠ
v 18. *a-na pu-tu*$_2$*-un-ni* E$_2$
v 19. *mar-kas* E$_2$.GAR$_8$ *la pa-ṭa-ri*
v 20. *si-mat e*$_2$*-sag-gil*$_2$
v 21. *la ma-še-e*
v 22. *it-ti* SIG$_4$ *ar-ṣip*

(...)

ix 26. MU.SAR-*e* IM *ṣar-pu-tu*$_2$
ix 27. *lu-ma-a-še*
ix 29. *tam-šil ši-ṭir* MU-*ia*
ix 30. *e-siq ṣe-ru-uš-šu*$_2$*-un*

(…) In the deep wisdom and broad understanding that the expert of the gods the prince Nudimmud gave me it came to my understanding to populate the city, renovate the sanctuaries and brighten the cultic centre and my heart prompted me to accomplish that work. (...) Expert [craft]smen and capable master builders who establish plans I brought together, I expo[sed] the ground of [E]sagil's emplacement and inspected its [structure] (…)I built into the brick *musukkannu*-wood, cedar and terebinth, pure woods, for the strengthening of the building, so that the wall's binding would not loosen up, so that the appearance of Esagil would not fall into oblivion. (…) On inscriptions of kiln-fired clay I carved astroglyphs equivalent to the writing of my name (…)

RINAP 4, 114, ii 12 – ii 18

i 7 *ul-la-nu-u*$_2$*-a ina* BALA
i 8 LUGAL *maḫ-re-e ina* KUR EME.GI$_7$
i 9 *u*$_3$ URI.KI *it-tab-ša*$_2$*-a*
i 10 A$_2$.MEŠ ḪUL.MEŠ UN.MEŠ
i 11 *a-šib lib*$_3$*-bi-šu an-na*
i 12 *ul-*˹*la a-ḫa-meš*˺ *e-tap-pa-lu*
i 13 *i-dab* ˹*bu-ba sur-ra*˺*-a-*˹*ti*˺
i 14 *a-*˹*na*˺ NIG$_2$.GA *e*$_2$*-sag-il*$_2$
i 15 E$_2$.GAL DINGIR.˹MEŠ˺ ŠU-˹*šu*˺-[*nu*]
i 16 *u*$_2$*-bi-lu-ma* KU$_3$.GI KU$_3$.[BABBAR]
i 17 *ni-siq-ti* NA$_4$.MEŠ *a-na*
i 18 KUR.ELAM.MA.KI *ip-šu-ru ma-ḫi-riš*
i 19 *i-gu-gu-ma* ^{d}EN.LIL$_2$
i 20 DINGIR.MEŠ ˹AMAR.˺UTU *a-na sa-pan*
i 21 KUR *ḫul-lu-qu* UN.MEŠ-[*ša*]
i 22 *ik-ta-pu-ud* MUNUS.˹ḪUL˺

(…)

ii 12. 70 MU.AN.NA.MEŠ *mi-nu-ut*
ii 13. *ni-du-ti-šu iš-ṭur-ma*
ii 14. *re-me*$_2$*-nu-u*$_2$ ^{d}AMAR.UTU
ii 15. *šur-riš lib*$_3$*-ba-šu i-nu-uḫ-ma*
ii 16. *e-liš ana šap-liš*
ii 17. *uš-bal-kit-ma a-na* 11
ii 18. MU.AN.NA.MEŠ *a-šab-šu iq-bi*

Before my time in the reign of a previous ruler, bad omens appeared in Sumer and Akkad. The people living there were answering yes-no to eachother and they uttered lies. They put their hands on the property of Esagil the palace of the gods and they gave out gold as well as silver and precious stones at market rate to Elam. The Enlil of the gods, Marduk, became angry, he evilly planned to level the land and destroy its people. (…) 70 years the merciful Marduk wrote as calculated time for the abandonment (of Babylon). (But) quickly his heart calmed down. The top turned into the bottom and he pronounced 11 years (as time before) its (re-) occupation.

RINAP 4, 116, r. 15 – r. 19

r. 15. [*ša e*$_2$*-sag-gil*$_2$ E$_2$.GAL DINGIR.MEŠ?] *uš-ši-šu ad-di-ma u*$_2$*-kin lib-na-as-su*
r. 16. [*u-šak*]-˹*ki*˺*-la ni-*˹*kil*˺*-tuš tam-šil šiṭ-ri-šu*$_2$ *eṣ-ṣi-ra iṣ-rat-su*

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r. 17. [*im-gur-*^{d}EN.LIL$_2$ BAD$_3$-*šu$_2$* GAL-*a ina* GIŠ.]*as-li* GAL-*ti ki-i giš-ḫur-ri-šu$_2$ maḫ-ri-i mi-ši-iḫ-ta-šu$_2$ am-šu-uḫ*
r. 18. [...] *te-me-en-*^{r}*šu$_2$*$^{\neg}$ *ki-ma šu-pu-uk* KUR-*i dan-ni u$_2$-dan-nin*
r. 19. [...]-*lu-ti ki-*^{r}*ma*$^{\neg}$ *ša$_2$ u$_4$-me pa-ni ši-kit-ta-šu$_2$ ab-ni-ma*
r. 20 *e$_2$-te-me-en-an-ki ziq-qur-ra-tu aš$_2$-lu ṣu-up-pan* UŠ *aš$_2$-lu ṣu-up-pan*
r. 21 [...DINGIR.MEŠ] ^{r}GAL$^{\neg}$.MEŠ *u$_3$* ^{d}*kulla* EN SIG$_4$ UDU.SISKUR.MEŠ KU$_3$.MEŠ ^{r}BAL$^{\neg}$
r. 22 [...].A GEŠTIN *ku-ru-un-ni uš-ši-šu$_2$-un ad-di-ma u$_2$-kin te-me-en-*^{r}*šu$_2$*$^{\neg}$-[*un*]

[Of Esagil, the temple of the gods] I laid the foundations, I made fast its brickwork [...] I made skilful its design, according to the likeness of its writing (document? constellation?) I drew its layout. [Imgur-Enlil its wall-] great cubit measures according to its previous plan I measured as its length, its foundation like the base of a strong mountain I made strong, [...] I built its structure as of old. [Etemenanki the ziqqurat] I built as before — it's length, [one *ašlum* and one *ṣup*]*pān*, its width one *ašlu* (and) one *ṣuppān.* To the great [gods] and Kulla lord of foundations and bricks I offered offerings. With [...], wine and *kurunnu*-beer I laid their foundations and made firm th[eir] foundation structure.

Aššur-bāni-apli

RINAP 5, 3, viii 60 – viii 64

viii 60. E$_2$-GAL *ma-šar-ti šu-a-tu ša la-bar-riš il-la-*^{r}*ku*$^{\neg}$
viii 61. *e-na-ḫu* UŠ$_8$-*šu$_2$ mi-qit-ta-šu ad-ke*
viii 62. *ak-šu-da a-sur-ru-šu ul-tu* UŠ$_8$-*šu$_2$*
viii 63. *a-di* GABA.DIB-*be$_2$-e-šu$_2$ ar-ṣip u$_2$-šak-lil*
viii 64. UGU *ša$_2$* UD-*me pa-ni u$_2$-dan-ni-na tem-me-en-šu$_2$*

This review palace which had become old, its foundation course was tired, its ruin (lit. "crumble") I cleared. I reached its base course. From its foundation course to its parapet I built it up and made it perfect. I made its foundation stronger than in previous days.

RINAP 5, 6, i 48′ – i 57′

i 48′. *e$_2$-maš-maš e$_2$-gašan-kalam-ma* KUG.BABBAR KUG.GI *u$_2$-za-*$^{\prime}$*i-in*
i 49′. *lu-le-e u$_2$-mal-li*
i 50′. ^{d}*šar-rat kid-mu-ri ša ina ug-gat* ŠA$_3$-*bi-ša$_2$*
i 51′. *at-man-ša$_2$ e-zi-bu u$_2$-ši-bu a-šar la si-ma-a-ti-ša$_2$*
i 52′. *ina* BALA-*ia* [*dam-qi$_2$*]
i 53′. *ša* AN.ŠAR$_2$ *iš-ru-ka tar-ša$_2$-a sa-li-mu*
i 54′. *a-na šuk-lul* DINGIR-*ti-ša$_2$ ṣir-ti*
i 55′. *šur-ru-ḫu mi-se-e-ša$_2$ šu-qu-ru-ti*
i 56′. [*ina*] ^{r}MAŠ$_2$.GI$_6$ *ši-pir*$^{\neg}$ [*maḫ-ḫe-*]*e iš-ta-nap-pa-ra ka-a-a-na*
i 57′. [^{d}UTU *u$_3$* ^{d}IŠKUR *aš$_2$-al-ma e-*]*pu-lu-in-ni an-nu ke-e-nu*

Emašmaš and Egašankalama I decorated with silver and gold and filled with opulence; Šarrat-kidmuri, who in the anger of her heart had left her cella and been to live in a place unsuitable to her, in the happy reign that Ashur gave me, recovered prosperity; for the perfect provision of her supreme divinity and the splendour of her precious cult, in dream, the work of the ecstatics, she constantly instructed me. I asked Šamaš and Adad and they answered me with a firm "yes".

RINAP 5, 9, vi 26 – vi 41

vi 26. E$_2$ *ri-du-ti šu-a-tu$_2$ ina* ḪUL$_2$.MEŠ ri-š*a$_2$-a-ti la-ba-riš il-lik*
vi 27. *e-na-ḫa* E$_2$.GAR$_8$.MEŠ-*šu a-na-ku* ^{m}*aš-šur-*DU$_3$.A LUGAL GAL-*u*
vi 28. LUGAL *dan-nu* LUGAL ŠU$_2$ LUGAL KUR AN.ŠAR$_2$.KI LUGAL *kib-rat* LIMMU$_2$-*tim*
vi 29. *aš$_2$-šu$_2$ qe$_2$-reb* E$_2$ *ri-du-ti šu-a-tu$_2$ ar-ba-a*
vi 30. ^{d}ALAD.MEŠ-*šu$_2$* ^{d}LAMMA.MEŠ-*šu$_2$ iṣ-ṣu-ru* DUMU LUGAL-*u$_2$-ti*
vi 31. *u$_3$* ^{d}GAŠAN-GARZA *ṣu-lul-ša$_2$* DUG$_3$.GA AN.DUL$_3$-*ša ša$_2$ ša-la-me*
vi 32. *ta-at-ru-ṣa* UGU-*ia*
vi 33. *ul-tu ina* GIŠ.GU.ZA AD DU$_3$-*ia u$_2$-ši-bu e-te-ne$_2$-ep-pu-šu$_2$ be-lut* KUR.KUR
vi 34. *u$_3$* UN.MEŠ DAGAL.MEŠ *ka-a-a-an pu-us-su-rat ḫa-de-e*
vi 35. *ša ka-šad* LU$_2$.KUR.MEŠ-*ia u$_2$-pa-sa-ru-in-ni ina* ŠA$_3$-*bi-šu$_2$*
vi 36. *ina ma-a-a-al mu-ši du-um-mu-qa* MAŠ$_2$.GI$_6$.MEŠ-*u-a*
vi 37. *ina ša še-e-ri ba-nu-u$_2$ e-gir-ru-u-a*
vi 38. *maš-ta-ku šu-a-tu mu-šal-li-mu* EN-*šu$_2$ šu-tu-u-ma*
vi 39. DINGIR.MEŠ GAL.MEŠ *ši-mat-su i-ši-mu a-na* MUNUS.SIG$_5$
vi 40. *an-ḫu-us-su ad-ke*
vi 41. *aš$_2$-šu$_2$ ru-up-pu-uš tal-lak-ti-šu$_2$ a-na si-ḫir-ti-šu$_2$ aq-qur*
vi 42. 50-*am$_3$ ti-ib-ke maš-kan$_2$ ši-kit-ti-šu$_2$*
vi 43. *pi-tiq-tu ap-tiq tam-la-a uš-mal*
vi 44. *ina* ITI DUG$_3$.GA UD ŠE.GA EDIN *tam-le-e šu-a-tu$_2$*
vi 45. UŠ$_8$-*šu$_2$ ad-di u$_2$-kin lib-na-as-su*

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vi 46. *ina* KAŠ.SAG *u* GEŠTIN *ka-lak-ka-šu*$_2$ *ab-lul*
[*am*]-*ḫa-ṣa šal-la-ar-šu*$_2$

This *bīt redûti* in rejoicings and celebrations had become old. Its walls were dilapidated. I Aššur-bāni-apli, great king, powerful king, king of the four quarters (of the world), because I grew up in that same *bīt redûti*, (because) its *šēdu*'s and *lamassu*'s protected crownprinceship and Bēlet-parṣē extended her favourable protective shadow and her aegis of peace over me, (because), since the time when I sat on the throne of the father who begot me, I exert the lordship of the lands and the vast people, and they always bring me joyous news of the defeat of my enemies therein, (because) on my bed for the night happy are my dreams (and), at dawn, beautiful my oracles, (because) this chamber keeps its lord in good health and the great gods decreed its fate as good fortune — I cleared its ruins. For the widening of its surface I tore it down in its entirety. I formed a mud brick wall of fifty layers on the location of its (previous) structure. Before the sanctuaries of the great gods, my lords, I was afraid and so I did not make the shape of that terrace very high. On a favourable month, on an auspicious day, on that terrace, I laid its foundation and made fast its brickwork. Prime beer and wine I mixed into its *kalakku*-clay, I sprinkled on its *šallaru*-mortar.

RIMB, B.6.32.2001, 10–31 (Sumerian)

10. e$_2$-temen-ni$_2$-gur$_3$-ru
11. niĝ$_2$ u$_4$ ul-li$_2$-a-ta[16]
12. eĝar diri-ga-bi[17]
13. te-me-en-bi a-ri-a
14. uš$_8$-bi bi$_2$-in-šu$_2$-šu$_2$
15. ka$_2$-bi ḫa-lam-me-e-ne
16. ki-bi bi$_2$-in-kin-kin[18]
17. ša$_3$-dub te-me-en-bi
18. u-me-ni-du$_3$
19. saĝ-bi ba-ni-in-il$_3$
20. ^{ĝeš}ig ^{geš}taškarin ĝeš saĝ
21. kur-bi-ta su$_3$-ud-da
22. gag urudu bi$_2$-in-du$_3$-a
23. keš$_2$-da-bi kala-ga
24. uš ku$_3$-si$_{22}$-a-ke$_4$[19]
25. si-gar ku$_3$-babbar zalag$_2$-zalag$_2$
26. aškud nu-kuš$_2$-u$_3$
27. urudu kala-ga
28. ku$_3$-babbar u-me-ni-dab-dab
29. ka$_2$ e$_2$-saĝ aš
30. e$_2$ ḫal-la-ta du$_3$-a
31. da-ri$_2$-še$_3$ gub-bu-de$_3$

Etemennigurru, of which from times most ancient, the collapsed wall, the foundation (plan) — a desert place — (and) the foundation (stones) had been covered up– I searched for the location of its forgotten gates. I placed its foundation documents in a box[20], its top was raised. So that the gates of E.saĝ.dil, built from the house of secret, should stand forever, I laid silver on the door of boxwood, a precious wood from a distant mountain, which had been fixed with copper pegs, whose bindings were strong, whose base was of gold, whose clamps were of shining silver, (and) whose bolt and pivot were of strong copper and silver.

RIMB, B.6.32.2016, iv 29–38

iv 29. GABA.RI SIG$_4$.AL.UR$_3$.RA
iv 30. *nap-pal-ti* URI$_2$.KI
iv 31. *ep-šet amar-*^{d}EN.ZU LUGAL *u*$_2$-ri
iv 32. *ina ši-te-ʾ-u*$_2$ *u*$_2$*-ṣu-ra-a-ti*
iv 33. *e*$_2$*-giš-nu*$_{11}$*-gal* ^{md}EN.ZU-TIN-*su-*^{r}*iq-bi*^{1}
iv 34. GIR$_3$.NITA$_2$ ^{r}URI$_5$^{1}.KI *iš-te-*^{r}*eʾ-u*$_2$^{1}
iv 35. ^{md}AG.MU-SUM.NA DUMU MU-^{d}*pap-sukkal*
iv 36. LU$_2$.GALA ^{d}EN.ZU
iv 37. *a-na ta-mar-ti*
iv 38. *i-mur-ma iš-ṭur*

Copy from a baked brick from the debris of Ur, the work of Amar Suen, king of Ur, (which) Sin-balassu-iqbi, viceroy of Ur, had discovered while looking for the ground plan of Ekishnugal. Nabu-šuma-iddin son of Iddin-Papsukkal, the lamentation priest of the god Sin, saw it and wrote it down for display.

16 niĝ$_2$ to be understood as Akkadian relative pronoun *ša.*
17 See Frame notes to RIMB, B.6.32.2001 for diri-ga = "had collapsed".
18 In the context of Assyrian royal inscriptions, what in Sumerian would be a third person singular form is most likely to be understood as a first person singular form.
19 The "*ke*$_4$" is difficult to explain here.
20 For the meaning "tablet box" see Orel/Stolbova 1995: fn. 2161.

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B. State Archives (by SAA number)

SAA 1, 25, o. 1 – o. 7. Reign of Šarru-ukīn

o. 1. [*a*]-˹*bat*˺ LUGAL]
o. 2. [*a*]-˹*na*˺1 ME u_2-[*ra-sí*]
o. 3. *an-nu-rig* ˹*dul*˺-[*la-ku-nu*]
o. 4. *ina* URU.BAD_3-ˡMAN-˹GIN˺
o. 5. *tug-dam-me-ra* [...]
o. 6. NA4.ᵈALAD.LAMA.[MEŠ]
o. 7. *ina* UGU-*ḫi-ku-nu* [...]

The word of [the king] to 100 corvée workers: "Now that you have completed your work at Dūr-Šarrukin the bull colossi are upon you [...]."

SAA 1, 58 o. 4 – o. 13. From Ṭab-šar-Aššur to Šarru-ukīn

o. 4. [TA E_2.GAL] *i-sa-par-u-ni*
o. 5. *ina* UGU-*ḫi-ia ma-a* 1 ME 50
o. 6. *e-bir-tu*$_2$ *ša* NA_4.AD.BAR
o. 7. *lib-tu-qu li-in-tu-ḫu-ni*
o. 8. *a-na* URU.NINA *lu-bi-lu-ni*
o. 9. *an-nu-rig ab-ta-taq*
o. 10. ˹*at*˺-*ta-at-ḫa a-na* URU.NINA
o. 11. [*al-la*]-˹*ka*˺ *šum*$_2$*-mu a-na*
o. 12. [E_2-*ra*]-˹*ma*˺-*ki ša* DINGIR *šu*$_2$*-u*
o. 13. [... *la*]-˹*an*˺-*tu-ḫu* [...]

They wrote to me [from the palace]: "Let them cut out 150 basalt slabs, pick (them) up, and carry (them) to Nīnawā." Now, I have cut (them) out, picked (them) up and I am going to Nīnawā. [Let the king send order] whether I should pick (them) up for the bathroom of the god itself [or...]

SAA 1, 66 o. 4 – o. 19'. From Ṭab-šar-Aššur to Šarru-ukīn

o. 4. *ša* LUGAL *be-li*$_2$ *iš*-[*pur-an*]-*ni*
o. 5. *ma-a gul-la-a-te* ˹*ša* KA_2˺
o. 6. *ša šap-la tim-me*
o. 7. *ša* E_2 *ḫi-il-la-na-te*
o. 8. *ma-a im-ma-te u*$_2$*-ša*$_2$*-ra-qu*
o. 9. *a-na* ᵐ*aš-šur*-MU-*ki-in*
o. 10. *a-na* LU_2*.um-ma-ni a-sa-a-*ʾ*al*
o. 11. *ma-a ina* ITI.APIN 4 *gul-la-te* URUDU
o. 12. *ša* 2 E_2 *ḫi-il-la-na-ni*
o. 13. *nu-ša-ra-qa ma-a* UR.MAḪ.MEŠ
o. 14. QAL_3.MEŠ-*te ša* E_2 *ḫi-il-la-ni*
o. 15. *ma-a* TA UR.MAḪ.MEŠ KALAG.MEŠ
b.e. 16. *ina* IGI MU.AN.˹NA˺
b.e. 17. *u-ša*$_2$*-ra-qu-*˹*ma*˺
b.e. 18. *ina* UGU *dul-li ša* GIŠ.˹IG˺.[MEŠ]
r. 1. *ša* E_2.DINGIR *a-na* DUMU ᵐEN?-[...]
r. 2. *a-sa-*ʾ*a-al nu-uk*
r. 3. *du*$_6$*-la-ka im-ma-te*
r. 4. *tu-ga-mar ki-i an-ni-i*
r. 5. *iq-ṭi-bi-a ma-a* GIŠ.IG.MEŠ
r. 6. *ša* E_2 ᵈ30 *ša* E_2 ᵈUTU
r. 7. *ša* E_2 ᵈNIN.GAL
r. 8. *ša le-*ʾ*a-a-ni ša* KUG.UD.MEŠ
r. 9. *ina* UGU-*ḫi e-lu-u-ni ra-aṣ-pa*
r. 10. GIŠ.*sa-ra-me-e la ga-mu-ru*
r. 11. *ma-a* UD.1.KAM ša ITI.DU_6 *a-ga-mar*
r. 12. *ina* UGU GIŠ.IG.MEŠ *ša* ZU.MEŠ
r. 13. *ša* URUDU.MEŠ *ina* UGU-*ḫi e-lu-ni*
r. 14. ˹*iq*˺-*ṭi-bi-a ma-a ša* 4
r. 15. [...] KA_2.MEŠ-*ni gam-mu-ru*

As to what the king my lord wr[ote]: "When are they going to cast the gate bases which are below the columns (i.e. column bases) of the *bīt ḫilāni* palaces?" I asked Aššur-šumi-ke'in and the artesans (who replied): "In the month of *Araḫsamnu* (VIII) we are going to cast the four copper column bases of the two *bīt ḫilāni* palaces. The small lions of the *bīt ḫilāni* together with the big lions I shall cast at the start of the year." Regarding the work on the doors of the temple- I asked the son of Bel-[...]: "When will you finish your work?" He said to me as follows: "The doors of the temple of Sin, Šamaš, Nikkal, on top of which are to be mounted sheets of silver are built (but) the (wooden) *saramū* are not finished, on the first of *Tašrītu* (VII) I shall finish (them)." About the doors to be mounted with sheets of copper he said to me: "Out of four, [...] doorways are finished."

SAA 5, 15, r. 5 – r. 12. From Našir-Bel to Šarru-ukīn

r. 5. URU.ḪAL.ṢU *ina* $ŠA_3$-*bi*
r. 6. ˹ak˺-*ta-ra-ar*
r. 7. [...] ˹*ina*˺ 1 $KUŠ_3$: *ki-pu-tu*$_2$
r. 8. ˹*ša*˺ URU :. E_2.GAL LUGAL
r. 9. *ar*$_2$*-te-ṣip* ALAM LUGAL
r. 10. *ina* $ŠA_3$-*bi e-te-ṣir*
r. 11. 2 ME I.DIB LU_2.ARAD.LUGAL
r. 12. *ina* $ŠA_3$-*bi u*$_2$ˡ-*se-ši-ib*

I established a fort there. The circumference of the city is [...] cubits. I constructed the palace of the king. The image of the king I depicted inside. I placed inside two hundred slabs and a servant of the king.

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SAA 5, 294, o. 1′ – r. 3. Unassigned. Reign of Šarru-ukīn

…

o. 1′. ⌜*ṭup*⌝*pu pi*-[*qid*?] LU_2.⌜u_2⌝-[*ra-si*?]
o. 2′. [*ša*] ⌜A_2⌝-$šu_2$-*nu ina* UGU *dul-li iš*-⌜*kun*⌝-[*u-ni*]
o. 3′. [*a*]-⌜*na*⌝ 2-*i* UD-*me i-da-ab-bu-bu*
o. 4′. [*ma*]-*a dul-lu an-ni-u ina* IGI ^{d}EN
o. 5′. ⌜*ma*⌝-*ḫi-ir a-dan-niš ma-a* UD.MEŠ *ša* LUGAL
o. 6′. ⌜*i*⌝-*ri-ku ḫa-di-u a-dan-niš*
o. 7′. *nu-uk* qi_2-*ba-a-ni mi-nu šu-u*
o. 8′. *la im-ma-gu-ru la i-qab-bu-u-ni*

(…)

o. 18′. LU_2.SIMUG.KUG.GI *ma-a* KUG.GI
o. 19′. *lu-rad-du-un-na-ši*
r. 1. 3 GU_2.UN AN.BAR *zag-ru ša a-dan-niš*
r. 2. *am-mar a-na* LUGAL EN-ia_2 $aš_2$-*pu-ra-an-ni*
r. 3. ar_2-*ḫiš* LUGAL *be-li*$_2$ *lu-še-bi-la*
r. 4. ŠE.PAD-MEŠ *a-na* LU_2.UM.ME.A LUGAL
r. 5. *liš-pu-ra lid-di-nu ri-ik-su*
r. 6. *ša* LUGAL *be-li*$_2$ TA E_2.DINGIR.MEŠ
r. 7. *ir-ku-su-u-ni e-ṣa-šu*$_2$*-nu*

… Consult(?) the tablet! The corvée workers who put themselves to work on the second day were saying: "This work is very appropriate for Bel! The days of the king will be long!" They were very joyful so I asked: "Tell me what it is." But they did not agree to tell me. (…) The goldsmiths say: "Let them supply us more gold". The king my lord should quickly send the three talents of steel/iron (?) about which I wrote to the king, my lord. The king should send grains to the artisan and have them delivered. The contract that the king, my lord, made with the temples is too small for them.

SAA 10, 14, o. 1 – r. 10. Sargonid (Aššur-aḫu-iddina? Aššur-bāni-apli?)

o. 1. *a-na* LUGAL EN-*ia*
o. 2. ARAD-*ka* ^{I}15-MU-KAM
o. 3. *lu* DI-*mu a-na* LUGAL
o. 4. EN-*ia*
o. 5. ^{d}PA *u* ^{d}AMAR.UTU
o. 6. *a-na* LUGAL EN-*ia*
o. 7. *lik-ru-bu*
o. 8. *ina* UGU *at-me-ni*
o. 9. *ša* ^{d}PA.TUG_2
o. 10. *ša* LUGAL *be-li*
o. 11. *iš-pur-an-ni*
o. 12. *ma-a* UD DUG_3.GA *a-mur*
o. 13. u_3 *a-ke-e*
o. 14. *ša* u_2-$ša_2$-*at-bu-u-ni*
o. 15. *šu-ṭur še-bi-la*
r. 1. ITI.SIG_4 DUG_3.GA
r. 2. UD.17.KAM_2 DUG_3.GA
r. 3. *an-nu-rig*
r. 4. ITI *ga-mur it-ta-lak*
r. 5. *im-ma-ti* u_2-$ša_2$-*an-ṣu-u*
r. 6. *e-pu-šu*$_2$
r. 7. ITI.KIN DUG_3.GA
r. 8. ITI-$šu_2$-*ma šu-u*
r. 9. *ina* $ŠA_3$-*bi* ⌜*le*⌝-*e-pu-šu*$_2$
r. 10. *ina* $ŠA_3$-*bi-ma lu-u*$_2$-*šat-bi-u*

To the king my lord your servant Issar-šumu-ereš. Good health to the king my lord. May Nabu and Marduk bless the king my lord. Regarding the chamber of Nusku, about which the king my lord wrote to me: "Look up a good day and also write down and send me how it should be erected!" The month *Simānu* (III) is good, the 17th day is good. Now the month has come to an end, so when can they start building? The month *Ulūlu* (VI) is good. This is really the month for it. In its course they should build, in its course they should erect (the building).

SAA 10, 349, r. 11 – r.e. 29. From Mar-Issar to Aššur-aḫu-iddina(?)

r. 11. (…) u_3 E_2 DINGIR.MEŠ
r. 12. *ša* BAD_3.DINGIR.KI TA *be*$_2$*-et uš-še-e-šu*$_2$
r. 13. *kar-ru-u-ni a-du-na-kan-ni* LU_2.$ŠA_3$.TAM
r. 14. u_3 LU_2.EN-*pi-qit*-ta-a-te ša* BAD_3-DINGIR.KI
r. 15. *ina* UGU *a-ḫi-iš* u_2-*bu-ku me-me-e-ni*
r. 16. *ina* UGU-*ḫi la iq-ri-ib* MU.AN.NA *an-ni-tu*$_2$
r. 17. u_2-*sa-ar-ri-i-u i-ra-aṣ-ṣi-pu*
r. 18. UD-*mu ep-pu-šu* UD-*mu* u_2-*ra-am-mu-u*
r. 19. *a-se-me ma-a* DUMU-LUGAL *ša* KUR.NIM.MA.KI
r. 20. *in-ta-ra-aṣ* LU_2.u_2-*ra-si*
r. 21. *a-na* $ŠA_3$-*bi is-sap-ra* BAD_3.DINGIR.KI
r. 22. *ina* UGU *ta-ḫu-mu ša* KUR *ša*$_2$*-ni-ti šu-u*$_2$
r. 23. *šum*$_2$*-ma* ⌜*pa-an*⌝ MAN EN-ia_2 *ma-ḫir* LU_2.*qur-bu-tu*$_2$
r. 24. u_3 LU_2.*e-tin-nu aš-šur*.KI-*a-a lil-lik-u-ni*
r. 25. *ina* $ŠA_3$-*bi le-*⌜*e-ku-lu dul-lu*⌝ *ša* ⌜E_2-DINGIR.MEŠ⌝
r. 26. [*le*]-*e-pu-*⌜*šu*⌝ [*šu-mu ša* MAN EN-ia_2]
r.e. 27. *a-na da-ra-*[*a-ti liš-ku-nu*]
r.e. 28. *a-na ma-ṣar-ti ša* [E_2.DINGIR.MEŠ]
r.e. 29. LUGAL *be-li*$_2$ *lu-*[*u la i-ši-ia-aṭ*]

(…) And the temple of ad-Dair: since its foundations were laid until now, the prelate and the officials of ad-Dair have been pushing it onto each other and nobody has set about it. This year they have started to build, (but) one day they do the work the next day they leave it. I heard that the crown prince of

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Elam has become troublesome and has sent corvée workers there. ad-Dair is situated on the border of another country. If it is acceptable to the king my lord, may a bodyguard and an Assyrian master builder go and live there. May they perform the work of the temples and [establish the name of the king my lord] forever. The king my lord should [not neglect] the guard of [the temples].

SAA 11, 15, o. i 1 – r.e. 7. Sargonid

o. i 1. […]
o. i 2. ⌜*sa*⌝-*a-a-te*
o. i 3. [*la*?] *na-as-ḫu*
o. i 4. […] *šal-ḫi-u*
o. i 5. […] ⌜URU⌝ *ša*$_2$-*ḫu-pa*

---

o. i 6. […] 01 *i-si-ta-te*
o. i 7. GIŠ.UR$_3$.MEŠ *ṣab-bu-tu*$_2$
o. i 8. ⌜*sa*⌝-*a-a-te na-as-ḫa*
o. i 9. […] ⌜20? 34?⌝ 29

[…]

o. ii 1. 08 *i-si-ta-te*
o. ii 2. 32 29 27
o. ii 3. 25 15 12 *tik-pi*
o. ii 4. 07 06 05 04 *šal-ḫi-u*
o. ii 5. 01-*me*-05 BAD$_3$ URU.*arrap-ḫa*

---

o. ii 6. ⌜03⌝*i-si-ta-te*
o. ii 7. 59 32 *tik-pi*
o. ii 8. ⌜URU⌝.*kal-ḫa*

---

o. ii 9. […] *i-si-ta-te* 22
o. ii 10. […] 19 18 15
o. ii 11. […]-⌜*me*⌝-05 01-*me*-03 BAD$_3$
o. ii 12. ⌜KUR⌝.*qu-u-e*

---

o. ii 13. […] *tik-pi i-si-tu*$_2$
o. ii 14. […] ? *šal-ḫi-u*
o. ii 15. […]-*me*-05 BAD$_3$
o. ii 16. URU.*bir-tu*$_2$

---

o. ii 17. […] 16 *tik-pi i-si-tu*$_2$

[…]

o. iii 1. 95 90 ⌜86?⌝
o. iii 2. 87 76 70
o. iii 3. 69 68 65
o. iii 4. LU$_2$.NIGIR$_2$-E$_2$.GAL

---

o. iii 5. 89 8 80
o. iii 6. 79 54 52
o. iii 7. LU$_2$.GAL – KAŠ.LUL

---

o. iii 8. 78 77 BAD$_3$
o. iii 9. URU.*ar-pad-da*

---

o. iii 10. 95 BAD$_3$
o. iii 11. ⌜23⌝ SIG$_4$ DAGAL *tam-li-u*
o. iii 12. KUR.E$_2$-*za-*⌜*ma-ni*⌝
o. iii 13. 01-me-28 ⌜SIG$_4$⌝ [DAGAL]
o. iii 14. *tam-li-u* ⌜LU$_2$⌝. […]

---

o. iii 15. 01-*me* SIG$_4$ DAGAL […]
o. iii 16. ⌜URU.⌝*ḫa-*⌜*ta*?⌝-[*rik-ka*]
o. iii 17. […] ⌜*šal*?⌝ [-*ḫi*?-*u*?]
o. iii 18. […] *ki* […]

---

o. iii 19. […]

[…]

r. i 1′. […]
r. i 2′. […]
r. i 3′. [KUR].*bar-ḫal-*⌜*zi*⌝

---

r. i 4′. […] *i-si-ta-te ga-mur*
r. i 5′. […] 13 (ditto) GIŠ.UR$_3$.MEŠ
r. i 6′. *ṣa-bu-tu*$_2$
r. i 7′. *sa-a-a-te la na-as-ḫa*
r. i 8′. KUR.*ra-ṣa-pa*

---

r. i 9′. 03 *i-si-ta-te*
r. i 10′. [GI Š].UR.MEŠ
r. i 11′. [*ṣab-bu*]-⌜*tu*$_2$⌝

[…]

r. ii 1′. […]
r. ii 2′. […]
r. ii 3′. […] 01-*me*-03 […]
r. ii 4′. 01 ^{m}*aš-šur-u*-[LAL?-*in*?]
r. ii 5′. GIŠ.UR$_3$.⌜MEŠ *ṣab*⌝-[*bu-tu*$_2$]
r. ii 6′. *sa-a-a-tu*$_2$ ⌜*na*⌝-[*as-ḫa*]
r.e. 7′. LU$_2$. ⌜IGI?⌝.[DUB]

The scaffolds [not?] removed — (Governor of) Šahupa.

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[x+]1 towers
roof beams fixed
scaffolds removed
20? 30? 29

[…]

8 towers
32 29 27
25 15 12 brick courss
07 06 05 04 the outer wall
105 the inner wall — (Governor of) Arrapḫa
_____

3 towers
59 32 brick courses
— (Governor of) Kalḫu
_____

[x] towers
22 19 18 15
105 103 the inner wall
— (Governor of) Que
_____

[x] brick courses tower
[x + ?] 9? the outer wall
105 the inner wall
— (Governor of) Birtu
_____

[x +?] 16 brick courses, one tower

[…]

95 90 ˹86?˺
87 76 70
69 68 65
—The Palace Herald
_____

89 81 80
79 54 52
—The Chief Cupbearer
_____

78 77 the inner wall
— (The Governor of) Arpadda
_____

95 the inner wall
23 large bricks, the terrace
— […]
_____

100 large bricks
— (The Governor of) Ḫatarikka
[…] ˹the outer wall?˺

[…]

_____

[…]

— (The Governor of) Barhalzi
_____

[x] completed towers
[x +] 13 ditto
roof beams fixed
scaffolds not removed
— (The Governor of) Raṣapa
_____

3 towers
[x?] beams fixed

[…]

103 [….]
1 — Aššur-belu-[taqqin]
roof beams fixed
scaffolds removed
—The Treasurer

SAA 13, 161 o. 12′ – r. 11. From Urdu-aḫḫēšu to Aššur-aḫu-iddina?Aššur-bāni-apli?

o. 12′. (…) u_3 [UD].˹MEŠ˺ *ša dul-li*
o. 13′. [*ša*$_2$ URU$_4$] *ša ziq-qur-rat ṭe*$_3$*-e-*[*mu*]
o. 14′. [*ni*]*-šak-kan re-e-šu*$_2$ *i-na-aš*$_2$*-ši-u*$_2$
o. 15′. ˹ITI˺.ZIZ$_2$ ITI DUG$_3$.GA *šu-u*$_2$ LUGAL *be-li*$_2$
o. 16′. [*i*]*-šap-par i-kar-ru-ru*
o. 17′. ^{m}*di-di-i* LU$_2$.*še*$_2$*-lap-pa-a-a*
o. 18′. *ša ina* UGU *dul-lu ša*$_2$ *e*$_2$*-sag-il*$_2$
o. 19′. *pa-qid-du-u-ni an-na-ka šu-u*$_2$
o. 20′. *aq-ṭi-ba-aš*$_2$*-šu mu-uk al-ka is-si-ia*
o. 21′. *ina* UGU *ka-ra-ri ša* URU$_4$
o. 22′. *ma-a la-aš*$_2$*-šu*$_2$ *ša la pi-i ša*$_2$ LUGAL
o. 23′. *la al-lak*
r. 1. *ma-a ina* UGU *ur-su-te ša e*$_2$*-sag-il*$_2$
r. 2. *ša al-lik-an-ni ma-a e-gir*$_2$*-tu*
r. 3. *ina* ŠA$_3$*-bi* E$_2$.GAL *at-ti-din*
r. 4. *ma-a u*$_2$*-di-na ṭe*$_3$*-e-mu la i-šak-kan-u*$_2$*-ni*
r. 5. *ṭe*$_3$*-e-mu liš-ku-nu-šu*$_2$ *is-si-ia lil-lik*
r. 6. *ša la ša*$_2$*-a-šu*$_2$ *la mu-qa-an-ni*
r. 7. URU$_4$ *la ni-kar-ra-ar ina* UGU ŠEM.ḪI.A
r. 8. I$_3$.DUG$_3$.GA IM.SIG$_7$ u_3 NA$_4$.MEŠ
r. 9. [*ša ina*] ˹ŠA$_3$˺ URU$_4$ *ni-kar-ra-ru-u-ni*
r. 10. [LUGAL *be*]-˹*li*$_2$˺ *ṭe*$_3$*-e-mu liš-kun*
r. 11. [*lid*]*-di-nu-na-a-ši*

Furthermore, it is [time] for the work [on the foundation] of the ziqurrat. We will issue the order and they shall make a start. *Šabāṭu* (XI) is a favourable

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month. The king my lord will send word and they will lay (the foundation). Dīdî the architect who is appointed to the work on Esagil is here. I said to him: "Come with me in order to lay the foundation." (But) he said: "No Without the king's order I shall not go. I delivered a document to the palace concerning the magazine of Esagil about which I came (but) they have not issued an order for me yet." They must issue an order for him so that he come with me. Without him we are not be able to lay the foundation.

Regarding the aromatic plants, sweet oil, red earth paste and stones [which] we must lay [in] the foundation- [the king] my lord should issue and order so that they give them to us.

SAA 13, 166, o. 1 – o. 5 + o. 18 – o. 20. Not assigned. Sargonid (Aššur-aḫu-iddina? Aššur-bāni-apli?)

o. 1. *ina* UGU GIŠ.IG.MEŠ *ša* e_2-*sag-gil*$_2$
o. 2. *a-na uḫ-ḫu-zi*
o. 3. *ina* UGU GIŠ.UR_3.MEŠ *ša* GIŠ.EREN
o. 4. *a-na* KA_2.DINGIR.RA.KI *sip-par*.KI GU_2.DU_8.A.KI
o. 5. *a-na ṣal-lu-li* ⌜*ša*⌝ E_2.KUR.MEŠ

(…)

o. 18. *ina* UGU LU_2.*u-ra-si* $ša_2$ GU_2.DU_8.A.KI
o. 19. $ša_2$ LUGAL *iq*$^{!}$-*bu-u-ni*
o. 20. *a-na-ku a-šap-par e-pu-šu*

(…)

—Concerning the doors of Esagil to be mounted with precious metals.

—Concerning the cedar beams for Babylon, Sippar and Kutha to be used in roofing the temples.

(…)

—Concerning the corvée workers of Kutha about whom the king said "I shall send word, they will do it."

(…)

SAA 15, 4 o. 17 – r. 6. From Issar-duri to Šarru-ukīn

o. 17. ^{md}UDU.EN.PAB
o. 18. TA URU.*de-ri i-sap-ra*
o. 19. *ma-a muš-ša*$_2$*-ra-ni-i*
o. 20. *la-aš*$_2$*-šu*$_2$ *ina* $ŠA_3$ E_2.SIG_4.MEŠ
b.e. 21. *ša* E_2.DINGIR *la niš-kun*
r. 1. u_2-*ma-a a-na* LUGAL *be-li*$_2$-*ia*$_2$
r. 2. *a-sap-ra* 1-*en muš-ša*$_2$*-ru-u*
r. 3. *liš-ṭu-ru lu-še-bil*$_2$*-u-ni*
r. 4. *ina pi-it-ti re-ḫu-ti*
r. 5. *liš-ṭu-ru ina* $ŠA_3$-*bi* E_2.SIG_4.MEŠ
r. 6. *ša* E_2.DINGIR *liš-ku-nu*

Šamaš-belu-uṣur wrote to me from Der: "There are no inscriptions in the walls of the temple. Should we not place any?" I am now writing to the king my lord: let them write one inscription and bring (it) to me. They should write the remaining accordingly and place (them) in the walls of the temple.

SAA 15, 41, o. 3 – o. 14′. From Nabû-bēlu-ka''in to Šarru-ukīn

o. 3′. (…) *ina* ⌜UGU⌝ […]
o. 4′. ⌜*ša*⌝ LUGAL EN *iš-pur*-[*an-ni*]
o. 5′. ⌜*ma*⌝-*a* E_2.MEŠ *ša e*-[*pu-šu-ni*]
o. 6′. ⌜*ki*⌝-*i* ⌜*ša*⌝ *ina* URU.*ba*-⌜*qar*⌝-[*ri ku-pi-ru*]
o. 7′. [*ina*] UGU-*ḫi-šuḫ*$_2$*-ni li-ik-pa*-⌜*ru*⌝-*ni*
o. 8′. LUGAL EN u_2-*da ki-i ku*-⌜*pu*⌝-[*u*]
o. 9′. *qar-ḫa-a-te an-na*-[*ka*]
o. 10′. *i-da-*ʾ*i-nu-ni la-aš*$_2$-[*šu*]
o. 11′. *e-bir-tu*$_2$ *la ta-ri*-[*ḫa-at*[21]]
o. 12′. *ta-ša*$_2$*-ḫu-ḫu* E_2.⌜MEŠ⌝
o. 13′. ⌜*ša*⌝ SIG_4.MEŠ *ina* UGU-*ḫi-šu*$_2$
o. 14′. [*ni*]-*ir-te-ṣi-bi* (…)

(…) Regarding […] about which the king the lord wrote to me: "The houses which they are building they should coat with bitumen like those in Baqaru." The king, lord, knows that the snow and ice here is severe. There is no kiln-fired bricks, it ran out. The houses which we have built out of mud bricks have disintegrated.

SAA 16, 111 o. 7 – r. 6. From Bel-iqiša to Aššur-aḫu-iddina

o. 7. *ina* UGU-*ḫi* E_2 MUNUS.E_2.GAL
o. 8. *ša ina* URU.*kal*$_3$.*zi*
o. 9. *ša* LUGAL *be*$_2$-*li*$_2$ *ip-qi-da-ni-ni*
o. 10. E_2 *up-ta-ṭi-ir*
o. 11. E_2 *uš-še pa-te*
o. 12. *uš-še a-na ka-ra-ri*
r. 1. SIG_4.MEŠ *kar-mat*
r. 2. *šum-ma* LUGAL *be-li*$_2$ *i-qab-bi*
r. 3. *a-na* LU_2.GAL-TIN.MEŠ
r. 4. *ṭe*$_3$*-e-mu liš-ku-nu*
r. 5. *lil-li-ka uš-še*
r. 6. *li-ik-ru-ra*

21 Here the feminine singular which agrees with *ebirtu* is preferred for the reconstruction.

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Regarding the palace of the queen which is in Kalzi (and) which the king, my lord, entrusted to me. I have demolished the building. The space for the foundations is open. The bricks are piled to lay the foundations. If the king, my lord, commands, they can issue an order for the master builder and he will come and lay the foundations.

SAA 16, 125, o. 5′ – r. 15. Unassigned, to Aššur-aḫu-iddina

o. 5′. *ša uš-še ka-ra-ri*
o. 6′. *pu-u-lu pa-ni-u ša₂ nu-pa-ṭi-ru-ni*
o. 7′. *ga-ṣa-a-nu šu-u*
o. 8′. *an-nu-rig* NA_4.*pu-u-lu ša₂-ni-u*
o. 9′. *qu-ru-ub šum-ma* MAN *i-qab-bi*
o. 10′. *šu-mu ša₂* MAN *ina* UGU-*ḫi liš-ṭu-ru*
o. 11′. *ni-ir-ṣi-ip* u_2*-la-a*
o. 12′. MAN *i-qab-bi ma-a la-bi-ru*
o. 13′. *ri-iṣ-pa mi-nu ša₂ ina* IGI LUGAL
o. 14′. *ma-ḫir-u-ni a-na* ARAD-$šu_2$
o. 15′. *liš-pu-ra*
r. 1. *ina* UGU GIŠ.MEŠ
r. 2. *ša₂ ina bir-te pu-u-li*
r. 3. *ni-ka-ba-su-u-ni*
r. 4. MAN *liq-bi* TA be_2*-et i-da-nu-ni*
r. 5. *a-na* LU_2.GAL—A.BA
r. 6. MAN $ṭe_3$*-e-mu liš-kun*
r. 7. *na-ru-u šu-mu ša₂* MAN *ina* $ŠA_3$ *liš-ṭur*
r. 8. u_3 *ša₂ ina si-ip-pa-ni ša₂* E_2
r. 9. *i-ša₂-kan-u-ni is-se-niš-ma*
r. 10. UD-*mu* DUG_3.GA *le-mur*
r. 11. […]-*su ša₂* MAN *ḫu-ṭa-ru nu-bil*
r. 12. [*ina* $ŠA_3$] *ni-ik-ru-ur*
r. 13. [… UD-x] […]-KAM_2 *le-pu-šu₂*
r. 14. […] ITI.GUD
r. 15. [.....] *tal-lak*

The previous limestone which we loosened to lay the foundations was to calcareous. Now there is another limestone block at hand. If the king commands, they will write the name of the king on it and we will build it in. Otherwise, the king may command: "Build in the old one!" May he (the king) write to his servant whatever seems to him appropriate.

Regarding the wood which we are to trample between the limestone (layers), may the king order from where it will be given. May the king issue an order for the chief scribe to write the name of the king on the stele and at the same time look up a favourable day for it to be set into the doorjambs. We will bring the […] of the king and a staff and lay them [there].

SAA 16, 143 o. 6 – r. 15′. From Nabû-rā'im-nišēšu to Aššur-bāni-apli

o. 6. NA_4.*pu-u-lu ina* $ŠA_3$ *uš-še ša* BAD_3
o. 7. *ša* URU.*tar-bi-ṣi ni-ik-ru-ru-u-ni*
o. 8. *šu-mu ša* LUGAL *be-li₂-ia ina* UGU-*ḫi ni-iš-ṭur*
o. 9. *ki-i ša ni-šaṭ-ṭa-ru-u-ni*
o. 10. LUGAL *be-li₂ liš-pu-ra*
o. 11. *i-na pi-it-te ni-iš-ṭur*
o. 12. u_3 *ša* LUGAL *be-li₂*
o. 13. *i-na* ŠU.2 ^{m}*za-bi-ni iš-pur-an-ni*
o. 14. *ma-a a-ta-a ti-ik-pi ša* NA_4.*pu-u-li*
o. 15. 1-*en id-da-at* $ša_2$*-ni-e*
o. 16. *la il-lak*
o. 17. *ma-a* ˹*ša*˺ *ra-*˹*mi*˺*-ni-ka šu-u*
r. 1′. ˹*ma*˺-[*a* …]
r. 2′. *ma-*[*a* …]
r. 3′. *ma-a* […]
r. 4′. *iš-kun-*$šu_2$*-nu ina* [$ŠA_3$ UD-*me*] ˹*ša*˺
r. 5′. DUMU.LUGAL *šu-*˹*tu*˺*-u-ni* ^{md}PA.MAN-*a-ni*
r. 6′. *ina* E_2 *ku-tal-li ina pa-an* LUGAL
r. 7′. *us-se-rib-*$šu_2$*-nu is-pi-lu-rat*
r. 8′. *is-sak-nu-šu-nu*
r. 9′. u_2*-ma-a* ^{m}DI-*mu*-KUR *it-ta-lak*
r. 10′. A_2^{II}-$šu_2$ *ina* UGU E_2 *is-sa-kan*
r. 11′. *a-na ša-aḫ-su-si šu-u*
r. 12′. *a-na* LUGAL *be-li₂-ia*
r. 13′. *as-sap-ra*
r. 14′. ˹LUGAL˺ *be-li₂ ki-i ša i-la-*u_2*-ni*
r. 15′. [*le*]-*pu-uš*

The limestone slab which we laid in the foundations of the fortification wall of Tarbiṣu – we must write the name of the king my lord on it. The king my lord should write me what we should write so that we may write it accordingly. Regarding what the king wrote to me via Zabinu: "Why do the layers of limestone blocks not go one against the other? It is your own (OR: Is it your own?) [...]. […Why has] he put [crosses] on them?" In the days when he (the king) was crown prince, Nabu-šarrani had them (the limestone blocks) brought to the *bīt kutalli* before the king (and) they put crosses on them. Today Šulmu-mati has gone and applied himself to work on the building. I am writing to the king my lord to remind him. The king my lord may do as he [cho]oses.

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11 INDEX OF AKKADIAN TERMS AND EXPRESSIONS

Common Sumerian logograms given in brackets

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