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Towards a New Perspective on Babylonian Medicine

The Continuum of Allegoresis and the Emergence of Secular Models in Mesopotamian Scientific Thought

Abstract: Traditional accounts of Babylonian medicine see the two disciplines involved in healing in ancient Mesopotamia, viz. \bar{a} sip \bar{u} tu "exorcism or incantation-and-ritual-driven healing" and as \hat{u} tu "medicine", as complementary disciplines, collaborating in the treatment of individual patients. Ritter's 1965 paper on the two disciplines, for example, sought to differentiate them, while at the same time arguing that they often collaborated in the treatment of individual patients. The new edition of AMC in this volume already overturns one of Ritter's primary working hypotheses, namely that Babylonian medicine (as \hat{u} tu) lacked the type of carefully organized, discipline-defining compendium known for asiputu, where u the Diagnostic Handbook clearly plays this role. Now that The Nineveh Medical Compendium — the medical corpus that AMC defines — can be seen as functionally equivalent, in certain ways, to The Diagnostic Handbook, this paper seeks to overturn two other common descriptions of Babylonian medicine that derive, however indirectly, from the idea that the medical corpus is amorphous or open-ended: (i) the belief that usutu and usutu were complementary and cooperative disciplines and (ii) the supposedly non-theoretical character of Babylonian medicine (usutu).

This paper argues that these two disciplines were, for the most part, in competition for the attention of the crown as well as for social standing more generally. Each of these two disciplines ($as\hat{u}tu$ and $\bar{a}\check{s}ip\bar{u}tu$) maintained its own disciplinary identity and compendia and, perhaps more importantly for Mesopotamian intellectual history, its own models of disease etiology and causation. These different models of etiology and causation in $as\hat{u}tu$ and $\bar{a}\check{s}ip\bar{u}tu$ only become apparent, however, when we adopt a properly "architectonic" approach to reconstructing the technical compendia that were used by each of these two disciplines. And, as a consequence, the position of any given line or fragment within a particular, discipline-specific compendium is one of its most important, even definitive, properties. This type of "architectonic approach" is unusually powerful, when we look at the diseases of the gastrointestinal tract, because there we find a decisive split. The etiologies of gastrointestinal disease within exorcism-driven healing ($\bar{a}\check{s}ip\bar{u}tu$) rely, almost exclusively, on postulating ghosts or demons as causal agents, while Babylonian medicine ($as\hat{u}tu$) turned to increasingly "secular" etiologies based on analogies between the unseen processes of the gastrointestinal tract and visible processes in the natural or social world. These distinctively secular etiologies in the medical corpus are registered, above all, in medical incantations that parody the established incantations of the competing discipline of $\bar{a}\check{s}ip\bar{u}tu$.

1 Introduction

One of the most important advances made possible by the new edition of the Assur Medical Catalogue (AMC), edited in this volume, is that we can now adopt an "architectonic" approach to the reconstruction of *The Nineveh Medical Compendium*. This compendium, which is represented by the first half of the materials catalogued in AMC and is described at length in Steinert's and Panayotov's contributions to the volume, consisted of twelve medical treatises, arranged anatomically from head (I CRANIUM) to foot (XII HAMSTRING), with each chapter (viz. tablet in Assyriological parlance) indicated by a trailing Arabic numeral (VIII STOMACH shows that the STOMACH treatise is the eighth treatise in *The Nineveh Medical Compendium*, but STOMACH 1 refers to its first chapter). Thanks to the scaffolding made available by *The Nineveh Medical Compendium* we can now systematically distinguish between "manuscripts" (the efforts of a scribe to represent a given textual object in antiquity) and "parallels" (textual passages that present a similar or completely identical segment of a text, but are situated in a different compendial context), only granting sigla to the manu-

¹ Thanks to M. Geller, N. Heeßel, U. Steinert, E. Schmidtchen and K. Simkó for extensive comments on a preliminary draft. Any remaining errors are entirely of my own doing.

scripts, but still listing all parallel passages, as can be seen in the following segment from the first chapter of STOMACH, the treatise dealing with gastrointestinal disease.²

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STOMACH 1, line 113 (A = BAM 574, B = STT 252)
[liš-šá]-ʿaʾ [......] ʿliʾ-pat-ta-a ÍD.ʿMEŠʾ
                                                                          (A ii 48)
[liš-šá-a gi]š MAR MEŠ / ša KÙ.BABBAR kid-di-me- e' šá KÙ.SIG, lip-pa-ta! [ÍD.MEŠ]
                                                                          (B 17c-18a)
   BAM 508 ii 5'-6a': 'liš'-šá-a gišMAR.MEŠ šá KÙ.BABBAR u ki-din-né-e šá KÙ.SIG<sub>17</sub> / li-pat-ta-a ÍD.MEŠ
   K. 5416a+ rev. iv 28′-29a′: [x] liš-šá-a gišMAR.MEŠ šá KÙ.BABBAR gi-dim-me-ti šá KÙ.SIG<sub>17</sub> / li-pat-ta-a ÍD.MEŠ
May they bear shovels of silver and spades of gold! May they open up the waterways! (var. May the waterways be
opened up!)
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This indelible line is from an incantation that imagines the shoveling out of an intestinal blockage by a group of Lilliputian ladies, a line that also finds its literary context in the so-called mannam lušpur "Whom shall I send?" incantations studied by Walter Farber (1990).³ In editions and studies that focus exclusively on the literary features of incantations like this, the position of this line (and its accompanying incantations) in a therapeutic subcorpus is not particularly relevant, yet it should be equally clear that for intellectual historians, particularly those interested in early technical disciplines such as medicine, the position of this line in a medical treatise dedicated to the treatment of gastrointestinal illness is of the utmost importance. Indeed, this single line occurs in two rather different technical compendia, and in doing so it also underscores two different approaches to the etiology of gastrointestinal illness in ancient Mesopotamia.

Five clay tablets preserve this line: (i) BAM 574 ii 48, (ii) STT 252, lines 17c-18a, (iii) BAM 508 ii 5', (iv) BAM 509 i 3'-4a' and (v) K. 5416a+ rev. iv 28'-29a', but only two of these five witnesses are designated here as "manuscripts", namely (i) and (ii), and consequently assigned to sigla A and B respectively, while (iii), (iv) and (v) are classified here as parallels, and, therefore, receive a quite different treatment in the apparatus. 4 Ms A is the well-known main manuscript of the first chapter of STOMACH, viz. BAM 574, partially edited already in Küchler's 1904 edition, while Ms B is a Sultantepe manuscript that duplicates a cluster of incantations found at the end of the second column and the beginning of the third in BAM 574. By contrast, the parallels in BAM 508, BAM 509 and K. 5416a+ each exhibit different compendial contexts and were presumably drawn up to serve rather different ends and ideologies. Of course, it should be immediately recognized that the only full manuscript is Ms A (BAM 574), whereas Ms B represents a decontextualized fascicle or major section of the standardized tablet BAM 574. If this is so, why distinguish between a decontextualized cluster of incantations in Ms B and the somewhat different decontextualization of similar materials in BAM 508, BAM 509 or K. 5416a+? Why treat these three partial witnesses differently, elevating STT 252 to the status of a "manuscript", while demoting BAM 508, for example, to a "parallel"? The simple answer is that, in doing so, we postulate at least two distinct occurrences of this line and its incantation in the architectonic structure of the Babylonian medical corpus as a whole: each of these two "contexts" will be described below, and I will seek to elucidate why the different position of at least two of these occurrences of the "same" line in the Babylonian medical corpus actually tells us a great deal about competing disciplinary identities and etiological beliefs.

Like any scholarly discipline Babylonian medicine (asûtu) had to differentiate itself from competing disciplines and practices, above all, among the learned or scholarly traditions in Mesopotamia, from the practices of the ašipu "exorcist, incantation-priest". In our efforts to distinguish these two disciplines we must be especially cautious about attributing textual materials to a specific discipline on the basis of the stated or implied discipline of a copyist or colophon. There are a number of examples of tablets containing therapeutic recipes, which clearly belong to asûtu rather

² In earlier works, in line with convention, I have referred to the subcorpus or medical treatise represented by BAM 574, 575, 578, 579 and related tablets as SUALU, but this label can be very misleading, since the materials dealing with the *suālu* disease do not actually occur in this subcorpus. Here I adopt the nomenclature of the BabMed Project and speak of this same group of materials as the STOMACH treatise, chapters 1 through 5 (or, in abbreviated use, STOMACH 1 through STOMACH 5).

³ Farber's Partitur of four of the five known sources (BAM 508, BAM 509, K. 5416a+ [listed under the published fragment AMT 45/5] and BAM 577 [now joined to BAM 574], only STT 252 is omitted) is the first real description of this incantation, but without the join of BAM 577 to BAM 574, the incantation could not yet be located within the therapeutic corpus as a whole. Farber's paper also serves as the key point of departure for the section on gastrointestinal diseases in Collins's dissertation (1999).

⁴ K. 5416a+ is largely unpublished and consists of a number of joined fragments that will be edited by M. Geller in a future BAM volume.

than āšipūtu, and yet were copied and transmitted by exorcists. While many potential contrasts between the two disciplines were advanced in Ritter's 1965 paper, these contrasts are actually rooted in a faulty methodology: Ritter used elements found in the colophons of STOMACH 1 and the second chapter of *The Diagnostic Handbook*, including the term $as\hat{u}$ embedded in an epithet of Ninurta and Gula and a reference to the term $\tilde{a}\tilde{s}ipu$ in the incipit of the first section of The Diagnostic Handbook, to assign these two texts to the disciplines of asûtu and \bar{a} sipūtu respectively. And while these two attributions happen to be correct, Ritter's method is flawed and this type of attribution-by-colophon can be quite misleading.⁵ The rather different approach advocated here argues for the centrality of compendial context: if a composition is listed in AMC, particularly in the anatomically-driven first half, which corresponds to The Nineveh Medical Compendium, it is quite likely to be part of asûtu rather than āšipūtu. This compendial context can then be buttressed by specific features of genre or textual organization such as the use of depersonalized case histories or the avoidance of traditional descriptions of causation in the medical compendia. Of course we must bear in mind that when Ritter's paper was published in 1965, AMC had not yet been discovered and the compendial structure of *The Nineveh Medical* Compendium was largely unrecognized. In the absence of well-defined compendia, clearly linked to the two disciplines, Ritter had little choice but to proceed as she did, whatever the methodological problems that it gave rise to.

One of the clearest points of contrast between asûtu "Babylonian medicine" and the discipline of the exorcist, viz. āšipūtu, may be found in their approach to gastrointestinal illness. As a group of illnesses that are not seated in a visible or easily accessible part of the human body (and often co-occur with fevers and headache, which might be linked to other, non-gastrointestinal parts of the body), illnesses of the digestive tract offer a nearly blank canvas, allowing native concepts of disease etiology and transformation to come to the fore. The incantations typically associated with the exorcist (āšipu) represent the older of the two disciplines, at least in written form, and the predominant model at work in this tradition is that unsettled or untoward ghosts (as well as certain other supernatural agents such as ŠU NAM.ÉRIM "Hand of a (broken) oath") often served as the immediate cause of the diseases of the digestive tract. Scurlock (2006) presents the textual evidence at length, and speaks of "ghost-induced illness", but if I may simplify her account somewhat, the exorcists seem to have inferred that illnesses with no obvious external cause came into existence through ghosts of those who had suffered a violent or unusual death. This malevolent ghost inhabited the body of the patient and transferred to the patient symptoms or behaviors that were associated with the ghost's own manner of death or subsequent mortuary experience. We have no theoretical treatises that explain the mechanics of this form of etiology, but presumably an explicit and visible cause that had led the ghost in question to "wander" was "carrier over" to the patient that the ghost inhabits: the ghost of a man killed by a blow to the head would represent the "cause" of a headache, for example, or a ghost disquieted by the absence of mortuary offerings, viz. food and drink, could represent the "cause" of a loss of appetite, and so on. Scurlock quotes, for example, the following:

If he was wounded on his spine and, as a consequence, he is stopped up so that his excrement does not come out, 'hand' of a murderous ghost, he will die.6

Scurlock goes on to suggest that "the murderous ghost' was in such bad sorts due to the fact that he himself was the victim of murder." Even if never spelled out directly, the implication is clear: internal illnesses for which no clear etiology was available could be explained as resulting from a ghost that had been affected by a proper external cause (a battle wound, starvation in the steppe or infrequent meals in the grave) and these causes could, then, be transmitted to the patient during the visitation of the ghost.

Some branches of Babylonian medicine (asûtu), at least in the late second and early first millennium BCE, reacted to this same group of intestinal illnesses in a fundamentally different way: "Hand of a ghost" is almost never mentioned in the therapeutic treatise labeled here as STOMACH and where we do find some traces of an etiological metaphor in these compendia, it is largely focused on environmental analogies. Simply put, ghost-induced illness plays almost

⁵ Ritter spoke of āšipūtu and asûtu as "professions" rather than "disciplines" and it remains to be seen if colophons can still be a useful way of studying the history of the corresponding professions, once "discipline" and "profession" are properly distinguished. For the history of this long debate, see Fales 2016: 24-25 and references therein, especially Scurlock 1999: 76 and Finkel 2000: 146. Generic references to exorcists and physicians in this paper should be seen as shorthand for practitioners of the disciplines of \bar{a} sip \bar{u} tu and as \hat{u} tu respectively, without taking a specific stand on the linkage between the these disciplines and particular professions in concrete historical circumstances.

⁶ Scurlock 2006: 6 and n. 72 and 73.

⁷ Scurlock 2006: 7.

no role. As Scurlock herself emphasizes, the actual therapies found in texts that describe contact with ghosts largely overlap with therapies for illnesses of the digestive tract:

Without exception, medicaments found in apparition potions appear also in potions for hurting insides, a fact which suggests that these apparitions, at least, were visual hallucinations accompanying severe abdominal discomfort.8

If we step back from Scurlock's occasionally overly literal understanding of ghostly apparition, a more precise characterization – separating out the texts belonging to the two disciplines ($as\hat{u}tu$ and $\bar{a}sip\bar{u}tu$) – would have to acknowledge a rather different approach on the part of the two disciplines: whereas "exorcistic healing" (āšipūtu) postulated ghosts as the mediators between visible causes and the etiology of internal illness, the physicians simply located these illnesses in an appropriate "seat", here the digestive tract, and sought to explain their etiology, if at all, only through observation and environmental analogies.

This contrast between the ghost-induced models of traditional exorcistic healing $(\bar{a}sip\bar{u}tu)$ and the analogy-driven approach of Babylonian medicine (asûtu) may have started to emerge as soon as the Old Babylonian period, but, for the most part, we can only link etiological doctrines to distinct disciplines, in a reliable way, when incantations begin to be incorporated into standardized, discipline-focused compendia in the late second and early first millennium BCE. In a certain sense, therefore, we can (and should) see collections of incantations as theoretical, or at minimum, doctrinal canons for particular disciplines. Unlike the numerous isolated incantations known from the late third and second millennium, even the most rudimentary Old Babylonian compilations introduce rubrics that survive into later periods. More importantly, the sequence of incantations that we find in Old Babylonian manuscripts of *Utukkū Lemnūtu*, for instance, line up, for the most part, with the sequence found in first-millennium canonical versions. *Utukkū Lemnūtu* (also known under its Sumerian title udug hul-a-kam or more colloquially as Udug hul "malevolent ghost") is a particularly relevant example here because it provides us with a *catalogue raisonné* of possible causal agents, namely the demons and wayward ghosts with which the exorcists were preoccupied. These causal agents were then linked to particular symptoms in *The Diagnostic Handbook*, when it speaks of "the hand of <causal agent>".

As M. Geller has emphasized in his recent edition of the canonical version, explicit reference is made to patients, lit. the sick one (Akk, marsu) in Utukkū Lemnūtu. 9 Moreover, many elements within Utukkū Lemnūtu only make sense if it is oriented to questions of disease etiology. Take, for instance, the list of circumstances that produce a wayward ghost found, in the Old Babylonian version, in lines 311-325:

- 311) Whether you are the ghost coming from the netherworld,
- 312) Whether you are the wraith that has no resting place,
- 313) Whether you are a virgo intacta,
- 314) Or whether you are the young man not at puberty,
- 315) Whether you are one who is cast on the steppe,
- 316) Whether you are the man who died in the steppe,
- 317) Or whether you are the one in the steppe not covered by earth,
- 318) Whether you are the man killed with a weapon,
- 319) Whether you are the man whom a bank crushed,
- 320) Whether you are the one whom a lion killed,
- 321) Or whether you are the one whom a dog devoured,
- 322) Whether you are the man who died in water,
- 323) Whether you are the one who fell from a roof,
- 324) Or whether you are the one who fell from a date palm,
- 325) Whether you are the one whose ship sank, ...

(Translation Geller)¹⁰

⁸ Scurlock 2006: 10.

⁹ Geller 2016: 4.

¹⁰ Geller 1985: 36-39.

The list goes on, and similar lists of the unfortunate dead are known from elsewhere in the cuneiform textual record, ranging from the zi-pà-incantations to *The Incantation to Utu* and Enkidu's vision of the netherworld.¹¹ If we are willing to recognize the centrality of ghost-induced illness within exorcistic healing $(\tilde{a}\tilde{s}ip\bar{u}tu)$, then it is only reasonable to infer that, in the mind of an exorcist $(\bar{a}sipu)$ who was attempting to treat a disease, this list of the unfortunate dead functioned as a fine-grained set of possible causal agents.

It is precisely at this point in *Utukkū Lemnūtu* that Scurlock's discussion of specific types of ghosts causing particular illnesses is so apt. Scurlock offers a number of examples from *The Diagnostic Handbook* in which a specific type of ghost from this list is associated with a particular patient, even examples in which a particular symptom is linked to the way in which the ghost had originally died. Here are three of Scurlock's examples, all from Tablet 26 of *The Diagnostic Handbook* (the type of ghost is in **bold**):

Obv. 17-18:

If, at the time it overcomes him, his limbs are paralyzed, his head spins, his innards are dissolving and whatever has been put into his mouth is, always on that (same) day, discharged through his anus: Hand of a ghost that has died through murder.12

Obv. 38:

If that of seizing seizes him time and again, at the time it has seized him, he rubs his hands and his face: the ghost of someone who has died in water has seized him; in the middle of the day it will be heavy for him; variant: the Lurker of the river hit him.¹³

Rev. 16:

If his limbs are quiet like those of a healthy man, his mouth being seized he does not talk: Hand of the ghost of a murderer (var. Hand of the ghost of someone burned (to death in a fire)).¹⁴

(Translations after Stol)

Demons and ghosts are described as murderous at various points in *Utukkū Lemnūtu*, but here in these three examples we see ghosts who were the victim of an unfortunate turn of events: murdered, drowned and, at least in one variant, burned to death. Scurlock points to the importance of a linguistic pun in the third example ($q\hat{a}lu$ "to be silent", a symptom of the patient, punning on $qal\hat{u}$ "to burn", the cause of the ghost's death), but more importantly observes that "the choice of which ghost to blame for what symptoms was not necessarily arbitrary: ... in a number of cases, the behavior of the victim was seen to mimic that of the ghost in a manner suggestive of possession." ¹⁵ There are, in some sense, entire ethnographies (of long extinct practices) that would need to be written, if we wanted to fully understand the logic behind these linkages between patient symptoms and the way in which a ghost originally died. At minimum, it should be clear that the lists and typologies of ghosts in *Utukkū Lemnūtu* were not idle speculation, but rather figured in the daily practice of exorcists.

Equally clear, as we learn from Geller's several editions of *Utukkū Lemnūtu* (1985, 2007b, 2016), the materials that find their way into these compendia (as well as the Marduk-Ea formula and the legitimacy that it provides for both courses of treatment and practitioners) extend back in time to the middle of the third millennium BCE. If the earliest incantation, in this tradition, is attested only in the Old Akkadian period (ca. 2350–2200 BCE), ¹⁶ the "divine dialogues" already play an important role in pre-Sargonic incantations from Fara and Ebla, a century earlier. ¹⁷ Early in the second

¹¹ For the zi-pà-incantations, see Borger 1969; for The Incantation to Utu, see Alster 1991; for The Catalogue of Ghosts in Gilgamesh, Enkidu and the Netherworld, see Gadotti 2014: 109-122 as well as Lynch 2010.

¹² DIŠ "U," LÁ-šú UB.NÍGIN.NA-šú i-šam-ma-ma-šú IGI.MEŠ-šú NIGIN.MEŠ -du ŠÀ-šú i-šah-hu-uh u mim-ma šá ana KA-šú GAR-nu (var. GAR-[ár]) / ina U, me-šú (var. <<DIŠ>> ina U, šú ma-ti-ma ina DÚR-šú ŠUB-šu (var. [na]-[di-šu]) ŠU GIDIM, šá ina šag-gaš-ti GAM (Stol 1993: 61; cf. Heeßel 2000: 280: 20'-21').

¹³ DIŠ šá DAB DAB.DAB-su U, DAB-šú ŠU¹¹-šú IGI.ME-šú ú-maš-šad GIDIM, ša ina A ÚŠ DAB-su ina ma-šal U, mi DUGUD-su (var. KI.MIN) MAŠKIM ÍD SÌG-s[u] (Stol 1993: 65; cf. Heeßel 2000: 282: 42').

¹⁴ DIŠ UB.NÍGIN.NA-šú GIM šá bal-ți ne-ha (var. ne-ha-šú) KA-šú DAB-ma NU DU₁₁-DU₁₁-ub ŠU GIDIM₇ šag-ga-ši (var. ŠU GIDIM₇ qa-li-i) (Stol 1993: 69; cf. Heeßel 2000: 285: 75').

¹⁵ Scurlock 2006: 6-7.

¹⁶ MDP 14, 91, edited in Geller 1980; for its place in the overall tradition, see Geller 2016: 5-7.

¹⁷ Several pre-Sargonic incantations feature a "divine dialogue", including no. 7, 9 and 11 in Krebernik 1984: 48-52, 64-72 and 76-80 respectively; for an overview, see Cunningham 1997: 40-43. As Krebernik emphasizes later in the same volume, this group of incantations (no. 7-11)

millennium, in the Old Babylonian period (ca. 1800–1600 BCE), we find something new: medical compendia that eschew incantations and focus exclusively on pharmaceutical remedies. The foremost example of this type of purely pharmaceutical compendium, up to now, is BAM 393, but Andrew George has recently published a similar compendium in CUSAS 32, no. 73, and Irving Finkel will publish a much more extensive example of this type of Old Babylonian compendium in future. The relevant passages from BAM 393 read as follows:

BAM 393 rev. 11-12 and 22-27:

11-12) If someone's belly is bloated: he should drink *zibibi'ānu* ("black cumin") in top-quality oil; then he will recover.

22-24) If someone's head suffers from *himiṭ ṣēti*-fever: you . . . powder on his head (and) you pour oil (on it); then he will recover.

25) If he is (also) warm: you add oil; then he will recover.

26-27) If someone's belly is continually swollen: he should drink $n\bar{i}n\hat{u}$ -plant in beer; then he will recover.¹⁹

Although Old Babylonian compendia like these are entirely pharmaceutical, it is decidedly unclear, at this early point, whether or not the practitioners of these therapies had separated themselves off as a distinct medical discipline ($as\hat{u}tu$). The Sumerian term a-zu (= Akk. $as\hat{u}$) is already attested as a professional designation, centuries earlier, at the end of the third millennium and in line 93 of the Old Babylonian version of $Utukk\bar{u}$ $Lemn\bar{u}tu$, an exorcist ($\bar{a}\check{s}ipu$) declares himself to be a $\check{s}im$ -m \check{u} "grower of aromatic plants", an epithet that is also applied to the healing god Ninisina, otherwise known as "the great physician of the Land" (a-zu gal kalam-ma). But the non-existence of incantations in these early collections of therapeutic recipes is our first substantial piece of evidence for a possible disciplinary split.

The definitive evidence for such a split, however, comes in the form of a cluster of incantations in STOMACH 1. No doubt, practitioners of Babylonian medicine ($as\hat{u}tu$) were probably making use of distinctively "medical incantations" for centuries, incantations that are often described as a sop to the expectations of patients. I would like to suggest, however, that, just as in the competing discipline of exorcistic medicine, collections of medical incantations were acting as theoretical and doctrinal texts for Babylonian medicine ($as\hat{u}tu$) as a discipline. This mirroring of a doctrinal codification for $as\hat{u}tu$, at least in written form, appears to be a late development, however: our first really good evidence for this is the cluster of incantations found in the second and third column of STOMACH 1. Like so many of the standardized two-column tablets from Ashurbanipal's Library, STOMACH 1 locates a major block of related materials in the second half of column 2 and most of column 3, on the reverse. In STOMACH 1 this block consists of a lengthy series of

all exhibit features of the 1.4-67; Krebernik 1984: 211-225). Moreover, George has recently published an Early Dynastic tablet (MS 4549/1, CUSAS 32, no. 1) that includes examples of both the 1.4-67; Krebernik 1984: 211-225). Moreover, George has recently published an Early Dynastic tablet (MS 4549/1, CUSAS 32, no. 1) that includes examples of both the 1.4-67; Krebernik 1984: 211-225). Moreover, George has recently published an Early Dynastic tablet (MS 4549/1, CUSAS 32, no. 1) that includes examples of both the 1.4-67; Krebernik 1984: 211-225). Moreover, George has recently published an Early Dynastic tablet (MS 4549/1, CUSAS 32, no. 1) that includes examples of both the 1.4-67; Krebernik 1984: 211-225). Moreover, George has recently published an Early Dynastic tablet (MS 4549/1, CUSAS 32, no. 1) that includes examples of both the 1.4-67; Krebernik 1984: 211-225). Moreover, George has recently published an Early Dynastic tablet (MS 4549/1, CUSAS 32, no. 1) that includes examples of both the 1.4-67; Krebernik 1984: 211-225).

18 George 2016: 165-167 and pl. cxliii-cxlv.

19 See the edition in Geller 2006 and, more generally, Schwemer 2007: 27-28; Schwemer 2010: 36-38. AHw usually translates *şapāru* in line 23 as "eindrücken", but does not translate our line 23; Geller has "tu appliques avec force de la poudre sur sa tête" (Geller 2006: 9). The Aramaic root ŞBR "to heap up" may be relevant, but is only attested in the western dialects. The original is as follows:

rev.

11. [6,40] a-wi-lum li-ba-šu na-pi-ih zi-bi-bi-a-[nam]

12. 'i'-na ru-uš-tim i-ša-ti-ma i-né-a-[aš] (double ruling)

•••

22. 6,40 a-wi-lum qá-qá-sú șe-tam ha-mi-iț

23. sí-ka-am qá-qá-sú ta-ṣa-pa-ar-ma

24. ša-am-nam ta-ša-pa-ak-ma i-né-a-aš

25. 6,40 e-em ša-am-nam tu-re-di-ma i-né-a-aš (double ruling)

26. 6,40 a-wi-lum li-ib-ba-šu i-ta-na-an-pa-ah

27. ni-ni-a-am i-na ši-ka-ri-im i-ša-ti-ma i-né-a-aš (double ruling)

20 Geller 1985: 92-93.

21 See Collins 1999 for an initial attempt to distinguish "medical incantations" from other types. As I suggest in section 3 below, "medical incantation" cannot simply be equated with "incantations that happen to occur in medical compendia", but rather must be defined in terms of concrete features of the incantations themselves, e.g., the avoidance of the Marduk-Ea formula, and the distinctive conceptual framework that they represent.

medical incantations, interspersed with brief rituals that focus on the gastrointestinal tract (blocks of medical incantations dealing with jaundice, for instance, are placed alongside thematically related recipes later on in STOMACH 3). The incantations found in STOMACH 1 were not simply taken over from the exorcists, nor were they mumbo-jumbo incantations meant for distressed patients. These incantations, in my view, are a countertext, parodies of the incantations used by the exorcists in the private ridicule that Babylonian physicians directed at their benighted competitors. Crucially, however, by the time we arrive at the monumental editions of Ashurbanipal's Library, decorum seems to have broken down and these incantations appear in STOMACH 1 as a kind of doctrinal statement, or at least a clear representation of disciplinary, if not professional identity.

In earlier work, chiefly Johnson 2015, I have argued for the depersonalized case history as the primary anchor or center of gravity for blocks of therapeutic recipes within the medical treatises, but in this paper I will also be describing "clusters of incantations" as a second mid-level textual entity alongside the recipes organized around a depersonalized case history. Both of these two types of medium-sized textual unit (or "textual block") stand midway between an entire library tablet, like STOMACH 1, which will often contain upwards of 250 lines, and the individual recipes or incantations, ranging from a single line up to a five or six line section. By mapping out these mid-range units, which are typically 30-50 lines in length, we can begin to sketch out a more precise topography of technical compendia and in doing so, we can establish a series of compendium-internal landmarks for describing the precise position of individual prescriptions and incantations within the medical corpus.²² At the same time, it should be readily apparent that these two types of textual blocks, within the Babylonian medical (asûtu) corpus, correspond in rough, functional terms to the two most important compendia in the competing discipline of exorcistic healing (\bar{a} sip \bar{u} tu): the symptomatologies and diagnoses in The Diagnostic Handbook correspond to the blocks of symptoms-plus-recipes that encircle the depersonalized case histories, while the theoretical and doctrinal goals of *Utukkū Lemnūtu* are achieved, within the discipline of Babylonian medicine (asûtu), by clusters of incantations like the cluster in STOMACH 1.

2 Case Histories as Nosological Centers of Gravity

As basic elements of a new textual criticism for Mesopotamian technical compendia, the two mid-level entities postulated here, namely (i) groups of symptom descriptions organized around a "depersonalized case history" and (ii) "clusters of medical incantations", must be rooted in an overarching model of how compendial texts, such as the Babylonian medical treatises, were assembled, curated and modified over time. This type of textual transmission is rather different from the recopying of a limited number of manuscripts in medieval Europe, which is usually seen as paradigmatic in the best traditions of Classical textual criticism. Reasonably enough, leading textual critics, people like Timpanaro, Most, Reeves and Trovato, have not usually focused on texts that were exclusively read in a group or interactive context. Those seeking to develop a distinct textual criticism for technical literature have, instead, sought to reconstruct contexts of "use" rather than "transmission", even if only implicitly, on the basis of clues in the textual format, textual condensation or the like.

The most influential paper in defining this approach, now published some twenty years ago, is Philip van der Eijk's "Towards a Grammar of Scientific Discourse" (1997a).²³ Both a summary of the status quaestionis and a programmatic text, it has served as the basis for a number of subsequent lines of research.²⁴ Beyond its influence as a locus communis for rhetorical or discourse-oriented approaches to ancient science, however, it also offers a particularly illustrative example of how we might conceptualize the assemblage of materials in an early Greek technical text such as *Epidem*ics. Van der Eijk points, in particular, to Epidemics 6.8.7, where a section of text is introduced by the words "(data) derived from the small writing-tablet (*tà ek toû smikroû pinakidíou*), suggesting that the author is drawing on an existing

²² Thus, it becomes possible to describe a mid-level context between the macro-level of the subcorpus ("BAM 574 is the first chapter (viz. tablet) of the treatise known as STOMACH and is registered in line 29a of AMC") and the micro-level citation of individual lines ("STOMACH 1, line 113, is attested in BAM 574, column 2, line 48").

²³ See as well van der Eijk's recent companion piece "Principles of Compilation and Abbreviation in the Medical 'Encyclopedias' of Late Antiquity" (2010).

²⁴ See the numerous publications on early Greek science from Markus Asper, especially Asper 2007, as well as Doody, Föllinger and Taub 2012.

collection (an archive or 'database') of information."²⁵ Moreover, as Langholf had already noted, "many 'chapters' or 'sections' in the Hippocratic *Epidemics* are of approximately the same length, [which] may be explained by reference to the material conditions in which information was stored, such as the size of writing-tablets".²⁶ This seemingly minor observation about the textual layout of the original "clinical" Schriftträger is anything but, and fits perfectly into several other lines of evidence that Langholf has assembled: the length of duplicate sections in *Epidemics* IV and VII, of appendices tacked onto the end of other compositions, and, not least, the use of 100 hexameters (ca. 600 words) as a unit of measure in calculating the cost of reproducing a manuscript.²⁷

Thanks to the overwhelming impact of early Greek case-history compendia such as *Epidemics* on both the internal historical development of Greco-Roman medicine and histories of medicine more generally, it is usually said that the compilation of individual case histories is a Greek invention.²⁸ As I suggested in the Introduction to In the Wake of the Compendia (Johnson 2015), however, it is likely that Mesopotamian physicians also collected individual case histories at least a millennium earlier than their Greek counterparts. The singular difference between the Mesopotamian and the Greek situations, a difference in text-artefactual practice that reverberates through their subsequent literatures, is that elite Babylonian physicians – at least in the Old Babylonian period, when medical compendia first appear in Mesopotamia – would certainly have passed through rigorous training in cuneiform writing and Sumerian literature in the Old Babylonian Tablet House (é-dub-ba-a). In the course of this training, these would-be physicians would also have been exposed to Mesopotamian models for the codification of individual case histories in formalized textual compendia, namely the promulgation of depersonalized royal edicts or rescripts in response to difficult or unprecedented legal situations.29

The utterances of a Mesopotamian king not only carried the force of law, generally, but were in fact epistemological, defining new realities to which subsequent rulers would generally adhere.³⁰ Thus, the process through which an individual legal situation was converted into a permanent fixture in the minds of Mesopotamian literati and other technical specialists was both well-established and, crucially, seen as the pre-eminent model for the "standardization" or "normalization" of new pieces of complex, case-driven knowledge. Indeed, the use of legal procedures as generalized models for discursive and textual practice in other, non-legal domains is found in a number of technical disciplines in Mesopotamian antiquity: we need only think of the central role of legal models of adjudication in divination, the most influential of the disciplines in ancient Mesopotamian thought.³² As I have argued in more detail elsewhere (Johnson 2015), we must infer the existence of individual case histories in medical circles that were roughly analogous to the following transformation of a legal case into an imperial rescript:

²⁵ Van der Eijk 1997a: 97.

²⁶ Van der Eijk 1997a: 97, summarizing Langholf 1989.

²⁷ Langholf 1989 and 2004, passim.

²⁸ Geller has generally denied the existence of case histories in the therapeutic texts (Geller 2010: 24) and only acknowledged something similar in first-person literary texts (Geller 2010: 73). More specifically in Geller 2004: 21, where he states that "[w]e have no single example of a case history from Akkadian sources, which is another major point of difference between Babylonian and Greek medicine". On the recontextualization of case histories, particularly in Galen's appropriation of the Hippocratic tradition, see van der Eijk 1997b.

²⁹ Summarized in Johnson 2015.

³⁰ The epistemological aspect is nicely captured in Radner's discussion of "Erkenntnisgegenstand" (2005: 16-19) as well as the preceding discussion of "Wort und Bild" (2005: 13), in particular her citation of Ludwig 1990: 54-59, on the contrast between Sum. gi(n) (= Akk. kīnum) "true" and lul (= Akk. sarrum) "false".

³¹ On case-driven models of codification, see Forrester 1996 and Furth et al. 2007 as well as the discussion in Johnson 2015. The legal phrase books and Gabriella Spada's recent work on the model contracts (Spada 2011; 2014) give some important hints about how legal practice was inculcated in the Old Babylonian Tablet House, but the most useful point of reference for those of us interested in how scholastic legal compendia may have played a role in the academies is Martha Roth's overview of the processes of codification that led to the Laws of Hammurapi (Roth 2000); the decisive evidence for a concrete linkage, however, between scholastic law and the Tablet House curriculum is probably The Class Reunion, line 46 (di ì-du,, eĝir-bi-šè nu-mu-un-til-e, "You state your case, but afterwards never reach a decision," Johnson and Geller 2015: 161), which Eichler, following Sjöberg, recognized in 1987 "as referring to the student's ability to render final verdicts in legal proceedings" (Eichler 1987: 82, n. 37; Sjöberg 1976: 165). Use in the Tablet House would also explain the occasional back-translations of Codex Hammurapi into Sumerian (Sjöberg 1991).

³² See the recent synthetic descriptions of the divinatory tradition in Maul 2013 and Koch 2015. For a survey of textual norms within technical disciplines in antiquity, generally speaking, see the papers collected in Bawanypeck and Imhausen 2015.

(Description of the legal case:)

"The judge Awil-Sîn has a claim of money owed by Mar-Šamaš, a man from Sippar. Because the latter did not pay it back, he seized Mar-Šamaš, saying:

'If you keep your property and I receive nothing, I will seize the slave of your daughter the *nadītu*-priestess of Šamaš, who lives in the cloister.'

This is what he said."

That is what they told me.

(Rescript:)

A nadītu-priestess of Šamaš whose father and brothers have provided her support for her to live and for whom they wrote a tablet, and who lives in a cloister, is not responsible for the debts or the ilku-service of the house of her father and her brothers. Her father and brothers shall perform their *ilku*-service and Any creditor who seizes a nadītu-priestess of Šamaš for the debts or the ilku-service of the house of her father and brothers, that man is an enemy of Šamaš.33

Here we see a concrete legal case, as described in the letter, being transformed into a depersonalized statute: personal names are removed, preconditions are drawn from elsewhere in the legal tradition, and crucially, the first-person quotation at the very heart of the original case, viz. "I will seize the slave of your daughter..." is removed in its entirety.³⁴

In early Greek medicine as well, there were important formal similarities in how first-order texts were transformed and subsumed in compilations, whether legal or medical, but this process of depersonalization finds no equivalent in the largely non-institutional, persona-driven scholarly world of early Greek society. Near the start of his fundamental 2004 paper ("Structure and Genesis of Some Hippocratic Treatises"), and in response to the old suggestion that Greek medical compendia were modeled on Egyptian compilations, Langholf bluntly states that in contrast to other, oratorically-inspired genres, "[t]he format of medical 'handbooks' . . . did not have a comparable cultural background in Greece. There existed no schools for teaching their composition."35 This means, in essence, that Mesopotamian scholars had a ready model for the transformation of individual case histories into general propositions, whereas Hippocratic physicians were left to their own devices.

Depersonalized case histories in the Babylonian therapeutic compendia can be distinguished from other nosological elements, in short, by the number of distinct symptoms within a single entry and the compendial context in which they typically occur. As a rule of thumb, depersonalized case histories typically list at least four distinct symptoms and are situated in an array of the apeutic simplicia, consisting of individual symptoms that reappear in the depersonalized case history. In the following passage from STOMACH 2, for example, the depersonalized case history in line 108 serves as the gravitational center for the dozen entries that surround it in lines 84 through 118, each of which combines a relatively simple description of symptoms with a pharmacological "simple", with only one, or at most, a few ingredients.

STOMACH 2, lines 84-119 (= BAM 575 ii 14-49 = Block y in the diagram 1, treatments are omitted here, the depersonalized case history is in bold)

- 84) If (a man) constantly has phlegm . . .
- 87) If a man's innards are bloated, he continually has cramps and his stomach heaves constantly (but he does not vomit), in order to treat him . . .
- 89) If a man DITTO . . .
- 90) If a man's innards are bloated, he continually has cramps and 'wind' churns around inside his belly . . .
- 92) If a man's innards are bloated and he continually has cramps . . .
- 94) If a man's innards continually suffer from cramps . . .
- 96) If a man's innards continually suffer from cramps . . .
- 98) If (a man) continually has phlegm, a spasm of coughing and suffers from intermittent fever \dots

³³ See, generally, Charpin 2010: 74. The text is known from four exemplars (Di 1668, Di 1771, Di 976 and BM 78364 [= CT 52, 111]), brought together and edited in Janssen 1991.

³⁴ This is quite the opposite of what we see in early Greek compendia, where named authors occasionally carry over the first person statements used in their sources; see, in particular, Totelin 2010: 310-313.

³⁵ Langholf 2004: 223.

- 101) If a man's epigastrium burns, his belly is continually bloated . . .
- 105) If a man's innards are extremely bloated, he regurgitates bread and beer . . .
- 108) If $<_{\text{symptom 1}}$ a man's innards are bloated>, $<_{\text{symptom 2}}$ he is continually struck down>, $<_{\text{symptom 3}}$ he has no appetite for bread or beer>, $<_{\text{symptom 4}}$ he continually has phlegm>, in order to treat him . . .
- 113) If a man's innards are bloated, he continually has . . . and phlegm (and) he cannot tolerate bread or beer, in order to treat him . . .
- 115) If a man's innards are bloated (and) his epigastrium is continually filled with phlegm, in order to treat him . . .
- 118) If a man's innards are bloated ...³⁶

The boundary between a discursive block like this and neighboring blocks is usually marked by a new Leitwort, here the shift from one term for bloating, namely *naphu*, lit. "inflated" to another word, in line 120, namely *e-me-er*, perhaps best translated as "swollen" or even "inflamed", since it seems to include the concept of heat alongside distension. The discursive structure of a block like the one in lines 84-119 (= Block y in the diagram 1), therefore, consists of one or two depersonalized case histories as its center of gravity and a surrounding array of individual symptoms that reappear in the central case history or histories. Discursive or textual blocks like this constitute the first of the two mid-level structures, operating in Mesopotamia technical compendia, that will be described in this paper.³⁷

As one of the few therapeutic subcorpora that is now largely reconstructed, the five chapters in the STOMACH treatise, with approximately 1000 lines reconstructed at present, offer us an excellent domain for the identification of case-history-centered blocks of symptomatology and their corresponding therapies. The three latter chapters in the treatise, namely STOMACH 3-5 (largely corresponding to BAM 578, the materials assembled in Johnson 2014a, and BAM 579 respectively), though exhibiting a block structure like the earlier tablets, are largely organized in terms of named diseases: STOMACH 3, columns 1-2, for instance, is concerned with illnesses associated with Akk. martu "bile" (= Sum. zé), columns 3 and 4 of the same tablet deal with two varieties of jaundice, viz. Akk. amurriqānu and ahhāzu. STOMACH 4, at least the relatively little that we have from this tablet is concerned with two types of sētu-fever: Akk. sēta kašid (written U_o.DA KUR-id) and sēta (U_o.DA) SÁ.SÁ, while STOMACH 5 is, for the most part, too damaged to admit any kind of thematic or block-driven analysis, although a number of the recipes in its second and third columns are quite similar to recipes for ghost-induced illness in other texts. Because even the smallest textual units within these sections typically include a telltale illness name or an iconic symptom for the corresponding illness, the "block" structure in these sections does not bear the functional weight that it does elsewhere in the STOMACH treatise. Our discussion will, therefore, focus on the first two tablets, STOMACH 1 and 2, where named diseases do not play such a dominant role.

We have already briefly reviewed the block in STOMACH 2, lines 84-119 (= Block y), above, and in the remaining parts of STOMACH 1 and 2 a number of other nosological blocks can be tentatively identified: STOMACH 1, lines 1-41 (= BAM 574 i 1-41 = Block α), STOMACH 1, lines 66-85 (= BAM 574 ii 1-20 = Block β), and a neighboring block in STOMACH 2, at the bottom of column 2 (= BAM 575 ii 50-65 = Block δ). The reverse of BAM 575 (= STOMACH 2, lines 136-260) may contain as many as four distinct Blocks $(\varepsilon, \zeta, \eta, \theta)$ including eight or so case histories, but it will have to be dealt with separately. The block in STOMACH 1, lines 66-85, offers a particularly good example of block structure and reads, in translation, as follows:

³⁶ Johnson 2015: 302-303.

³⁷ Blocks like this, which exist in somewhat different forms in a wide variety of technical literature in antiquity, give Mesopotamian technical compendia their "modular" character and allow for relatively easy condensation and expansion (see the papers collected in Horster and Reitz 2010, especially van der Eijk's contribution; this conceptualization stems from a long-running collaboration with Lucia Raggetti and Matteo Martelli; it originates, in part, with Ullmann's concept of "erratic blocks" (Ullmann 1972: 376-377, apud Raggetti 2016). More importantly, however, for an archaeologically-recovered technical literature like Babylonian medicine, the specific "block" structure of Babylonian treatments can occasionally be traced beyond the usually impermeable boundaries of cuneiform writing. It is now increasingly clear, thanks to Mark Geller's on-going work on the transmission of cuneiform materials into Aramaic, that at least one block of Babylonian medical lore appears in at least two distinct Aramaic textual witnesses from Mesopotamia: The Gittin Recipe Book in the Babylonian Talmud and much the same block of materials in the Aramaic technical treatise that Lady Drower published in 1946 (for the materials in the Bavli, see Geller 2000 and 2004; for the Lady Drower materials, see Drower 1946, Müller-Kessler 1999).

STOMACH 1, lines 66-85 (= BAM 574 ii 1-20 = Block β, recipes omitted here; depersonalized case history in **bold**)

- 66) If someone's stomach is causing him pain . . .
- 67) If someone's stomach is causing him pain . . .
- 68) If someone's stomach is causing him pain . . .
- 70) If someone's innards continually cause him pain . . .
- 72) When he (= the patient) is seized by . . .
- 74) If DITTO . . .
- 75) If someone's stomach is bound up on him . . .
- 77) If DITTO (= line 75) . . .
- 78) If DITTO (= line 75) . . .
- 80) If someone's stomach is constantly bound up (and) his innards are very bloated . . .

82-83) If $<_{\text{symptom 1}}$ someone eats bread and drinks beer to his satisfaction>, but $<_{\text{symptom 2}}$ his stomach is constantly bound up and seizes him>, <_{symptom 3} his innards are swollen> and <_{symptom 4} he is constipated>, <_{symptom 5} he is sick to his stomach morning and evening>, in order to treat him . . .

84) If someone's stomach keeps throbbing up against him . . .

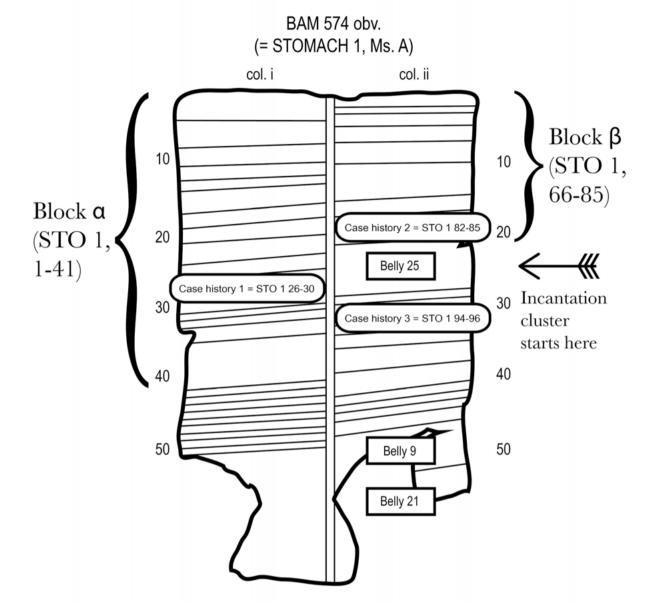
The key symptoms in the depersonalized case history in lines 82-83 are (i) a reaction to eating and drinking one's fill (Akk. išebbi) that consists of (ii) some kind of blockage or constriction in the belly (libbu), (iii) bloating in the intestines (qerbū), here translated as "innards", and (iv) constipation. The fifth symptom, i.e. his stomach hurts in the evening $(mu-\check{s}e)$ and the morning (KIN.NIM), has occasionally been taken as a name for the illness, ³⁸ but the usual formula for naming a disease, viz. NA BI (= Akk. $am\bar{e}lu\ \tilde{s}\hat{u}$) "that man", which resumes the patient as topic, is not used here, so it is almost certainly a fifth element of the symptomatology. Only a few of the symptoms mentioned in this depersonalized case history are anticipated: in line 75, for instance, where Akk. libbašu kasīšu describes the resulting state of the first of the two verbs in symptom 2, viz. libbašu iktanassušu, or in line 80, where the two symptoms (libbašu iktanassušu and gerbūšu magal naphū) reappear in the case history as symptoms 2 and 4, viz. libbašu iktanassušu and gerbūšu nuppuhū respectively.39

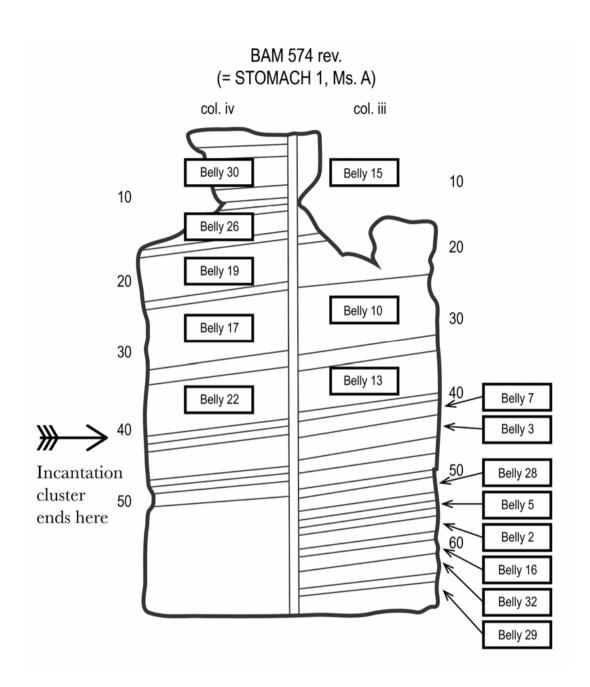
The demarcation of blocks like these is, admittedly, somewhat impressionistic. Nonetheless, points of transition between one block and the next can often be identified without too much difficulty. For example, as noted above, STOMACH 2, lines 84-119 (= Block y), deals with several gastrointestinal problems under the *Leitwort napāhu*, while the next block, starting in STOMACH 2, line 120 (= BAM 575 ii 50 = Block δ), deals with similar symptomatology under the Leitwort emēru. The emēru block culminates in a series of distinct case histories at the end of the column, in which emēru "swelling" is found in combination with ummu "heat". 40 The next block, at the top of column 3 on the reverse, namely STOMACH 2, lines 136-171 (= Block ε), turns to questions of "constipation" and the inability to take food and drink, culminating in the middle of the column with a six-symptom depersonalized case history in lines 165-167 (= BAM 575 iii 30-32). As we turn to the other type of mid-level textual block found in these compendia, namely the clusters of incantations dealt with in the next section, it may be useful here to diagram the thematic blocks as well as clusters of incantations in chapters 1 and 2 of the STOMACH treatise (= BAM 574 and 575):

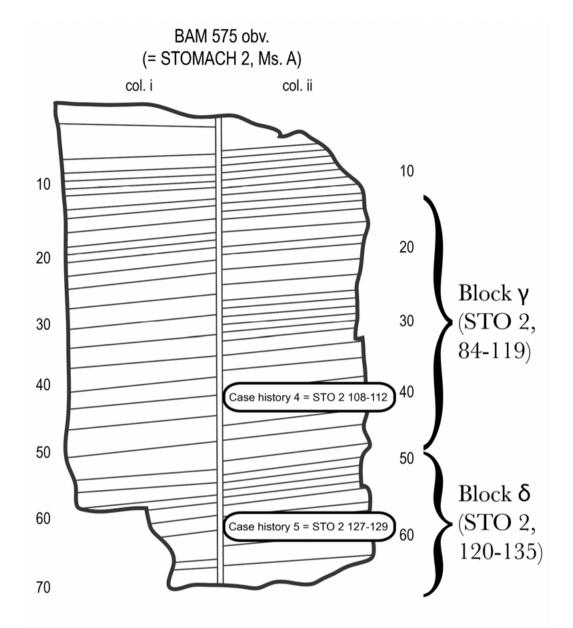
³⁸ Haussperger 2002: 42-43.

³⁹ The variation here (*qerbūšu magal naphū* vs. *qerbūšu nuppuhū*), like the variation between the stative and the Gtn form *kasû* in lines 75 and 80, involves two distinct linguistic forms viz. magal + G-stem vs. D-stem stative, that can, in appropriate circumstances, be equivalent in

⁴⁰ This was the genesis of my mistaken translation of *e-me-er*, in Johnson 2015: 303, as "is warm" rather than "is swollen".







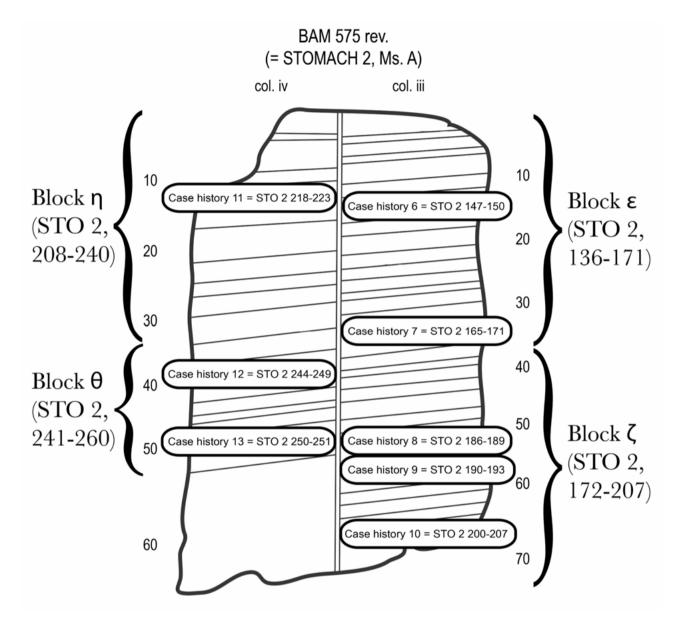


Fig. 1-4: The distribution of depersonalized case histories and clusters of incantations in STOMACH 1 (= BAM 574) and STOMACH 2 (= BAM 575).]

Obviously, sections of these compendia that have not yet been reconstructed offer no possibility of identifying their internal, block-driven structure. Even so, it should be immediately apparent that those parts of the compilation that do not offer pharmaceutical remedies were occupied with other materials, primarily clusters of medical incantations.

3 Clustered Medical Incantations as Countertext

Therapies oriented to pharmaceutical plants and minerals must be recognized, first of all, as central to the self-definition of Babylonian medicine (asûtu) as a discipline. The same cannot be said, however, for incantations and their accompanying rituals. Incantation and ritual were, from the very earliest phases of Mesopotamian history, continually and prototypically associated with the exorcistic healers, practitioners of āšipūtu, which was the primary discipline in competition with Babylonian medicine. These different therapeutic approaches line up quite nicely with the world view and etiological models of the two disciplines: exorcistic healing (āšipūtu) saw ghosts, demons and deities as the most important agents of disease etiology and their healing practices were oriented to assuaging the displeasure of these entities through incantation and ritual. In contrast, Babylonian medicine (asûtu) largely discounted or de-emphasized these agencies (and the traditional countermeasures against them), favoring instead pharmaceutical approaches aimed at alleviating symptoms rather than defending against ghosts and demons. It should not come as a surprise, therefore, that our earliest compendia of pharmaceutical-driven therapies, in the Old Babylonian period, include no incantations whatsoever.41

Objections to this generalization will, perhaps, be swift: in non-compendial texts and contexts, such as in the group of practical texts from the Old Babylonian period, 42 we find therapeutic recipes combined with incantations, a practice that is known from a wide variety of formats. But we have no way of knowing which profession or discipline made use of these heterogeneous, practical texts. Again, as already mentioned in the introduction, only compendia containing numerous therapeutic recipes are uniform in their exclusion of incantations as a medium of healing. Aficionados of the Akkadian incantation tradition will also, no doubt, want to point out that Old Babylonian incantations such as YOS 11, 11 and YOS 11, 12, including the earliest versions of the so-called Heart Grass Incantation, find their way into the very compendium under consideration here, namely STOMACH 1.43 As it happens, however, the Old Babylonian incantations that end up in first millennium medical compendia do not re-appear in the standard collections of āšipūtu incantations, known from *Utukkū Lemnūtu* or the other groups of bilingual incantations published in CT 17, viz. SAG. GIG, AZAG.GIG.GA, and the like. Indeed, even in terms of their most generic features, the incantations used in exorcistic healing (āšipūtu) have very little in common with their medical counterparts in the first millennium: the exorcistic incantations regularly make use of the so-called Marduk-Ea formula or dramatization, and can often be traced, without too much difficulty, to much older antecedents in the third millennium BCE. By way of contrast, the precursors to the Babylonian medical incantations – the incantations that eventually find their way into first millennium BCE medical treatises - often lack third-millennium Sumerian antecedents and rarely, if ever, use the Marduk-Ea formula in a canonical or normative way. It is, consequently, no accident that many favorite pieces of vernacular Akkadian rhyme and poetry appear for the first time in materials that are eventually incorporated into a medical treatise like STOMACH. Folk poetry at its most humorous and scatological – whether minor deities shovelling out constipated faeces or a man dialoguing with his own stomach in order to convince it to pass gas – is limited almost entirely to the vernacular stream of materials and is nowhere to be found in traditional collections of incantations meant for the exorcist (Akk, \bar{a} sipu).

The library editions of Babylonian medicine (asûtu) that we know from Ashurbanipal's Library, the same corpus documented and regimented in AMC, are the most important materials in BabMed's on-going efforts to provide compendial context for both the pharmaceutical recipes and the medical incantations. 44 Given the central role of thematic blocks in the nosological sections of these compendia, it should come as no great surprise that similar principles of textual organization were used to organize the incantations within these compendia. Although isolated incantations are occasionally found in the medical corpus, wedged in between distinct recipes, for the most part we find clusters of incantations that occupy a distinct position within the compendia. Occasional recipes, often as part of a ritual, are found in the midst of these clusters of incantations, but what we do not find in these sections is, precisely, the depersonalized case histories that typify the other sections of these compendia. For the materials under consideration here, the most important cluster of incantations is located in STOMACH 1. Up to now the only real effort to make sense of this cluster is found in Collins' dissertation, Natural Illness in Babylonian Medical Incantations (1999), where approximately half of the 30 "Belly Incantations" that Collins distinguishes are actually found within this single cluster. The numbered

⁴¹ See Wasserman 2007 for the status quaestionis, but the compendium published as CUSAS 32, No. 73 (George 2016: 164-167) and Finkel's unpublished materials will substantially affect the prevailing view.

⁴² See Wasserman 2007 and George 2016: 4-8 for an overview of the practical texts.

⁴³ For an overview of the Heart Grass incantations, see Veldhuis 1990. The newly published Old Babylonian incantation compendia (CUSAS 32, No. 7 and 8) also include an expanded form of the Heart Grass incantation in the midst of incantations against stomach-ache and gall, among other problems (George 2016: 129-132), but the Heart Grass incantation in these two compendia (No. 7 (o) vi 9-44 = No. 8 (i) ii 40'-iii 38) seems to be the only major textual commonality between the incantation cluster in STOMACH 1, where Heart Grass occupies lines 152-160 (= BAM 574 iii 23-31), and the Old Babylonian compendia in CUSAS 32.

⁴⁴ This foundational work, viz. the alignment between the library editions in Nineveh and the incipits of AMC is amply documented in Ulrike Steinert's commentary in this volume.

"Belly Incantations" in Collins's dissertation are listed in the following table in the sequence found in STOMACH 1. The length of each component incantation is listed in the right-hand column as well:

Number	Line in STOMACH 1 (position in BAM 574)	"Belly Incantation" number (pages in Collins 1999)	Length of incantation
1	86-92 (ii 21-27)	Belly 25 (pp. 166-168)	<u> 7 lines</u>
2	<u>111-116 (ii 46-51)</u>	Belly 9 (pp. 134-137)	<u>6</u>
3	117-121 (ii 52-?)	Belly 21 (pp. 160-162)	unclear ⁴⁵
4	133-144 (iii 4-15)	Belly 15 (p. 151)	unclear ⁴⁶
5	152-160 (iii 23-31)	Belly 10 (pp. 137-140)	9
6	163-168 (iii 34-39)	Belly 13 (pp. 145-148)	6
7	170-171 (iii 41-42)	Belly 7 (pp. 130-131)	2
8	172-174 (iii 43-45)	Belly 3 (pp. 126-127)	3
9	180-181 (iii 51-52)	Belly 28 (p. 171)	2
10	183 (iii 54)	Belly 5 (p. 128)	1
11	185-186 (iii 56-57)	Belly 2 (pp. 125-126)	2
12	188-189 (iii 59-60)	Belly 16 (p. 152)	2
13	190-192 (iii 61-63)	Belly 32 (pp. 175-176)	3
14	194-196 (iii 65-iv 1)	Belly 29 (pp. 171-173)	3
15	199-203 (iv 4-8)	Belly 30 (pp. 173-174)	5
16	208-210 (iv 13-15)	Belly 26 (pp. 168-169)	3
17	212-217 (iv 17-22)	Belly 19 (pp. 155-157)	6
18	219-226 (iv 24-31)	Belly 17 (pp. 153-154)	8
19	229-235 (iv 34-40)	Belly 22 (pp. 163-164)	7

Although the organizational principles of this cluster of incantations are far from clear, it does appear that lengthier incantations are located at the beginning and the end of the cluster, with smaller incantations bracketed by these two bookends. This is quite the opposite of how blocks of therapeutic remedies are grouped around a limited number of depersonalized case histories. The three incantations that we are looking at in this paper occur at the beginning of the cluster (underlined in the table) and our point of orientation, the shovelling-out-the-intestines incantation in lines 111-116 is in **bold** as well. If the most ideologically charged incantations appear at the beginning of the cluster, including the direct statement of Ea to the patient to "belch and get well!" in Belly 25 and the dialogue between the belly and the head in Belly 21, the incantations at the end of the cluster such as Belly 17 seem to be somewhat more orthodox.⁴⁷

The cluster of incantations in the third chapter of CRANIUM, which is antithetical in its ideological implications to the cluster under discussion here, exhibits a similar overall structure: lengthy incantations, at the head of the cluster, signal major themes, while a long sequence of short, two-or-three line incantations forms the bulk of the cluster. Moreover, in both of these clusters - STOMACH 1 and CRANIUM 3 - we typically find, toward the end of columns 3 or 4,

⁴⁵ Only traces of stray signs are visible in lines 121-128 (= BAM 574 ii 56-63) and it is unclear where this particular incantation ends, or whether there might have been more than one incantation in this section.

⁴⁶ Here as well it is unclear how many distinct incantations were originally present in lines 133-144 (= BAM 574 iii 4-15).

⁴⁷ Orthodox, that is, in the sense of including typical closing formulae. The only thing that might upset this picture of "innovative materials at the front, orthodox at the back" are some similarities between Belly 21 and Belly 22; though the latter is too damaged to say much, it does include the same pregnant phrase "Belly, belly! Where are you going?" that we find in the opening lines of Belly 21.

rubrics that enumerate dozens of these short incantations. 48 This arrangement is probably a direct result of the tablet format and layout of the medical compendia from Ashurbanipal's Library. These medical compendia were exclusively two-column tablets with 250-300 lines of text. Babette Schnitzlein, citing a number of the texts under discussion here as well as materials from other technical literatures, has suggested that the proportion between height and width approximated the golden mean of 1.618,⁴⁹ but of more immediate importance, for us, than their physical proportions, is the positioning of the cluster of incantations in STOMACH 1 on the physical exemplar found in BAM 574. Simply put, the middle of column 2, on the obverse, and the top of column 3, on the reverse, seem to be prime real estate in the layout of tablets like BAM 574. This necessarily consigns the bulk of the short incantations, almost as a kind of catalogue, to the reverse of the tablet, in particular to the bottom of column 3 or the top of column 4. The lengthy and involved incantations that we find at the beginning of the cluster - in STOMACH 1 in the middle of the second column and the beginning of the third – may, due to their placement on the tablet, take on special importance for those who compiled the compendium. If so, this might suggest that the incantations found at the beginning of the cluster may be thought of as a "countertext" to well-known collections of exorcistic incantations such as *Utukkū Lemnūtu*.⁵⁰

For cuneiformists, the most important discussion of "countertext" is Eckart Frahm's use of the term to describe Genesis 1-2:3 (and 11:1-9) as a reaction against the late, yet influential, mythological mélange known as *Enūma Eliš*. ⁵¹ In the interests of brevity, I can only direct the reader to Frahm's comparison of the two texts, but in essence, as Frahm puts it, "the ideological premises underlying the Babylonian epic are completely reversed in the Biblical account" (Frahm 2011: 367). Or if I may restate Frahm's point in detail, the creation account in Genesis is a countertext because it accepts and replicates major narrative or generic elements of what it is countering, viz. Enūma Eliš, but in the midst of these generic similarities, the countertext fundamentally alters or refuses a number of telltale, ideologically charged elements in order to reject (and usually invert) the ideological import of the source text. The creation account in Genesis 1-2:3, "with its reference to Tehôm (< Tiamat?) and its focus on naming and separating, looks like a thoroughly demythologized and significantly abbreviated version of Enūma eliš" (Frahm 2011: 366), but in doing so the biblical account also rejects the polytheistic worldview of the Babylonian myth. We find similar ideological work, I would like to suggest, in the cluster of incantations found in STOMACH 1. These incantations not only seem to reject the idea of ghost-induced illness (and consequently we find no incantations directed against "Hand of a ghost" within the STOMACH treatise), but even offer parodies of the characteristic features of the Marduk-Ea incantations used in the competing discipline of āsipūtu.

Let me focus here on just two examples of parody in the cluster of incantations found in STOMACH 1, which are meant to counter the incantations used by exorcists: the parody of the Marduk-Ea formula found in lines 86 through 92 (= BAM 574 ii 21-27) and the dialogue between the patient and his own stomach in lines 117 through 121 (= BAM 574 ii 52-56). These two incantations precede and follow, respectively, the shovelling-out-the-intestines incantation in STOMACH 1, lines 111-116: although a couple of recipes do intervene between lines 86-92 and 111-116, the dialogue between the patient and his own stomach in lines 117-121 (= BAM 574 ii 52-56 + BAM 577: 6'-10') follows immediately after the shovelling-out-the-intestines incantation in 111-116.⁵² The first of these passages reads as follows:

STOMACH 1, lines 86-92 (= BAM 574 ii 21-27)

86. [Incantation: The innards] are constantly loosened, with twisting of the stomach, (and) the knotted up intestines are . . .,

87. [...] the darkness, his eyes are covered by algae like water in an irrigation ditch,

⁴⁸ The list of short incantations in STOMACH 1 is easily seen in entries 7 through 16 in the table; at the end of the third column of CRANIUM 3, in a preliminary edition that I am preparing in collaboration with Krisztián Simkó, we find the rubric 18 KA INIM.MA [SAG.KI] DAB.BA. KAM "18 incantations for headache" (K. 4023 iii 38'), and likewise later on in column 4, 24 K[A INIM.MA...] "24 incantations for ..." (K. 2516 rev. 10).

⁴⁹ Schnitzlein 2015: 260.

⁵⁰ This line of argument is inspired, to a substantial degree, by Geller's critique of Collins's 1999 dissertation on natural models of illness in the medical incantations, as Geller summarizes his own view of the matter: "[m]edical incantations tend to be addressed to the more immediate causes of illness, such as draught or bile, while more formal magical texts concern themselves with the ultimate causes of demonic attack and divine disfavor" (Geller 2007a: 390-391).

⁵¹ Frahm 2011: 364-367.

⁵² BAM 577 directly joins BAM 574 at this point in the text; there is no additional space between these two texts, as one might infer from the CDLI version of Köcher's handcopy – see instead the photo available at CDLI.

- 88. Blown up by the wind of the steppe, he suffers from bowel disease, the "Hand of the steppe" (makes him) pour out all the tears that he can muster,
- 89. His two lips are constantly parched, he keeps flopping around like fish (and) continually puffs himself up like a snake,
- 90. Gula, the provider of good health for mankind, saw the young man and brought him into the temple of Asalluhi (= Marduk).
- 91. Merciful Enki looked upon of him, and then (said): "Belch and feel better, young man!
- 92. May the wind either come out through (your) anus, or may a belch come out from (your) throat." (End of) incantation.53

There are, if we want to see this incantation as a countertext, two elements that are clearly meant to stand in opposition to the Marduk-Ea formula incantations that are normally made use of in the competing discipline of $\bar{a}sip\bar{u}tu$. First, rather than speaking of "Hand of a ghost" as a causal agent, this incantation speaks instead of "Hand of the steppe" in line 88. This is, in all likelihood, a pun: in place of the expected expression ŠU GIDIM(.MA) or more accurately ŠU GEDIM(.MA) "Hand of a ghost", where the initial /g/ sound in the word /gedim/ "ghost", may already have been lost in Sumerian, we have ŠU EDIN "Hand of the steppe". 54 If we take the loss of /g/ in Sumerian /gedim/ for granted, 55 the only difference between /gedim/ and /edin/ is the position of the final nasal: labial /m/ in /gedim/ as opposed to the dental /n/ in /edin/. More important, however, than the phonetic details is the motivation for making a change like this. Whereas traditional accounts would, no doubt, have postulated a restless ghost, prototypically dwelling in the steppe, as the source of the patient's abdominal difficulties, the Babylonian scholars who compiled this cluster of incantations seem to reject this idea, opting instead for a description of the phenomena taking place in the patient's digestive tract as analogous to physical or environmental processes that are observable in the steppe. Put somewhat differently, the Babylonian physicians have replaced the wayward ghost that typically occupies the steppe (before inhabiting the patient) with an environmental analogy between the steppe and the gastrointestinal tract.

These lines go on, however, in lines 90 through 92, to offer a parody of the usual procedure found in the Marduk-Ea formula. The expected sequence of events would be as follows: Marduk, having noticed a person suffering from an illness, goes to his father Ea, the god of wisdom and technical skill, and describes the illness to his father. A dialogue then ensues where Ea reassures Marduk that he has nothing more to teach him, but, in the end, Ea offers a treatment - usually consisting of an incantation and a ritual - to Marduk. Marduk returns to the patient and heals him using this new bit of knowledge. In reality, of course, the figure of Marduk is played by the exorcist (āšipu) who is healing the patient, so the Marduk-Ea formula not only guarantees that the treatment originates from the gods, but also, at the same time, sacralizes the exorcist himself, thereby guaranteeing that the healing practice will be successful. The differences, when we return to our parody in lines 90-92 are manifold: the primary deity at work here is Gula, the goddess of Babylonian medicine, rather than Marduk; she does go to the temple of Asalluhi, which is the Sumerian deity that normally corresponds to Marduk, but Asalluhi/Marduk himself is nowhere to be found; lastly, she brings the patient directly before Ea himself, whereas in the traditional Marduk-Ea incantations, Marduk always acts as an intermediary between

⁵³ For an overview of the background of this incantation, see the discussion in Collins 1999: 166-168 and Steinert 2012: 319-323. Given the regular mention of GIDIM in the other sources of this tradition, its omission and replacement here with ŠU EDIN is all the more striking. The original is as follows:

^{86. [}ÉN ŠÀ.MEŠ it]-'ta'-nap-šá-ru ze-er kar-'ši' ŠÀ.NIGIN ku-uṣ-ṣu-'ru-ti' [...]

^{87. [}x x] 'hir?' ik-le-ta ki-i me-e hi-ri-ti a-la-pa-a na-du-ú IGI.MEŠ-šú

^{88. &#}x27;ša'-[ar] EDIN e-di-ip na-ţi i-ta-naq-qí ŠU EDIN ma-la ÉR.MEŠ-šú

^{89.} e-^rta-na[¬]-ba-la ša-pa-tu-šú i-ta-na-pa-aş ki-ma KU_s.MEŠ it-ta-nak-bir ki-ma MUŠ

^{90.} e-[mur]-ʿmaʾ dgu-la na-di-na-at ba-la-ṭí NAM.LÚ.ÙLUlu ina É dASAL.LÚ.HI ú-bil eṭ-lu

^{91.} dIDIM re-mé-nu-u ip-pa-lis-su-ma gi-ša-ma TI-uṭ eṭ-lu

^{92.} šúm-ma TU₁₅ ina DÚR lu-și šúm-ma gi-ša-tu ina nap-šá-ti li-še-și TU₆.ÉN.

⁵⁴ Previous editions have often taken the ŠU sign as an object pronoun attached to the preceding verb, hence *i-ta-na-aq-qí-šu*, but ŠU is almost never used for the object pronoun in first millennium medical texts such as this; the parallelism between 'ša'-[ar] EDIN and ŠU EDIN also favors separating ŠU from the preceding verb.

⁵⁵ See Geller 2005 for the general argument; for a more self-conscious meditation on the loss of word-initial /g/, see the discussion of zag-udu vs. zag-gu-du in Johnson and Geller 2015: 213-214 and Johnson 2016.

⁵⁶ Thanks to M. Geller for drawing my attention to this possibility. Note the similar alternation in the reading of alan as opposed to alam.

Ea and the patient.⁵⁷ Rather than telling Gula how to heal the patient, Ea directly addresses the patient, ordering him to "Belch and feel better! May the 'wind' either come out through your anus or may a belch come out from your throat!" (lines 91-92). The punchline of this sham Marduk-Ea incantation – it must be stressed – is nearly identical to the ending of CT 4, 8a, a standard Marduk-Ea incantation for digestive trouble (lit. ša libbim "of the belly"). Here is the last section, where Ea responds, in the usual canonical form, to Marduk's request for help:

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CT 4, 8a (BM 92518 = Bu. 88-5-12, 51), lines 25-39
25) den-<<LÍL>>ki-ke, dasal-lú-hi mu-un-na-ni-íb-gi-gi
26)
              dé-a marduk(AMAR.UTU) i-ip-pa-al
27)
    dumu-ĝu, a-na-àm ne-zu a-na-àm ma-ra-ab-dah-e
28)
              ma-ri mi-i-na la ti-di-ma mi-i-na-am lu-si-ib-šu

 níĝ ĝá-e zu-mu ù za-e-ĝá-zu

30)
              ša a-na-ku i-du-ú <<Ú>>> at-ta ti-di
31)
    ù za-e ĝá-zu níĝ ĝá-e zu-mu
32)
              ša at-ta ti-du-ú a-na-ku i-di
33) lú hé-a g[u, hé]-a udu hé-a
34)
              lu-ú a-wi-lu-tum lu-ú al-pu lu-ú im-me-ru?
35) lag mun ù ha'-še-na ù-un-tah-he ù-bí-i[n-x]
36)
              ki-ir-ba-an ta-ab-ti u ha-si us-sa? a[b^! \dots]
37) še, ki-šè hé-si-il-le
                                           ki-ma ši-it-[ti...]
38) bu-lu-úh-gen, hé?-si-il-le
                                          ki-ma g[i-šu-ú-ti]
39) tu_{15}-gen, gu-du-šè è-îb-ta?
                                           ki<sup>?</sup>-ma<sup>?</sup> x [...]
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(25.26) Ea answers Marduk: (27.28) "My son, what do you not know? What can I add to it? (29.30) What I know, you know, (3132) what you know, I know! (3334) Be it a human, or a bull, or a sheep, (3536) —A lump of salt and thyme he should ad[d...]!" (37.39) "[May it come out] like excrement! May it be released] like a b[elch]! May it go out like 'wind' through the anus!" (Translation after SEAL)58

Obviously neither of these two traditions was hesitant, in an incantation against digestive difficulties, to plainly call for the gas to be passed and the belch expelled. What differentiates the "straight" version of such an incantation, as in CT 4, 8a here, and the humorous send-up of it in STOMACH 1, is not the actual descriptive content, but rather the way in which the serious version carefully adheres to the Marduk-Ea generic formula, while the medical incantation openly mocks these literary conventions: Gula rather than Marduk travels to Ea, the double mediation (Marduk as intermediary between Ea and the patient, and the exorcist as stand-in for Marduk) is abandoned, and Ea himself addresses the patient. It is the violation of the careful decorum of the Marduk-Ea formula that is humorous: the intermediary steps carried out by Marduk and his stand-in, the exorcist – are dispensed with and the laughter would have been triggered by the direct encounter between Ea and the patient.

The usual dialogue between Marduk and Ea, which culminates, as we see in CT 4, 8a in the preceding paragraph, with Ea offering instructions for a course of treatment to Marduk, is nowhere to be found in STOMACH 1, lines 86-92, even if we wanted to simply replace Marduk with Gula, since Gula and Ea never speak to each other in the text. The missing dialogue turns up a dozen lines later at the bottom of column 2. In lines 117-121, in place of the expected dialogue between Marduk and Ea, we find a dialogue between the patient and his own stomach, here again with the aim of expelling "wind" from the body.

⁵⁷ That this is exceptional was already noted by Falkenstein (1931: 69, apud Geller 1985: 13 and n. 13), including reference to STOMACH 1, line 90 (= BAM 574 ii 25). The formula found in lines 25-32 was so well known that it was usually abbreviated.

⁵⁸ For a similar monolingual Sumerian precursor against zé "gall", see Alster 1972 and Michalowski 1981. George (2016: 7) offers an overview of the remedy described here, viz. the hurling of a clod of salt and thyme, and a similar incantation is also found in STOMACH 3, lines 99-108 (= BAM 578 ii 29-38, reference courtesy U. Steinert and L. Vacín). This heavily damaged section is the only Sumerian incantation in STOMACH 3.

STOMACH 1, lines 117-120 (= BAM 574 ii 52-55 + BAM 577: 6'-10')⁵⁹

"O belly, belly! Where are you going?" 117a (Patient:)

117b (Belly:) "In order to inflict pain on (lit. eat) the belly of the young man!

For me to crush the belly of the young woman!"

118a (Patient:) "You should not inflict pain on (lit. eat) the belly of the young

man! You should not crush the belly of the young woman!

118b-119 Eat the belly of the ox in the pen, the belly of the ram in the fold

(and) the belly of the pig in the pigsty!"

120 (Commentary:)

That is: the belly and the head were speaking (to each other): "Without a hole the wind cannot . . . to the anus the way that the

snake of the vineyard . . . to the back of the . . . "60

This dialogue, like the expected dialogue between Marduk and Ea, aims at solving a medical problem, but rather than spelling out an illness and its divinely approved treatment, it focuses on expelling the "pain" that is in the patient's body and sending it on to a less important host such as an ox, ram or pig. The usual way of expressing pain in Akkadian is to combine a verb meaning "to eat", typically $ak\bar{a}lu$, with a case-marking arrangement in which the locus of the pain is the subject of akālu, while the person suffering from the pain, viz. the experiencer, appears as a pronominal object on the verb, historically a dative pronoun. This scenario is complicated somewhat by the fact that the "locus" of the pain, particularly in a personification like this, can easily be transformed into the "source" or even the "causal agent" of the pain, particularly in reference to internal illnesses for which no obvious cause can be observed. This grammatical configuration is wonderfully personified in the dialogue: the patient addresses his own stomach, asking that the locus/ source of the pain in his own belly to depart and find a new, preferably non-human host.⁶¹ The highly formalized dialogue between an exorcist and his god Ea in the Marduk-Ea formula is replaced, here, with a dialogue in which a patient speaks to his own belly about passing gas.⁶²

⁵⁹ 117. [ÉN ŠÀ-bu ŠÀ-bu e-ki-a-am tal-lak ŠÀ-bi GURUŠ ina] 「GU,"-ia ŠÀ-bi KI.SIKIL ana GAZ-ia

^{118. [}ŠÀ-bi GURUŠ la ta-kal ŠÀ-bi KI.SIKIL la ta-ha-pi a-kul] ŠÀ-bi GU, ina úr-re-e li-kul

^{119. [}ŠÀ-bi UDU.NÍTA ina šu-pu-ri] 'ŠÀ'-bi ŠAH ina a-sur-re-'e'

^{120.} ša DU₁₁.GA ŠÀ-bi SAG.DU ba-lu hur-ru TU₁₅ ina šu-bur-<ri> GIM ṣer-ri GEŠTIN a-na EGIR KA 'x x'.

⁽BAM 574 includes only the dialogue itself in lines 117-119; the commentary in line 120 is only found in the version in STT 252, lines 21-26. The line in BAM 574 that corresponds to STOMACH 1, line 120, viz. BAM 574 ii 55, may contain a closing line, attributing the incantation to the gods, but the traces show [...] \times LUH² u^{-1} u^{-1} 96) cites lines 118b-119 and translates asurrû as "sewer", but the parallels earlier in the line suggest the place where pigs are typically kept, hence "pigsty".)

⁶⁰ The "snake of the vineyard" is a known figure elsewhere in the incantation tradition: most of the key sources for it are assembled in Finkel 1999: 223-229, including the reference to muš gišgeštin-na in CBS 7005 and several Akkadian orthographies (pa-ar-ba-la and bur-ru-ba-la-a in IM 51292 and IM 51328) that may go back to the muš bùru-da "snake of the hole" (Geller suggests, apud Finkel 1999: 225, that these Akkadian orthographies may be calquing the Sumerian expression bùru bal "hole digger"). If so, the kenning ba-lu hur-ru "without a hole" in STOMACH 1, line 119, may be a transformation of bu-ru-ba-la-a or something similar; this series of kennings may even extend back to bu-ur-bu-ra in the Old Assyrian text kt k/k 23 (Hecker 1993: 285). For the use of kennings in Norse poetry, where the term originates, see Holland 2005; the terms under discussion here would only qualify as kennings if these different "snakes" typically referred to the gastrointestinal system, but this still needs to be demonstrated. The original context for this series of kennings may have been the parallel phraseology in line 5 in both IM 51292 and IM 51328: i-ru-ub hu-ra-am ú-ṣi nu-ṣa-ba-am "it entered the hole, went out by the drainpipe." The epithet applied to the "snake of the vineyard" in CBS 7005, lines 14b-15, viz. ša it-ti wa-ši-pí-šu / im-ta-aḫ-ṣú, "the one who does battle with the exorcist" (translation Finkel) may also have motivated its appearance here.

⁶¹ There may even be a more specific intertextual link between STOMACH 1 ii 52-55 and CT 4, 8a, since in CT 4, 8a, above in lines 33-34, the non-humorous, \bar{a} sipūtu incantation states that "whether (the patient is) a human being, an ox or a sheep" (lú hé-a g[u, hé]-a udu hé-a = lu-ú a-wi-lu-tum lu-ú al-pu lu-ú im-me-ru), one should treat constipation with a lump of salt. In STOMACH 1 ii 52-55, however, the patient seeks to move the pain, precisely, from his own stomach to a domesticated animal such as an ox or a sheep.

⁶² Geller (2007a: 396-397, citing Cadelli 2000: 215) points to the humor to be found in incantations like this, and even provides us with a further example of body-part personification later on in the third chapter of STOMACH, lines 109-114 (= BAM 578 ii 39-44; Collins 1999: 230-231), "in which the bile addresses those eating and drinking beer and says, 'when you eat food and drink beer, I will pounce upon you and you will belch like an ox" (translation Geller); here the personification is clearly the source rather than the locus.

Beyond a mere parody of the Marduk-Ea formula, the common feature in these two incantations, the "Hand of the steppe" incantation in lines 86-92 and the Dialogue between Patient and Stomach in lines 117-120, is the marked absence of Marduk and his stand-in, the exorcist. The fundamental contrast between the typical Marduk-Ea formula and the parody found in these two short incantations is further strengthened by a host of secondary features. The incantations used by the exorcist were normally Sumerian or bilingual, as in the snippet from CT 4, 8a, above, and even when written in monolingual Akkadian, they often appeal to idioms and norms found in the Sumerian tradition. In contrast, the incantations found in the STOMACH 1 cluster are entirely Akkadian, never bilingual, and seemingly drawn, to a great degree, from vernacular or folk parodies of the incantations used in exorcistic healing (\bar{a} sip \bar{u} tu). Given their humorous and scatological tenor and the omission of the exorcist, it is even possible that some of these incantations came into existence as full-fledged parodies in direct opposition to existing $\bar{a}sip\bar{u}tu$ incantations for gastrointestinal disease. Whereas the sedate metaphors found in CT 4, 8a, e.g. a covered box (ki-ma pí-ša-an-ni ka-at-m[u], line 2), the water in a well that does not flow, lit. without a wave (ki-ma me-e bu-ur-ti a-gi-a ú-ul i-šu), or a covered brewing vat (ki-ma ka-ak-ku-li [...] ka-ti-im), are descriptively adequate, they have none of the humor, dynamism or imagination found in the vernacular tradition. Worthington, in a study of comic portrayals of physicians in Akkadian literary works, has emphasized that doctors were often the butt of jokes because of "certain simple cross-cultural constants in how healers interact with their patients, such as their use of difficult language, their need for remuneration, and their privileged access to and control over the patient's body" (Worthington 2010: 26). Some of these universal features can, indeed, be found in the STOMACH treatise such as the *locus classicus* for payments to Gula (and by implication the doctors who represent her), namely dgu-la TI.LA qiš-tu, TI-e "O Gula! Heal (him)! Accept your fee!" in STOMACH 1, line 116, but the STOMACH treatise does not seem to revel in these universally humorous features of physicians in the way that a self-evident parody of medical practice like The Poor Man of Nippur does. Instead, the object of ridicule in the cluster of incantations in STOMACH 1 seems, almost always, to be the hoary tradition of exorcistic healing, in particular the heavily-staged Marduk-Ea formula. 63

The omission of the exorcist from these parodies and their seemingly folkloristic character raises, quite emphatically, the question of the social context that generated medical incantations in the first place. Worthington, for example, argues for a close connection between pharmaceutical medicine and cooking recipes, at their point of origin, largely on the basis of ethnographic parallels and similarities in the ingredients and procedures used in both practices, a proposal that might suggest a folk or vernacular context for Babylonian medical incantations as well. ⁶⁴ Geller, in contrast, while acknowledging the quite different uses to which medical and exorcistic incantations are put in later compendia, largely abstains from speculating on their original context:

It might seem logical to assume, therefore, that medical incantations were composed by the $as\hat{u}$, at the same time as he compiled his recipes, while incantation tablets were composed by the $\bar{a}sipu$. In fact, no such assumption can be proven. We do not know who composed any of the incantations in the various compendia....⁶⁵

Geller's skepticism is well taken, and we cannot really know about specific historical contexts of composition, but, none-theless, recent work on the *mannam lušpur* formula in Old Assyrian incantations, now summarized nicely by Barjamovic (2016), may provide a useful way forward. The Old Assyrian incantations display a surprisingly broad array of uses for the *mannam lušpur* formulae (*mannam lašpur* and variants in the Old Assyrian dialect), in a context that really must be seen as a vernacular tradition, though already at one remove from the originating context in Babylonia. As Barjamovic puts it:

There is evidence to suggest that the Assyrian incantations from Kültepe were indeed written products of a "pool" of traditional magic that combined "master texts" and oral tradition. Written practice might itself be fluid in structure, and altered easily according to need: magic could be stored in writing if desired, or turned into talismanic form to act its spell by itself.⁶⁶

⁶³ For a detailed survey of the non-comedic means of referring to internal organs and digestive processes, see Stol 2006. On the other hand, if we are looking for comedic descriptions of internal processes, of course, we could easily turn to Bakhtin's famous discussions of Rabelais, himself a physician, and especially the mocking language of the "quack and the druggist at the fair" as well as the comic literature on gout and venereal disease (Bakhtin 1984: 161).

⁶⁴ Worthington 2003: 9-11.

⁶⁵ Geller 2007a: 393.

⁶⁶ Barjamovic 2016: 55.

Barjamovic is arguing for an analytical framework that focuses on textual criticism, in particular the text-critical notion of a "fluid tradition" rather than the reconstruction of originating contexts, and this is, in my view as well, the only profitable way of approaching these materials.⁶⁷

There are important similarities between the Old Assyrian birth (and secondarily jaundice) incantations studied by Barjamovic and the incantations assembled, a thousand years later, in the incantation cluster in STOMACH 1, and these similarities provide us with several anchor points within this fluid tradition. Foremost among these is the mannam *lušpur* formula itself. The key passage in the Old Assyrian incantations reads as follows:

ma-re-ki-na ù ta-áp-šu-kà-té-ki-na li-gí-a-nim-ma ba-áb a-ra-ah-tim ha-ba-tum hu-ub-ta Take up your spades and your baskets and clear the canal gate!

The version in STOMACH 1, line 113, repeated from the beginning of the paper goes like this:

liš-šá-a gišMAR.MEŠ šá KÙ.BABBAR u ki-din-né-e šá KÙ.SIG, li-pat-ta-a ÍD.MEŠ May they bear shovels of silver and spades of gold! May they open up the waterways!

Standing at opposite ends, as it were, of the mannam lušpur tradition, these two versions of our thread of Ariadne differ from each other in vocabulary (the only common term is Akk. marru "shovel"), word order and even the grammatical person of those bearing spade and hod.⁶⁸ Nonetheless, these two versions of the "same" line represent the most important anchor in this fluid tradition.

The other element of the incantation cluster in STOMACH 1 that reaches back to this primordial phase in the mannam lušpur tradition is the ambiguity of Akk. sēru as either "snake" or "steppe" in two otherwise quite similar Old Assyrian incantations: the Assyrian form *şa-ru-û ki-ra-nim* "snake of the vineyard" in kt 90/k 178, line 19, is a straightforward Assyrian rendering of the Babylonian form sēr karāni, while it is left unrendered, still in its Babylonian dialect form, in i-na se-er / ki-ra-nim, which in Assyrian can only mean "in/on the vineyard" in kt 94/k, 429, lines 21-22 (though accompanied by *li-ší-lam* "let it slither forth" at the beginning of line 21). As Barjamovic observes, "[t]he author seems to have mistaken the Babylonian word for "snake" as an Assyrian preposition ina şēr and produced a sentence that makes no real sense."69 This necessarily implies a point of origin in southern Mesopotamia, 70 since the practiced ambiguity of şēru as either "snake" or "steppe" only exists in the Babylonian dialect. 71 Both ṣēru for "steppe" and ṣēru for "snake" are found in the commentary in STOMACH 1, line 120, and this paronomasia also provides a link between şēru for "steppe" in STOMACH 1, line 88 and sēru for "snake" in line 120.

⁶⁷ Barjamovic (2016: 54) frames the question of oral tradition - a useful proxy for fluid textual traditions in some ways - in terms of a contrast between Farber's 1990 paper on the mannam lušpur formula and Michalowski's 1992 statement that "at least as far as the Sumerian incantations were concerned, one can reconstruct a written tradition that extends as far back as the earliest literary texts" (Michalowski 1992: 321, apud Barjamovic 2016: 55). But if Farber is describing the vernacular (and partially oral) tradition of the mannam lušpur formula, while Michalowski is describing the Marduk-Ea tradition, they may simply be speaking past one another.

⁶⁸ Michel (2004: 408) translates habātu with "dégager" = "to clear, to free" but goes on to explain that "le verbe habātum, généralement em $ploy\'e \ dans \ le \ sens \ «piller, voler» \ signifie \ aussi \ «arracher, enlever, d\'eblayer». \ L'expression \ \textit{hubta habātu} \ peut \ donc \ se \ comprendre \ «d\'eblayez \ peut \ donc \ se \ comprendre \ (deblayez \ peut \ donc \ peut \ peut \ donc \ peut \ don$ (la terre à) déblayer». The same position in the version found in STOMACH 1, line 113, has a form of petû "to open", so one might suspect a banalization of the underlying verbal root from habātu to petû.

⁶⁹ Barjamovic 2016: 58. Of course, if someone recognized the purposeful ambiguity of şēru in the Babylonian tradition, this might have led them to leave it in its Babylonian form.

⁷⁰ In the interests of clarity, it should be reiterated here that the mannam lušpur tradition must have originated in Babylonia; see Barjamovic's summary of forthcoming work from Kouwenberg: "the incantations from Kültepe contain a significant number of Babylonian elements that include single words and phrases, grammatical and syntactic features. The geographical origin of the genre is further proven by the fact that the gods invoked in the incantations mainly come from the south: Anum, Ea, Nin-karrak, Nin-kilili and Šassur" (Barjamovic 2016: 52).

⁷¹ See n. 60 above for some of the specifically Babylonian evidence.

1	86-92 (ii 21-27)	Belly 25 (pp. 166-168)	7 lines
2	<u>111-116 (ii 46-51)</u>	Belly 9 (pp. 134-137)	<u>6</u>
3	117-121 (ii 52-?)	Belly 21 (pp. 160-162)	<u>Unclear</u>

As we can see in this extract from the beginning of the incantation cluster, the incantations that precede and follow the shovelling-out-the-intestines incantation in lines 111-116, namely Belly 25 in lines 86-92 and Belly 21 in lines 117-121, both make significant use of the ambiguity of *ṣēru*. What is entirely missing from the Old Assyrian precursors, however, are the elements that parody the Marduk-Ea formula (and by implication critique the discipline of $\bar{a}sip\bar{u}tu$), elements that seem to be present, a thousand years later, in Belly 25 and Belly 21.72

Only familiarity breeds contempt, and there is no evidence for the Marduk-Ea formula in Old Assyrian Kanesh. This lines up nicely with the complete absence of any evidence for the discipline of $\bar{a}sip\bar{u}tu$ in Old Assyrian Kanesh, and it suggests that we can draw a rather strict distinction between a vernacular tradition that typically invokes the mannam *lušpur* formula and a likely older tradition, at least in its written form, that makes use of the Marduk-Ea formula. Barjamovic offers a survey, broadly conceived, of the "healing professions" in Old Assyrian Kanesh,⁷³ and the "exorcist" (āšipu) is not numbered among them. This means that the parody of the Marduk-Ea formula in STOMACH 1, lines 86-92 and 117-120, must have entered into this tradition at a later date, after the heyday of the Old Babylonian and Old Assyrian incantations at the beginning of the second millennium BCE (and presumably after a clear disciplinary split between $as\hat{u}tu$ and $\bar{a}sip\bar{u}tu$ had taken place). Parody presupposes familiarity, so it is likely that this kind of parody arose in the off-line joking of Babylonian physicians ($as\hat{u}$), about the rival discipline of the exorcists ($\bar{a}\check{s}ipu$), in the latter phases of the second millennium BCE, but of course we have no concrete evidence for this. Presumably this type of interdisciplinary humor went in a number of directions: the exorcists mocking the physicians, the physicians ridiculing the exorcists, and the non-professional public laughing at both for the usual reasons outlined by Worthington above. Decorum would have prevented most of these parodies from entering the textual record in the second millennium BCE, 74 but perhaps the interdisciplinary struggle between \bar{a} sip \bar{u} tu and as \hat{u} tu had grown cold in the early first millennium, 75 allowing the editors at work in Ashurbanipal's Library to include these parodies in the cluster of incantations found in STOMACH 1.

4 The Continuum of Allegoresis in Babylonian Medicine

If we were to take for granted the "etiological secularism", viz. the avoidance of ghosts and demons as causal agents, in STOMACH 1, as a self-evident, general feature of the medical tradition in Mesopotamia, it would be easy enough to construct a simplistic Whig history of Babylonian medicine: having cast off the false beliefs of the exorcistic healers, the humble Babylonian physician could then be portrayed as a man of science, pursuing empirical truth in the face of powerful institutional opponents, Galileo in Mesopotamian dress.⁷⁶ If this were the case, however, we might reasonably

⁷² It might be suggested that the reference to "daughters of Ea" in the Old Assyrian incantation against the black dog, kt a/k 611, line 10 (Farber 1990: 305-306), represents some awareness of the Marduk-Ea tradition, but in the absence of any other evidence for the Marduk-Ea tradition in Kanesh, I find this unconvincing.

⁷³ Barjamovic 2016: 72.

⁷⁴ One clear exception to the otherwise strict separation of the mannam lušpur and Marduk-Ea materials is BAM 538 iv 44' // AMT 23/6: 12, part of TEETH 1, where the text asks "Whom shall I send to Asalluhi, the eldest son [of Ea]?" (man-nu lu-uš-pur a-na dASAL.LÚ.HI DUMU.SAGti-i [ša dé-a]), with the usual protagonists of the Marduk-Ea formula appearing in a mannam lušpur formulation. But this occurrence in the medical corpus may also represent a parody of some kind.

⁷⁵ The existence of polymaths like Urad-Gula, for example, who was both deputy chief physician and chief exorcist at different points in his career (see Parpola 1993: xiv, xxv, but note that none of the scholars listed in SAA X, no. 160 master both āšipūtu and asûtu) shows that the disciplines were not exclusive in the Neo-Assyrian period. It is noteworthy, for example, that the physician $(as\hat{u})$, regularly listed among the five disciplines in the Neo-Assyrian scholarly correspondence, is no longer a distinct profession in the roster of professions found in the book of Daniel (see Parpola 1993: xxxiv, n. 1).

⁷⁶ Thus, I must reject Steven Weinburg's limited use of Whig history, in the context of the history of science ("Eye on the Present – The Whig History of Science," NYRB December 17, 2015, see also the rebuttal from Arthur Silverstein in the next issue) not because of philosophical or historiographic objections (although these exist as well), but because Whig histories of Mesopotamian technical works lead us to ignore nearly everything that is distinctively Mesopotamian about them.

expect the Babylonian medical treatises to be entirely free from designations such as "Hand of a ghost", but this is clearly not the case. The puzzle that we face, in looking at the full expanse of the Babylonian medical treatises, is that some treatises such as STOMACH 1 contain few if any references to causal agents such as these, while other treatises such as CRANIUM 3 are full of "Hand of a ghost" symptomatologies and the incantations that usually accompany them. This heterogeneity is not found in the compendia used by the exorcists such as *Utukkū Lemnūtu* and similar series; mannam lušpur incantations do not occasionally pop up in *Utukkū Lemnūtu* tablets, but the type of formal, Sumerian or bilingual incantations in which an interaction between Asalluhi/Marduk and Enki/Ea plays a key role do appear in CRANIUM 3 and other similar strata in the medical treatises.⁷⁷ It is this heterogeneity of tradition within medical treatises such as STOMACH 1 and CRANIUM 3 that requires our attention here. Only if these seemingly disparate materials can be comprehended within a single system of thought, can a hypothesis about the ideological significance of the clusters of incantations found in the medical treatises be maintained.

In order to make sense of this heterogeneity, I propose that a "continuum of allegoresis" existed within Babylonian medicine and, as a consequence, materials that ostensibly refer to ghost-induced models of illness were, in fact, divested of their metaphysical significance and used, within the discipline, as mere labels for observable symptoms. More concretely, this would mean that references to "Hand of a ghost" and similar designations within a diagnostic statement refer to the symptoms traditionally associated with ghost-induced illness, without necessarily buying into the etiological models that gave rise to this terminology. If this is true, it would suggest that different degrees of allegoresis may be found within different parts of the Babylonian medical corpus: STOMACH 1 includes very little material that presupposes ghost-induced etiologies, so no allegoresis is needed there, but CRANIUM 3, sitting squarely in the midst of a traditional bastion of ghost-induced symptomatologies could not be radically denuded of "Hand of a ghost" as a diagnosis, in part because empirical phenomena such as headache, tinnitus or visual hallucinations had been classified as examples of the direct perception of ghosts. I suggest that in these latter cases, where traditional "Hand of a ghost" symptoms could not be expunged, they were regularly reinterpreted, via allegoresis, as empirical symptoms, but of illnesses that could be treated pharmacologically rather than through incantation and ritual. This idea is not new and my presentation of it draws, in particular, on Heeßel's 2007 paper ("The Hands of the Gods: Disease Names, and Divine Anger"), in which he outlines a number of key components of the approach pursued here; I argue, however, that these components make a great deal more sense situated within a broadly conceived notion of Mesopotamian allegoresis. Once this framework is in place, presupposing, as it does, a fundamental contrast between Babylonian medicine ($as\hat{u}tu$) and exorcistic healing ($\bar{a}\check{s}ip\bar{u}tu$), I return, in conclusion, to some evidence for competing schools of thought within Babylonian medicine itself, focusing in particular on collections of incantations, such as BAM 508 and K. 5416a+, that reassert, or so it seems, ghost-induced models.

Nils Heeßel has argued that the divergent orthographies for "Hand of a god", "Hand of a goddess" and "Hand of a ghost", within compendia assigned to the two disciplines of exorcistic healing (āšipūtu) and Babylonian medicine (asûtu), actually represent distinct phonological renderings, in Akkadian, of the underlying Sumerogram. If we return to the example of SU GIDIM(.MA) or alternatively SU GIDIM,(.MA) for "Hand of a ghost", it appears that medical treatises typically rendered Sumerograms like this by directly adopting the Sumerian phonology as in *šugidimmakku*, while the exorcists calqued and translated each of the two lexical items separately, viz. qāt etemmi, in The Diagnostic Handbook. 78 Heeßel draws out a series of orthographic contrasts for these three seemingly identical terms in the medical treatises and The Diagnostic Handbook as follows:

⁷⁷ The Marduk-Ea formula per se seems to be quite rare in the first millennium BCE medical corpus: the two occurrences known to me are (i) two fragments from EYES, viz. AMT 18/1 lines 2'-4', and AMT 8/3 lines 9'-11' (= Eyes 13, in Collins 1999: 224), and (ii) one occurrence in BAM 244 rev. lines 51-52. But we should not let this distract us from the prevalence of formal, Sumerian incantations within certain parts of the medical corpus. It is particularly telling that in CRANIUM 3 the healing goddess Gula only appears in the colophon, while Asalluhi appears no less than eight times.

⁷⁸ Heeßel cites two attestations of syllabically-written forms, both of which are from Meier's edition of the second tablet of bīt mēseri: šudingir-ra-ki and šu-gidim-ma-ka in lines 35-36 (Meier 1944: 142, apud Heeßel 2007: 122).

Expression	Form typically used in medical treatises (= expected pronunciation in Akkadian)	Form typically used in <i>The Diagnostic Handbook</i> (= expected pronunciation in Akkadian)
Hand of a god	ŠU.DINGIR.RA	ŠU DINGIR
lland of a moddon	(= šudingirrakku) ŠU.INNIN.NA	(= qāt ili)
Hand of a goddess	SU.INNIN.NA (= šu'inninnakku)	ŠU ^a iš-tar/ ^a iš-tar ₂ / ^a XV (= qāt ištari)
Hand of a ghost	ŠU.GIDIM.MA/GIDIM ₇ .MA (= <i>šugidimmakku</i>)	ŠU GIDIM/GIDIM $_2$ /GIDIM $_7$ (= $q\bar{a}t$ $etemmi$)

Although the orthographies for "goddess" (Akk. ištaru) are quite distinct, for the most part the two sets of orthographies are distinguished by explicit indication of the Sumerian genitive case in the forms found in the medical treatises: RA, NA and MA all mark the Sumerian genitive /-ak-/ in the Sumerograms and this is an indication that these forms are to be read with a Sumerian reading even in Akkadian:⁷⁹

Sumerogram	ŠU	GIDIM	-ak vs. Ø	-u vsi
Direct reuse of Sumerian phonology (rendering in the medical treatises)	šu	gidimm	ak(k)	u (Nominative)
Akkadian equivalent (rendering in <i>The Diagnostic Handbook</i>)	qāt	eţemm	Ø	i (Genitive)
Meaning ("Hand of a ghost")	'hand'	'ghost'	Sumerian genitive case	Akkadian case ending

This orthographic contrast suggests that the Babylonian physicians were using the Sumerogram as a frozen label for a disease name, whereas the translation of the underlying Sumerogram into Akkadian in The Diagnostic Handbook, the key compendium for the exorcists, suggests quite the opposite, namely that "Hand of a ghost" was not a mere label for the exorcists, but rather represented for them a living etiology of the illness.80 Whereas the ordinary translation into Akkadian in *The Diagnostic Handbook*, viz. qāt eṭemmi, represents the traditional use of the phrase to designate a supernatural agent named "Hand of a ghost", the frozen use of the Sumerian expression in the medical treatises, viz. šugidimmakku, should, in my view, be seen as a form of "allegoresis", viz. a demythologized use of a conventional term to designate observable realities.

In designating this form of demythologized use as "allegoresis", I am following in the terminological footsteps of Glenn Most, who has used this term to describe a Greco-Roman hermeneutical practice, found in the Derveni Papyrus for example, that posits

another level of signification . . . concealed behind the gods and their actions narrated in the apparent, surface meaning of the poem, ... [in] which the poet is talking not about characters and their psychologically motivated behavior but instead about material elements and their mechanically produced interactions and that it is in fact not the manifest superficial meaning but instead this second, hidden level that reflects the true intention of the poem as conceived by the author.81

⁷⁹ Due to an orthographic convention in Sumerian, only the initial vowel, namely /a/, of the Sumerian genitive /ak/ is consistently represented in the orthography: the doubling of the preceding consonant (known by the German term Auslaut) is merely part of this orthographic convention. The consonantal element of the Sumerian genitive, namely /k/, only appears in the orthography when it is followed by another bound morpheme.

⁸⁰ As Heeßel emphasizes, the orthographies that include the Sumerian genitive, typical of the medical treatises, also appear in the Diagnostic Handbook, but almost exclusively in the protases, describing symptoms, rather than in the apodoses, describing causal agents (Heeßel 2007: 123-125). Both Heeßel (2007) and Geller (2011) have pointed to the thirty-third chapter of The Diagnostic Handbook (see Heeßel 2000: 353-374), where ŠU + <deity name> phrases are equated with conventional disease names, as a key text. It is certainly a key text for disease typology, but the three phrases that we are looking at here (ŠU.DINGIR.RA, ŠU.INNIN.NA and ŠU.GIDIM.MA) do not appear in that text. There are a few references to ŠU diš-tar, but these are almost certainly references to the specific deity Ishtar rather than the generic term for goddess.

⁸¹ Most 2016: 54.

Most's references to psychological motivation and authorial intention do not fit very well into the context of a Mesopotamian incantation or technical treatise, but the main contention of Most's definition is perfectly apt. An exorcist, approaching a patient with ringing in the ears and a splitting headache, will see these symptoms as a direct consequence of contact between the hand of a ghost (Akk. qāt eţemmi) and the patient (and will respond with rituals and incantations aimed at mollifying or removing the ghost), whereas a Babylonian physician, faced with the same symptoms, may still refer to these symptoms as "Hand of a ghost" (Akk. *šugidimmakku*), but only so as to apply a conventional label to the symptoms and arrive at the correct pharmaceutical remedy. This looks very much like the exemplum used in Most's own exposition of the term, namely Orpheus's designation of the goddess Night as a nurse in columns 10 and 11 of the Derveni Papyrus. The author of the Derveni Papyrus, in Most's account, asserts that "in calling it [scil. night] 'nurse' he [scil. Orpheus] shows in a riddling way [ainizetai] that everything that the sun heats and dissolves, the night reunites in cooling" (col. X, lines 11-12), and as Most goes on to comment, "[t]he goddess named 'Night' becomes the natural condition called, 'night,' and the attributes applied to her are reformulated in such a way that they can apply to [the natural condition]."82 Most focuses here on commentary, as the key genre for recognizing allegoresis, and so perhaps we should briefly look at a similar example in the cuneiform record.

One of the most intriguing examples of an allegoretical interpretation in a Mesopotamian commentary is found in a commentary on Marduk's Address to the Demons (tablet 11 of Utukkū Lemnūtu), namely BM 47529+BM 47685, which M. Geller has investigated in his recent volume on melothesia.⁸³ This commentary reinterprets a hymn of self-praise, in which Asalluhi describes his own appearance and attributes, as a series of references to the signs of the zodiac (commentary is indented below, XI 65 and XI 66 refer to the position of the annotated text in *Utukkū Lemnūtu*):

- I am Asalluhi, seer who gives decisions, who assigns lots: Region of Sagittarius; diviner and dream-interpreter: lots (halhallu): hal = "divination", hal = "secret".
- 7 (= XI 66)I am Asalluhi, who reveals (the meaning) of cuneiform wedges, who destroys the evil and the wicked:

Capricorn; under this command he observes all. The depth of the waters of death: they are the depth of heaven: the hypsoma of Mars, a shining star and its reddening: bùr = "hole (in the liver)", bùr = "depth", bùr = "Mars".84

Inscribed at roughly the same historical moment as the Derveni Papyrus, though more than 2500 kilometers to the east, commentaries like this combine etymology (Sum. hal = "divination") and allegoresis (Asalluhi as seer who assigns lots = "part of the constellation of Sagittarius"), but it is the allegoresis here that is new: the reinterpretation of Asalluhi's attributes as observable zodiacal signs.85 The occurrence of a rather explicit example of allegoresis in the most ideologically-charged tablet of *Utukkū Lemnūtu*, itself the most important compendium for exorcistic practice (āšipūtu), shows that allegoresis, in one form or another, was an allowable and fitting hermeneutical technique in even the most conservative of the Mesopotamian disciplines.

What I would like to suggest, here, is that this type of allegoresis also plays a particularly important role in Babylonian medicine. What complicates its recognition in the medical treatises, however, is that allegoretical interpretations of ŠU.GIDIM.MA "Hand of a ghost", for example, were implemented in some medical treatises such as CRANIUM 3, while in other treatises such as STOMACH 1, the same purposes were achieved by simply removing references to SU.GIDIM.MA and the corresponding Marduk-Ea incantations (or, as we saw earlier, offering a parody in their place). Indeed, it is telling that the very few occurrences of ŠU.GIDIM.MA that do occur in the STOMACH treatise turn up,

⁸² Most 2016: 54.

⁸³ Geller 2014: 60-64.

⁸⁴ The original reads (Geller 2014: 61):

^{6 (=} XI 65). GE U-hi MHAL EŠ.BAR pa-ri-is hal-hal-la: KI málPA.BIL.SAG MHAL u MŠá-'-i-lu: hal-hal-la: HAL: bi-ri HAL: pi-riš-tú

^{7 (=} XI 66). GE U-hi pe-tu-ú sat-tak-ku mu-hal-líq şe-nu u rag-gu : SUHUR.MEŠ ina qí-bit-su ina-aṭ-ṭal DÙ šu-pul me-e mu-ú-tú [: š]u-pul šá AN-e šú-nu : ʿÉʾ ni-ṣir-tú šá ˈsal-bat-a-nu MUL ṣar-hu ṣar-[rip-t]u-šú : BÙR : ši-la ʿ:ʾ BÙR : šu-pul : BÙR : ˈsal-ba-ta-nu

⁸⁵ Myerston (2013) has described some Mesopotamian precursors such as Enūma eliš for the etymological reworking of divine names in the Derveni Papyrus, but of course this approach to etymological and etymographic reinterpretation of divine names is first attested, much earlier, in the middle of the third millennium BCE; see Johnson 2014b for an overview.

entirely, within stereotyped rubrics and labels. 86 Simply put, there is no need, within the STOMACH treatise, for allegoretical reinterpretations and this fact locates STOMACH near zero on a continuum of allegoresis within the medical record. At the other end of this continuum of allegoresis, however, we find materials such as the cluster of incantations in CRANIUM 3, where ŠU.GIDIM.MA is described as "seizing" the patient and, alongside pharmacological responses, we also find a number of treatments that would normally be associated with exorcism (Akk. āšipūtu), and even a litany that could easily derive from *Utukkū Lemnūtu*. Clusters such as this, within the medical treatises, must, in my view, have been subjected to a great deal of allegoresis, perhaps even extending to the third chapter of the CRANIUM treatise as a whole.⁸⁷ Either way, the references to SU.GIDIM.MA in the symptomatologies in CRANIUM 3 would still, according to Heeßel's proposal, be read as *šugidimmakku* rather than *qāt etemmi*, and it is passages such as this that would represent the maximal degree of allegoresis along the continuum proposed here. There do seem to be other concrete indications of allegoresis beside the orthographic contrasts identified by Heeßel, such as the euphemistic use of Akk. šipru 'work, activity, effect' (usually written KIN) before ŠU.GIDIM.MA,88 but the most important piece of evidence, in favor of widespread allegoresis, is the strict avoidance of explicit causal statements in the medical treatises.

5 Avoiding the Tainted Language of Causation

Like so many other aspects of scientific or technical knowledge in ancient Mesopotamia, the language of causation was rooted in juridical terminological and practice. As Rochberg has made clear on several occasions, the casuistic, "If P, then Q" structure of Mesopotamian scientific and technical literature provides us with a minimum threshold: omen collections of all kinds, including the omens found in *The Diagnostic Handbook*, were formulated as lists of cases, each in the form of an "If P, then Q" statement. As Rochberg has recently put it:

... omen statements were formulated in just the same way as the "laws" in law collections, that is, in conditional sentences introduced by the subordinating conjunction of "if" (*šumma*).

Just as in Hammurapi's or the other law codes where case rulings represent what was (theoretically) decided by the judge in the case of P, so the omen statements refer to what was "ruled/decided" by the gods, in the event of P, where P is some possible ominous phenomenon.⁸⁹

Rochberg is frying bigger fish, in this passage, than the indirect coding of epistemological values through juridical textual forms, in particular the logical coherence of the omen collections as an expression of scientific thought. But we should bear in mind that there are features of *The Diagnostic Handbook*, such as the use of depersonalized case histories and explicit statements of cause, that more closely resemble the legal compendia than what we find in the non-medical omen collections. We have looked at the genesis of depersonalized case histories earlier in this paper, but explicit statements of cause do exist and are crucial in any consideration of the use of legal models in scientific literature.

Within both jurisprudence and the more traditional discipline of exorcistic healing (āšipūtu), the Akkadian preposition aššum is used to mark the decisive causal element in a complex legal or exorcistic situation. Martha Roth (2001) offers a detailed description of its use in legal situations, emphasizing that "the aššum clause provides an indication of

⁸⁶ The only occurrence of ŠU.GIDIM.MA in the entire STOMACH treatise is in STOMACH 5 (= BAM 579) iii 19', where it comes at the end of a section, presumably in a fixed phrase for a "lotion" (Akk. marhaşu) or "salve" (Akk. napšaltu) directed at a number of illnesses, including ŠU.GIDIM.MA. The similar passage in lines 54'-55' in the preceding column of the same tablet (BAM 579 ii 54'-55') does not preserve ŠU.GIDIM.MA, although nearly all of the duplicate texts that Cadelli assembles for these lines do (Cadelli 2000: 258).

⁸⁷ It is noteworthy that CRANIUM 1 contains no references to GIDIM or ŠU GIDIM(.MA) (Worthington 2005), while CRANIUM 2 (Attia and Buisson 2003) has only three references to GIDIM, all in juxtaposition to standard descriptions of headache: ina DAB-it GIDIM in line 166', ina DAB ŠU GIDIM in 169' and ina DAB GIDIM [...] in line 222'. We should not infer, in my view, from passages like this, that Babylonian physicians were regularly performing Marduk-Ea style incantations or reciting passages from Udug-hul/Utukkū Lemnūtu; instead, it is much more likely that these exorcistic materials are included within CRANIUM 3 simply as examples of the type of incantations traditionally appropriate to headache (rather than a standard or recommended course of medical treatment).

⁸⁸ See the discussion in Scurlock 2006: 521-522.

⁸⁹ Rochberg 2016: 187-188.

the gravamen, that feature of a given case that leads the judges to a specific penalty determination," before citing, as a prime example, §146 from the Laws of Hammurapi: 90

šumma awīlum nadītam īhuzma amtam ana mutīša iddinma mārī ittalad warkānum amtum šî itti bēltīša uštatamhir aššum mārī uldu bēlessa ana kaspim ul inaddišši abbuttam išakkanšimma itti amātim imannuši

If a man marries a *nadītum*, and she gives a slave woman to her husband, and she (the slave) then bears children, after which the slave woman aspires to equal status with her mistress - because she bore children - her mistress will not sell her; she shall place upon her the slave-hairlock, and she shall reckon her with the slave women. (translation Roth)

As Roth emphasizes, the aššum clause, **bold** and **underlined** above, does not provide us with new information, since the same semantic content is provided earlier in the case, viz. mārī ittalad, "she (= the slave) bore children"; instead, the aššum clause picks out the single element within a complex situation that is decisive for the judgment. In the statute cited here, one might infer, quite differently, that the status of the female slave's owner, as a *nadītu* priestess, might have prevented her from selling the slave, but no, the causal statement aššum mārī uldu "because she bore children" picks out the single decisive cause of the judgment. Heeßel, in the same paper in which he defined the contrast between qāt eṭemmi and šugidimmakku, also collected occurrences of the aššum construction in The Diagnostic Handbook such as the following:91

Diagnostic Handbook, chapter 17, line 79

DIŠ ina GE, GIG-ma ina ka-sa-a-ti ba-lit ŠU dUraš aššum(MU) DA[M LÚ]

If he is sick in the night and healthy in the morning: It is "Hand of Uraš," because of the wife of (another) man.

Like the gravamen in the legal cases studied by Roth the aššum phrase in this entry from The Diagnostic Handbook gives us the cause of the illness, here presumably a case of "illicit sexual contact". ⁹² Here, however, no longer operating within a human juridical context, the aššum statement sketches out – if we can draw on Rochberg's paradigm – a Quinean "causal chain" or "rudimentary theory of the world" rather than a Humean "constant conjunction". Indeed, if we want to differentiate these two types of causation in the Mesopotamian textual record, our only real hope is to look at complex cases, in which a single definitive cause is picked out by an aššum statement.

Stol refers to a few places in the medical corpus in which a cause of some kind is alluded to, but in fact none of the examples that Stol cites make use of the aššum construction and, as far as I can tell, explicit statements of causation like those found in legal or exorcistic contexts are scrupulously avoided in the medical treatises.⁹³ As we have seen above, in the depersonalized case histories, the medical treatises present us with complex cases at every turn, but are we to infer that Quinean "causal chains" played no role in the etiological ruminations of Babylonian physicians? This avoidance of explicit causal statements could be chalked up to a wide-ranging "methodism" within Babylonian medicine, namely a nearly total rejection of all models of causation, 94 as happened in 2nd century BCE Rome. I do not believe this to be the case. Instead, I suspect that the traditional language of causation, in particular the use of aššum statements, was so thoroughly tainted with the cosmological presuppositions of the exorcists that it could not be used to describe the types of causal chains that the Babylonian physicians had in mind.

⁹⁰ Roth 2001: 408.

⁹¹ See, generally, Veenhof 1978, Roth 2001 and Heeßel 2007: 126-127. Veenhof describes the use of aššum together with divine names as a kind of oath formula: "It is used in order to convince a listener or addressee, rather emphatically, of the seriousness and reliability of the words which follow, either a statement of facts, or a threat, or a promise" (Veenhof 1978: 186). Since it is used in interpersonal communication, rather than in a technical discipline, it is not dealt with further here, although from a logical point of view it has the same discursive function, namely to state the justification upon which a following statement is based.

⁹² Heeßel 2007: 126, citing Stol 1992: 46.

⁹³ Stol 1992: 46 cites BAM 174 rev. 34, BAM 240 rev. 70 and the HAMSTRING treatise, recently edited in Eypper 2016, but none of these make use of the aššum construction.

⁹⁴ Geller 2014: 16-23 offers a wide-ranging comparison between the methodists in Rome ("Methodism distinguished itself from both Dogmatism and Empiricism by refusing to acknowledge causes of illness", p. 17) and similar features in the Babylonian medical tradition.

Instead, as I have suggested earlier in this paper, I believe that causal models within Babylonian medicine were expressed indirectly through the clusters of incantations found within the medical treatises. If traditional etiological models of ghost-induced illness (Sum. ŠU GIDIM = Akk. *qāt eṭemmi*) linked gastrointestinal difficulties with headache, buzzing in the ears and similar symptoms, the separation of these symptomatologies into two distinct treatises in *The Nineveh Medical Compendium*, namely STOMACH (VIII) and CRANIUM (I), already suggests that Babylonian medicine (*asûtu*) had rejected this causal linkage. In itself, the imposition of an anatomically-structured logic on a large compendium like *The Nineveh Medical Compendium* cannot be used as the sole argument for this interpretation. But, crucially, we find a contrastive configuration of these materials in different compendial formats. Whereas STOMACH (VIII) and CRANIUM (I) are completely delinked in *The Nineveh Medical Compendium*, in other compendia such as BAM 508 and K. 5416a+ this delink is reversed, apparently as a critical response to what is happening in *The Nineveh Medical Compendium*. If we briefly return to our red thread, the shovelling-out-the-intestines line in STOMACH 1, line 113, this critical response comes into focus.

The placement of this line in STOMACH 1, line 113, is certain, thanks to the incipit and catchline in BAM 574 and their alignment with line 29 of AMC. But at least two of the parallels, BAM 508 and K. 5146a+, provide us with evidence for a countervailing, reactionary tradition that sought to re-establish the linkage between the materials in STOMACH (VIII) and CRANIUM (I) under the aegis of a revivified model of ghost-induced etiology. Both of these compendia, BAM 508 and K. 5416a+, consist entirely of incantations and rituals, and most importantly, they bring the clusters of incantations traditionally associated with ghost-induced illness back within a single compendial context. Thus, if clusters of incantations are indirectly coding etiological beliefs, the separation of STOMACH (VIII) and CRANIUM (I) in *The Nineveh Medical Compendium* would indicate a disavowal of ghost-induced models, while the reunification of these materials might represent some kind of reactionary reassertion of ghost-induced models.⁹⁵

The two compendia, BAM 508 and K. 5146a+, largely overlap: BAM 508 consists of major clusters of incantations drawn from CRANIUM 3 and STOMACH 1, while K. 5146a+ also includes a group of materials concerned with diarrhea (Sum. ŠÀ SI.SÁ), along with other abdominal illnesses. For our purposes here, it is particularly significant that K. 5146a+ is a three-column tablet, and thus could not, in any way, have represented a tablet from *The Nineveh Medical Compendium*. BAM 508, in contrast, adheres quite closely to the expected two-column form of a chapter from a medical treatise in the Library of Ashurbanipal. One possibility is that BAM 508 represents a collection of the traditional incantations used against ghost-induced illness, precisely the type of materials that had been excluded from the STOMACH treatise (similar to the relegation of ghost-induced models to CRANIUM 3 within the CRANIUM treatise). If so, the clusters of incantations found in BAM 508 might correspond in some way with the still poorly understood section known as ABDOMEN (IXb), in lines 40-43 of AMC.

⁹⁵ Note as well that the orthographies characteristic of the medical treatises, such as ŠU.GIDIM.MA and the like, are not attested in these compilations.

IXb ABDOMEN

- 40) DIŠ NA GI[DIM DAB-su-ma
- 41) DIŠ NA NINDA N[U GU, KAŠ NU NAG
- 42) DIŠ NA ZI.K[U_ε.RU.DA DÙ-su] x x [x (x)]
- 43) EN 8 DUB.ME[Š ... KA INIM.MA UŠ₁₁ BÚR.RU]. DA[?] [KAM]

(40) If a gh[ost afflicts] a man [...]. (41) If a man [can] neither [eat] bread [nor drink beer ...]. (42) If "cutting-of-thethroat" [magic has been performed against a man...]. (43) Including eight tablets of [..., (including) incantations to remove witch]craft [(...)] . . . (Translation Steinert et al.)

The most important feature of this section of AMC is that it uses the EN sign, rather than the NÍGIN sign, to label the eight tablets that are summarized in line 43. The norm, in the rest of the catalogue, is to summarize each treatise with the logogram NÍGIN, presumably for the Akkadian napharu "total", followed by the number of library tablets or chapters found in the treatise as a whole. Yet here, instead, we find the logogram EN, presumably for Akkadian *adi* "as far as", and the content seems to swerve in the direction of exorcism and witchcraft.

As Ulrike Steinert emphasizes in her commentary on these lines, treating this section as a kind of appendix solves an important problem with the alignment of the AMC catalogue and a Nineveh colophon that lists KIDNEY immediately after EPIGASTRIUM, seemingly omitting these four lines. 96 If Steinert's analysis is correct, it might suggest an explanation for the peculiar thematic overlap between the ABDOMEN section (IXb) in AMC and the treatise known as STOMACH (VIII). In the absence of any solid linkage between the incipits in AMC, lines 40-43, and particular library tablets from Nineveh, we must proceed with caution, but perhaps we can hypothesize that this appendix (ABDOMEN IXb) catalogued traditional methods of treating gastrointestinal illness, perhaps even in a library text like BAM 508. If so, the concentration of treatments against "Hand of a ghost" (ŠU.GIDIM.MA) in ABDOMEN and the nearly total absence of these treatments from STOMACH may represent one way of responding to the inherited tradition of gastrointestinal treatments (segregation of ghost-induced treatments of gastrointestinal illness in ABDOMEN), while CRANIUM 3 and similar materials, where ghost-induced symptoms continue to abound, could not be reconfigured in this way and had to be interpreted through a relatively strong form of allegoresis.

6 Conclusion

If allegoresis exists in the Babylonian medical treatises, it means, first and foremost, that the simple occurrence of ŠU. GIDIM.MA or similar orthographies cannot be used to infer a belief in ghost-induced etiologies on the part of the editor. Indeed, if Heeßel's arguments about these orthographies hold, then it suggests quite the opposite: the presence of ŠU. GIDIM.MA, read as *sugidimmakku*, would act as an index of a medical milieu, in which ghost-induced models of disease etiology were largely discredited. Rather than adhering to this kind of orthographic test, however, as the only basis for identifying the editors or intended users of a given compendium, the architectonic approach advocated here suggests that the configuration of blocks of text within a particular compendium can be used as a proxy for explicit statements of causation. The separation of gastrointestinal treatments (STOMACH) from treatments for headache (CRANIUM) in The Nineveh Medical Compendium indicates a rejection of ghost-induced etiologies, while the recombination of these materials in reactionary compendia such as BAM 508 or K. 5416a+ might represent quite the opposite, a reassertion of a ghost-induced model. But of course this type of argumentation only becomes possible to the degree that we can reconstruct the compendial context of a given textual source.

The Assur Medical Catalogue, in combination with the reconstructed medical treatises of *The Nineveh Medical Com*pendium, represents, by far, the most important piece of the architectonic puzzle. In particular, if we are trying to link

⁹⁶ See Abusch and Schwemer 2011: 126, text 7.5 with pl. 23, where two fragments from Nineveh, K. 3661 and AMT 44/7 (K. 13390) include a colophon (K. 3661 rev. iv 17'-18' and AMT 44/7 rev. iv 1'-2') that ends with the catchline for KIDNEY and identifies the tablet itself as the final chapter of EPIGASTRIUM. This suggests that KIDNEY follows EPIGASTRIUM directly. For a more detailed discussion of this, see Steinert's commentary to AMC, lines 38-43.

a specific model of causation to a historically contextualized school of medical thought, the context provided by AMC and the compendium that it helps us to reconstruct is of the utmost importance. Just as reactionary compendia such as BAM 508 and K. 5416a+ demonstrate the theoretical import of the separation of STOMACH (VIII) and CRANIUM (I) in The Nineveh Medical Compendium, it appears that this type of contrast could even be identified at the level of an entire scholarly discipline, even medicine itself. It is telling, for example, that in some few texts such as BAM 155 and BAM 221 – the relevant passages are nicely collected in Scurlock 2006, No. 307, 318, 319a, 320 and 347 – we find the curious protasis "If 'Hand of a ghost' afflicts someone, so that neither medicine (asûtu) nor exorcism (āšipūtu) is capable of removing it and it cannot be expelled: "97 This protasis is a reformulation of the incipit of CRANIUM 3, which simply refers to a headache (SAG.KI.DAB.BA), (due to) *šugidimmakku*, that remains in the body and cannot be expelled. But statements like this clearly indicate that individual practitioners could, and occasionally did, step beyond the ordinary disciplinary boundaries of Babylonian medicine.98

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⁹⁷ The best preserved example seems to be Scurlock no. 307 (2006: 626), where the two manuscripts, BAM 221 ii 8'-9' in combination with BAM 155 i 9'-10', yield: [DIŠ N]A ŠU.GIDIM.MA DAB-su-ma lu ina DÙ-ti a-su-ti lu ina MAŠ.MAŠ-u-ti / il-ta-zi-iz-ma NU DU, ana [TI]-šú The slightly different orthography in Scurlock no. 319a, based primarily on BAM 225 rev 3'-5', reads: [DIŠ NA ŠU.GIDIM.MA] DAB-su-ma lu ina ne¹pil-ti [a]-ʿsuʾ-t[i l]u ina ne-pil-ti MAŠ.MAŠ-ti [i]l-ta-za-az-ma NU DU, ana TI-šú Note that in all relevant manuscripts ŠU.GIDIM.MA rather than ŠU GIDIM is the only orthographic form attested, suggesting that these few texts are an outgrowth of the medical tradition rather than a resurgent form of exorcism.

⁹⁸ A synthetic version of the incipit would read DIŠ NA SAG.KI.DAB.BA ŠU.GIDIM.MA ina SU NA il-ta-za-az-ma NU DU_s.

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