Studies in Akkadian Medical Texts

William White
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Abstract
This series of studies in Akkadian medical texts is to be considered essentially a collection, not a collection in the sense of an encyclopedia of the history of science, or even an encyclopedia of the history of Akkadian medical literature. At the present point in our knowledge of Akkadian medical literature and of the Akkadian language it is impossible to produce such a work. However it is hoped that in the course of these pages certain difficult and disconnected ideas in various fields of Akkadian medical literature may be joined together so that a clearer picture of Akkadian medical theory and practice may emerge.

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Comments
STUDIES IN AKKADIAN MEDICAL TEXTS

A Thesis
Submitted in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy.

by William White Jr., B.S., Th. M.

The Dropsie College
for Hebrew and Cognate Learning
Philadelphia
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## Table of Contents

1. Preface and Acknowledgements.

2. Abbreviations.

### I. Introduction.
- A. Historical Introduction.
- B. Textual Introduction.
- C. Science and Ancient Man.

### II. The Study of Akkadian Medical Texts to the Present.
- A. Studies to 1900.
- B. Studies to 1960.
- C. The Presuppositions of Medical Understanding and Praxis in the Akkadian Medical Texts.

### III. Texts dealing with the diagnosis and prognosis of diseases.
- B. Grammatical-Philological Commentary on the texts edited by R. Labat as, "Textes Inclassables".
- C. The Position of these texts in the Mesopotamian Medical Corpus, 'SA.GIG'.

Sections:

1. Preface and Acknowledgements.
2. Abbreviations.
3. Historical Introduction.
3a. Textual Introduction.
5. Studies to 1900.
6a. The Presuppositions of Medical Understanding and Praxis in the Akkadian Medical Texts.
7. Texts dealing with the diagnosis and prognosis of diseases.
9. "Textes Inclassables".
10. The Position of these texts in the Mesopotamian Medical Corpus, 'SA.GIG'.
IV. The relationship between the codified lists of diagnostic-prognostic texts and the Assyrian Medical Texts from the library of Assurbanipal, located in the British Museum and published by Reginald Campbell Thompson, Oxford, 1923.

V. Conclusions.

VI. Bibliography. With Deepest Affection.

A. Bibliography of Cuneiform Technological Literature relating to the study of the Medical Texts.

B. Bibliography of Akkadian Medical Texts.

C. General Bibliography

D. Index and Glossary of Words and Phrases.

VII. Bibliography and transliterated texts of certain Lexical Lists cited in the Studies.

VIII. Postscript.
To my father

with Deepest Affection.
Throughout my undergraduate career at Haverford College I was much impressed by the scientific disciplines and the modi by which they operated. However I was also impressed by the men who had and were advancing such learning. It was my pleasure and privilege to attend lectures by such foremost scientific minds as Enrico Fermi, Linus Paling, George Wald, Abraham Zirkle, Marstan Bates and Brock Chisolm. My two science professors at Haverford were E. R. Dunn and A. G. Lowey both of whom were humanistic as well as scientific scholars and excellent teachers. This fascination with science and scientists continued on into Divinity School. At the Reformed Episcopal Theological Seminary the Rev. Prof. Robert K. Rudolph introduced me to the vast and profound current of Reformed Theology. When I matriculated and subsequently studied at the Westminster Theological Seminary I was indeed honored to study under the Rev. Prof. Dr. Cornelius van Til, who encouraged me to read such giants of theistic philosophy as: J. H. Bavinck, Abraham Kuyper, Prof. Herman Dooyeweerd and Rev. Dr. Klass Schilder. Both at Haverford and in seminary I was impressed by such philologists as L. A. Post, John W. Flight and E. J. Young with the absolute necessity of learning the original languages of the ancient world. Through my classes with Prof. F. C. Kuehner and Prof. E. J. Young
I first became acquainted with the Semitic languages. Dr. Young directed me to take up Assyriological studies at the Dropsie College for Hebrew and Cognate Learning under the renowned Prof. Dr. Moshe Held. Again through the classroom experience afforded by Dr. Held I realized a synthesis of my two interests; the history of science and cuneiform research, was possible. In the following studies I have attempted to investigate and elucidate a number of aspects of the medical understanding and praxis of the people of Mesopotamia who flourished some three thousand years ago. As can readily be seen there are a number of persons who have contributed over the years to the execution of this Dissertation. More immediately I must acknowledge the aid and encouragement of: Prof. Benno Landsberger, Dr. S. N. Kramer, Dr. Ferris Stephens, Dr. A. L. Oppenheim, Dr. M. Bravmann and Dr. T. H. Gaster, all of whom have offered valuable suggestions and aided me in my safaris through the deserts of cuneiform bibliography. Among the various European scholars who have kindly corresponded with me on one or another aspect were foremost the following: Prof. Dr. Ir. R. J. Forbes of the Polytechnie te Delft, the Netherlands; and Prof. Dr. Ir. H. van Riessen of the Vrije Universiteit te Amsterdam, the Netherlands. I must also acknowledge a particular debt to Prof. Dr. R. Labat, Directeur d'Études à l'École des Hautes-Études de Paris, who graciously supplied me with documents, offprints and lists of new joins, plus some much needed encouragement. However above
and beyond all others, the discouragements and prolixities of such a project could not have been undertaken without the help and instruction of my major professor, Dr. Moshe Held. My thanks are also to be mentioned to Mrs. Lois Reimer who typed the manuscript and the students who attended the seminars in Ancient History at Temple University in 1964 and 1965, who by their basic and incisive questions drove me back again and again to the sources. Last but by no means least I owe my heartfelt thanks to my wife, Jane, and my eldest daughter, Rebecca, for their continued patience and unstinting aid during this arduous process. I wish my acknowledgement and gratitude to be according to the classic epigram:

"Whatever excellencies may appear herein they were engendered by another, whatever errors, they are mine alone."

Wm. White, Jr.,
North Hills, Pa.,
1965.
Abbreviations used in
"Studies in Akkadian Medical Texts"

AASF. Annales Academiae Scientiarum Fennicae, Helsinki.
AbME. P. Jensen, Assyrisch-babylonische Mythen und Epen, Berlin, 1901.
ABRT. Craig, J. A., Assyrian and Babylonian Religious Texts.
AfO. Archiv für Orientforschung, vol. III--., Berlin, 1926--.
An. Dr. Analecta Orientalia, Rome, 1931--.
AOb. Altorientalische Bibliothek, Bd. 1, Leipzig, 1926.
As. Assyriological Studies of the Oriental Institute of the University of Chicago.
ASKT. Haupt, P., Akkadische und Sumerische Keilschrifttexte.
BA. Beiträge zur Assyriologie und semitischen Sprachwissenschaft, Leipzig, 1890--.
BE. University of Pennsylvania, Babylonian Section, Series A, cuneiform texts, Philadelphia, 1893-1914.


BHM. Bulletin of the History of Medicine, Baltimore, Md.

BIN. Babylonian inscriptions in the collection of James B. Nies, New Haven, 1917--.


BM. British Museum, tablets outside of the Kouyundjik collection.


CAD. The Assyrian Dictionary of the Oriental Institute of the University of Chicago.


CT. Cuneiform texts from Babylonian tablets in the British Museum, London, 1896--.


GCCI. Goucher College cuneiform inscriptions, New Haven, 1923--.


Haupt ASKT. Haupt, P., Akkadische und sumerische Keilschrifttexte nach den Originalen im Britischen Museum copiert, etc. (equals Assyriologische Bibliothek I), Leipzig, 1881-1882.


H.-h. Series HAR.ra equals 'hubullu' according to the MS prepared for the Chicago Assyrian Dictionary Project by B. Landsberger.


Idu. Neo-babylonian series, ≈ equals idu.

Izi. Neo-babylonian series, IZI equals išatu.

JADS. Journal of the American Oriental Society, Boston, etc., 1894--.


JCS. Journal of cuneiform studies, New Haven, 1947--.

JEA. The Journal of Egyptian Archaeology, London, 1914--.

JNES. Journal of Near-Eastern Studies, Chicago, 1942--.

JRAS. The Journal of the Royal Asiatic Society of Great Britain and Ireland, London, 1834--.

K. Tablets in the Kouyundjik collection of the British Museum.


KAH. Messerschmidt, L., Schroeder, O., Keilschrifttexte aus Assur historischen Inhalts, (equals WVDOG XVI and XXXVII), Leipzig, 1911, 1922.

KAR. Ebeling, E., *Keilschrifttexte aus Assur religiösen Inhalts* (equals WVDOG XXVIII, XXXIV), Leipzig, 1920--.


Landsberger MSL I. Landsberger, B., Die Serie 'ana ittišu' (equals Materialien zum sumerischen Lexikon I), Rome, 1937.
MAOG. Altorientalische Gesellschaft, Mitteilungen, Leipzig, 1925-.
Meier Maqlû. Meier, G., Die assyrische Beschworungssammlung Maqlû (equals Afo Beihaf I), Berlin, 1937.
OIP. Oriental Institute Publications.
OLZ. Orientalistische Literaturzeitung, Berlin, 1896-1906; Leipzig, 1909-.
Orientalia NS. Orientalia, commentarii de rebus assyro-babylonicis, arabicis, aegyptiacis, etc., Rome, 1932-.
Osiris. Osiris, Studies on the history and philosophy of science and on the history of learning and culture, Bruges, 1936-.
PB and M. Perspectives in Biology and Medicine, Chicago, Ill.
PBS. University of Pennsylvania, University Museum, publications of the Babylonian section, Philadelphia, 1911-.


R. Rawlinson, Sir Henry, The cuneiform inscriptions of Western Asia, 5 v., London, 1861-1891.

RA. Revue d'assyriologie et d'archéologie orientale, Paris, 1886--.

RB. Revue biblique, Paris, 1892--.


Riftin. A. P. Riftin, Staro-Vavilonskie i uridicheskie i administrativnye dokumenty v Sobraniakh SSSR, Moscow, 1937.

RLA. Reallexikon der Assyriologie (ed.: Ebeling, E., Meissner, B.), Berlin, 1928--.


SLT. E. Chiera, Sumerian Lexical Texts from the Temple School of Nippur, OIP XI, Chicago, 1929.

Sm. Tablets in the Kouyundjik collection of the British Museum.


Stud. Or. Studia Orientalia, Societas orientalis fennica, Helsingfors, 1925--.

TCL. Musée du Louvre, département des antiquités orientales, textes cunéiformes, Paris, 1910--.

TCPF. Transactions of the College of Physicians of Philadelphia.

Thompson AMT. Thompson, R. C., Assyrian medical texts from the originals in the British Museum, Oxford, 1923.


VAS. Staatlich Museen, Berlin, Vorderasiatische Abteilung, Vorderasiatische Schriftdenkmaler, Leipzig, 1907--.

VAT. Tablets kept in Berlin, Staatliche Museen, Vorderasiatische Abteilung, Thontafelsammlung.


WO. *Die Welt des Orients*, Wissenschaftliche Beiträge zur Kunde des Morgenlands, Wuppertal, 1947--.

WVDOG. *Deutsche Orientgesellschaft, Wissenschaftliche Veröffentlichungen*, Leipzig, 1900--.

YOS. *Yale Oriental Series*, Babylonian texts, New Haven, 1915--.

ZA. Zeitschrift für Assyriologie und verwandte Gebiete, Leipzig, 1886--.


Abbreviations used only once or twice are in the form adopted and published by W. von Soden in: *Verzeichnis der Abkürzungen*, Akkadisches Handwörterbuch, Band I, 1965, pp. VII-XVI.
This series of studies in Akkadian medical texts is to be considered essentially a collection, not a collection in the sense of an encyclopedia of the history of science, or even an encyclopedia of the history of Akkadian medical literature. At the present point in our knowledge of Akkadian medical literature and of the Akkadian language it is impossible to produce such a work. However it is hoped that in the course of these pages certain difficult and disconnected ideas in various fields of Akkadian medical literature may be joined together so that a clearer picture of Akkadian medical theory and practice may emerge.

I. Introduction.

(Sections 1-3a)

There are essentially four studies in this particular set. The first is simply an outline of the historical, Assyriological and scientific value of what is now known of Akkadian medicine. The second is the study of the history of the interpretation of Akkadian medicine to the present time. The third consists of grammatical, philological commentary with some background discussion of texts which do not fit into any of the formal series of Akkadian medical literature. The third is longest and most tedious because it deals with the texts as actually written upon the tablets. The fourth is a brief estimate of the light which Akkadian medical literature can throw upon bio-medical contexts.
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of the Old Testament. Taken together, these studies will give a survey and at the same time a look in detail at various aspects of our present knowledge of Akkadian medical literature and the presuppositions of Akkadian scientific thinking.

Since the rise of the natural sciences beginning in the seventeenth century, there has been on the part of western man a cultural ethnocentrism which has presupposed that any human activity of mind or of hand which lay behind his own period was by nature and by definition primitive, superstitious and benighted. Reinforced by an optimistic rationalism writers on the history of science and the history of civilization have looked forward rather than backward for the projection of scientific thinking. It is important, in fact possibly more important, as one projects scientific thinking into the future to know the roots, the sources and the methods by which science and scientific knowledge have progressed to the present point.

The study of the history of science, like the study of the science of science may be pursued for a variety of reasons and towards a wide range of goals.

When the specific discipline is medical science and the material studied is that produced by an ancient and alien civilization
the variety and range is limited to a single focus. The focus we have chosen is that admirably set forth by E. G. Boring of Harvard when he wrote, "There is nevertheless a good reason for knowing the history of science. One finds that he needs to know about the past, not in order to predict the future, but in order to understand the present." Isolating and investigating the "Zeitgeist" of Mesopotamian medicine has been a long historical process traceable to none other than Herodotus himself. Several basic factors are peculiar to this isolation and investigation of the Mesopotamian material. Initially the number of extant cuneiform texts containing data of specifically medical interest is rather large, filling several thousand pages in printed form and written in Sumerian, Akkadian, Hittite and possibly Hurrian. Since only one small pharmaceutical tablet detailing some thirteen dose-forms and one other prescription is all that exists of Sumerian medical literature it is not necessary to deal with Sumerian medicine in any great detail. These texts have been adequately published and discussed by Miquel Civil and Samuel N. Kramer. Hittite medical tablets are apparently translations of Akkadian tablets traditionally copied in ancient Hattusas and excavated at Boghazkoi. They originated in the thirteenth century B.C. and are redundant in regard to the Akkadian material. Since therefore the material from the

Mesopotamian area proper and the temporal span of Babylon and Assur is the most complete and earliest witness to Mesopotamian medicine which we have it shall be the subject of this study. Another factor is the morass of unknown words and technical terms met with in cuneiform medical texts and the elliptical style of all medical writing, ancient or modern.

Last but not least is the factor of a proper comprehension of ancient science itself. It is now recognized that a vast fund of empirical and scientific knowledge is presupposed in the simplest technologic process. The making of an axe from flint and wood, the building of a hut from branches and mud and the production of a cloak from animal skins demands a degree of manual dexterity and mental experience of subtle complexity. In actually the weaving of a watertight boat of reeds or the dismemberment of a large animal with an obsidian blade would nearly confound the best educated of modern men. In the same manner the tailoring of clothing against the cold, the salting of foods against spoilage and the aiding of women in childbirth all involve a certain bio-medical supposition. This supposition properly understands the necessity of intervention by man of artifacts and praxes to stay injurious processes and prolong his life. The major difference between this ancient intervention and
modern interventions of the same type is found in the mechanistic interpretation supplied since the rise of Greek medicine and the Pre-socratic philosophers. It is not sufficient for the scholar to draw parallels between Akkadian medical principles and practices and those of the Hippocratic corpus or the modern diagnostic clinic. The "Zeitgeist" of Akkadian medicine is to be sought and understood against the total background of the Mesopotamian world. The work and progress of the Akkadian medical "scientist" is to be sought and understood in the "zeitgeist" of Akkadian medicine. "It is much too simple to think of scientists as right or wrong, as clear or muddled, as prejudiced or objective. Each individual effort is an eddy in the total stream of science; and we shall become much wiser, get much nearer the truth, if we remember always to look at the stream as a whole and notice the eddies only as they contribute to the sweep of the main current. 'La science', said the physiologist Flourens, 'n'est pas; elle devient'." 2.

Since the total and exhaustive display of Mesopotamian bio-medical concepts is not yet possible, and if it were its writing would demand super-human abilities, as stated by R. Labat, "Une telle recherche exige de l'auteur une documentation extraordinairement

2. ibid.
vaste et complexe et sens critique sans défaillance." Therefore it is necessary for a number of investigators to work out various aspects of the overall problem until a coherent picture emerges. It is sincerely hoped that some of the material and opinion expressed herein may be incisive for others who seek to illuminate our understanding of the rise and progress of not only Assyriology but the science inherent in Assyriology and in the Assyrians themselves. One further word of introduction will facilitate the reader's progress. It has become common in the present century with the specialization and separation of the various academic disciplines for narrow subjects to be treated narrowly. Herman Dooyeweerd has said, "If I consider reality as it is given in the naive pre-theoretical experience, and then confront it with a theoretical analysis, through which reality appears to split up into various modal aspects then the first thing that strikes me, is the original indissoluble interrelation among these aspects which are for the first time explicitly distinguished in the theoretical attitude of the mind. An indissoluble inner coherence binds the numerical to the spatial aspect, the latter to the aspect of mathematical movement, the aspect of movement to that of physical energy, which itself is the necessary basis of the aspect of organic life. The aspect of organic life has an inner connection with that of psychological

feeling, the latter refers in its logical anticipation (the feeling of logical correctness or incorrectness) to the analytical-logical aspect. This in turn is connected with the historical, the linguistic, the aspect of social intercourse, the economic, the aesthetic, the jural, the moral aspects and that of faith. In this inter-modal cosmic coherence no single aspect stands by itself; everyone refers within and beyond itself to all others."^4. On this basis and for this reason they will not be separated in this study.

Many scholars writing in the history of medicine and in Assyriology, and trained in the exact sciences of the Western World, have not recognized the technological presuppositions which may be called "scientific" in the ancient world and in the literature produced by the technologists of that world. A few years ago in the Chicago symposium on The History of Medicine in the Ancient Near-East, Prof. A. Leo Oppenheim stated, "I would like to state quite bluntly that I cannot find evidence for science or, to be more specific, for scientific medicine in the river valley civilizations." ^5. This statement is made all the more important because of the illustrious scholarship of the man who stated it. The problem involved

with the statement is, what definition of science and scientific medicine is involved. When we deal with such large areas of knowledge and with such great sweeps of historical literature, it is necessary for any scholar to appeal, in fact to obtain help from outside his own particular discipline. As stated quite adequately in the introduction to his classic study of Cybernetics, Prof. Norbert Wiener states, "For many years Dr. Rosenblueth and I had shared the conviction that the most fruitful areas for the growth of the sciences were those which had been neglected as 'no man's land' between the various established fields." Since Leibniz there has perhaps been no man who has had a full command of all the intellectual activity of his day. Since that time science has been increasingly the task of specialists, in fields which show a tendency to grow progressively narrower. A century ago there may have been no Leibniz but there was a Gauss, a Faraday and a Darwin. Today there are few scholars who can call themselves mathematicians or physicists or biologists without restriction. A man may be a topologist or an acoustician or a coliopterist. He will be filled with the jargon of his field and will know all its literature and all its ramifications, but more frequently than not he will regard this next subject as something belonging to his colleagues three doors down the corridor and will consider

any interest in it on his own part as an unwarranted breach of privacy. These specialized fields are continually growing and invading new territory." It is for the purpose of invading such territory that this series of studies is produced. It can be safely said that the study of Akkadian medicine actually begins with Herodotus, the classical Greek historian, who wrote, "I come now to the next wisest of their customs: having no use for physicians, they carry the sick into the market place; then those who have been afflicted themselves by the same ill as the sick man's, or seen others in like case, come near and advise him about his disease and comfort him, telling him by what means they have themselves recovered of it or seem others so recover. None may pass by the sick man without speaking and asking what is his sickness." 7.

Recent authors have attempted to solve the apparent disparity between vast numbers of known cuneiform texts dealing with medicine and medical practice and this statement of Herodotus denying the practice and office of physicians among these dwellers in Babylon. One such writer, H. W. F. Saggs states, "In Iraq before the revolution of 1958, Bagdad contained about one-half of the population of the country, but about

three-quarters of the physicians. The situation between the capital and the rest of the country cannot have been wildly different in ancient Babylonia. There, although physicians certainly existed, the availability to the man in the street, the phrase being literal in this case, was such that Herodotus in the fifth century B.C. was misled into writing of the Babylonians, and the quotation from Herodotus' work follows. This is probably an unnecessary piece of circumlocution. This interesting negative comment must be seen on the background of many of Herodotus' remarks about Babylonia and the other non-hellenic countries of his time. That he is dependent upon traditional and oral stories is evident. His egyptology as compared to Manetho is patently in error, and it is to be expected that his Assyriology is also. Plutarch in his De Malignitate Herodoti, remarks about his inaccuracy and if compared with his faulty statements on Egyptian medicine his statement on the position of Babylonian medicine may be seen in its true light. Even in the time of the renaissance some scholars were suspicious of this statement of Herodotus simply on the basis of the mention of physicians in the Old Testament. It was suspected that if there were such in Israel there must have been in other countries of the same time.
The first evidence of cuneiform tablets containing medical texts came to light in the excavation of the library of Assurbanipal and the accidental discovery of the twenty thousand tablets stored there by the Mosul born assistant to Sir Henry Austin Layard, the Oxford educated Rassam. From the time of Layard and Rassam to the present, Assyriology and the study of the various types of literature which were produced by the inhabitants of ancient Mesopotamia, have been studied in detail by many scholars from many lands. The development of this scholarship will be taken up in the next study in this series.

We must now turn our attention to a textual introduction, to survey the types of witnesses to Babylonian medical practice and ideas which have come to light in the excavations of ancient Mesopotamia. There are eight basic types of literary composition in which information on Mesopotamian medicine appears:

1. The lists and talismans against demons and sickness.
2. The curse formulas and mentions of physicians in laws as particularly, Hammurabi's Code.
3. The sicknesses mentioned in such compositions as Ludlul Bēl nemiqi where they are religious in origin and religious in relief.
4. Gilgameš and the epic myths.

5. The annals of the kings.

6. Personal letters to, from and about physicians.

7. Lexical texts dealing with names of pharmaceutical plants, dosage forms and diseases.

8. The medical texts themselves.

In fact it may almost be said that all of Mesopotamian literature has, somewhere in it, reference to the physician and his practice. There are, to extend this principle, cylinder seals which apparently are written for the use of physicians and which have dedications to the tutelary gods of medicine. There are also what appear to be drug vessels with the amounts to be used or to be placed in them written upon them. And there are economic tablets detailing expenditures to physicians for services rendered.

When one reads over even the translations which exist of Akkadian medical texts and incidental mentions of physicians and their practice in other types of texts, one notes four aspects of interest in the study of Mesopotamian medicine. Firstly, the vast mass of literature, remnants of which have been found in a whole series of Mesopotamian excavated finds, stretching all the way from central Anatolia to the very south.
of Iraq itself, all the way from the Coast of Syria to the Lake Van region, and comprising in number fairly to one thousand fragments and copies. Secondly, the acuteness of observation, the fact that there are verbs, nouns and adjectives applied to peculiar diseases and to the symptoms of disease with, in many cases, a great deal of sophistication, based on precise observation and proper abstraction. Thirdly, the amount of classification involved in these texts. Later on in the study we shall discuss in some detail the principles of classification as they can be deduced from the many fragments. However the fact that any classification at all exists and that it exists through a whole series such as the 'SA.GIG' series, is of extreme importance. Classification systems of this type can only arise with two factors: first, a large number of people dealing with the texts over a long period of time, and secondly, the preservation of such texts as important to the society. Fourthly, the extension and expansion of Mesopotamian medical texts, the fact that there are lists based upon them of words and phrases, and that there are such hand apparatus as the 'KIMIN I' and 'KIMIN II' series. These lexica of medical terms must have been known to many others than simply the physicians who would utilize them or who would learn from them when they developed their skills because many of these words are found in such literary compositions as
Ludlul and the laments of the sufferers. They are also found in the curse formularies where they are used to call down a particularly obnoxious condition upon some foe.

One other aspect must be considered and that is, precisely what we mean by science and the understanding of science in regard to ancient man. Most fundamental of all to such an understanding is the simple fact that to the ancient world there was no such thing as theoretical knowledge. Knowledge of any particular kind of work of such skills as medicine, astronomy, engineering, and mathematics were all considered just precisely that, skills, not objects of theoretical or inductive thought. The Babylonian physician is often referred to as a person possessing 'emku'. It is of course difficult to look back on such a pre-theoretical society and see it through the eyes of theory and the theoretical because Mesopotamian medicine was essentially 'emku'. It was something to be experienced, something in which one was skilled, wise, wiley, cunning, clever. However in a society where there is division of labour and specialization the passing on of such skill from one individual to another, even from an individual of one generation to an individual of the next generation, constitutes in time, a guild or class of society skillful in that
particular thing, and it is of course traditional for such classes to slowly organize not only a literature of their field but even a vocabulary, an argot in certain cases, which may be used by the initiants of their particular circle. This may account to some extent for the extreme difficulty of the orthography of the Mesopotamian medical literature. The texts are written in an elliptical abbreviated style. They are filled with extremely difficult Sumerian logograms. These logograms in many cases do not have meanings ordinarily found in literature. They would of course be known to anyone who was initiated into their use by long experience and by long familiarity with the physicians and their sphere of activity. An illustrative parallel may be drawn between the gaining and transmission of such knowledge of medicine in ancient Mesopotamia and the gaining and transmission of the knowledge of printing in the fifteenth and sixteenth centuries. As is well known, the early pressmen and printers did not write large manuals or theoretical instructions of their art, although this was an art which presupposed a vast knowledge of practical science, of engineering, of chemistry, and of such skills as paper making, to say nothing of the metallurgy involved in casting type. The same sort of situation is involved with Mesopotamian medicine, as with many other technical skills in Mesopotamia including wine-making, glass-
blowing, the erection of high buildings, and even the writing and production of clay tablets. However there apparently were schools of pharmacy and medicine, although the only textual evidence for this is one small tablet published in KAR 203 r. 1-3, 28, which states in a colophon, 'ṭuppi P.N. LÚ.A.ZU a-ga-aš-gu-u', which is to be translated, "tablet of (personal name) junior physician''. The tablet in question, however, is a dosage formulary or pharmaceutical tablet. It is therefore possible that the physicians did not learn their trade through the use of tablets but that the tablets were only utilized for the training of pharmacists, those who prepared the drugs and the actual dosage forms in which they were to be administered to the patient. This may account for one possible answer to one of the most intriguing problems in the study of Akkadian medicine, that is, the apparent lack of any texts dealing with surgery, or orthopedics. Such texts of course are known in abundance from Egyptian archeological finds and from the interpretation of later Greek sources dealing with Egyptian medicine. Even though the Codex Hammurabi contains several classical laws which apparently deal with some sort of incision being made in the living flesh of patients, yet no such texts have ever come to light. There is however one other aspect. Some of the cylinder seals which are supposed to have belonged
to physicians do show what appeared to be instruments which would be used in surgical operations. These surgical operations, like those encountered in the Egyptian texts, were probably simply the draining of boils and the removal of some sort of tissue from the surface of the body. It is extremely doubtful if not improbable that any Mesopotamian physician ever opened up the larger cavities of a living patient to deal with internal diseases. As will be seen in KIMIN I and KIMIN II later on in this study, the symptoms of diseases are in all cases external symptoms or the externalization of internal symptoms. It has been though by some authorities that the reason no surgical texts have ever appeared from Mesopotamia is that surgery, like barbering, in later ages was not one of the aspects of the physician's labors and that therefore the person actually practicing the surgery, no matter how simple, would be one of another class. The difficulty with such an interpretation of course is that the term used in the Codex Hammurabi leaves no doubt as to the social class or the guild of the person involved.

Much has also been written about the possible etymology for the two terms used for "physician" in Mesopotamian medical literature. The one is the well known Sumerian loan word 'A-ZU'. Saggs and other writers have taken this word to mean "the man who knows
water", or literally, "water knowledge". The problem with such a rendering is that in Sumerian the term 'A' followed by the verbal stem 'ZU', "to know", would needs have to have some sort of relationship particle. These relationship particles are simply not dropped, especially when they are dealing with a phrase made up of a substantive and a verb. The supposition is more plausible that this word actually came to have an entirely different context having nothing to do with divining by water or lecanomancy but actually having something to do with some etiological principle. Such an etiological principle runs throughout Egyptian and Greek medicine where it is utilized in almost every aspect of the medical praxis. In Egypt this was the familiar technical medical term 'w-h-d-w', which has been so ably discussed in the studies by R. D. Steuer in the Bulletin of the History of Medicine No. X. The problem with making up an etymology on a word such as 'A.ZU, asu' is the fact that we simply do not know what the meanings of many words which apparently described professions and trades are. The danger with a false etymology in dealing with names and proper nouns of any type are well known. The guild or association of physicians in Mesopotamia had as their chief deity, the god 'NIN.A.ZU' whose son, 'NINGIZIDA' had as his symbol of authority the rod with intertwined serpents

which passes into Greek and later artistic attribution as the "Caduceus" the wand of Hermes or Mercury, the messenger of the gods, often confused with the official symbol of the medical profession or the staff of Aesculapius. This latter figure being the deified and ideal physician, the patron god of all medical practice in the Greek world. The other term for a practitioner of the medical art was 'āšipu', some sort of a diviner or incantation priest associated with the sick. This term will be discussed in Section C of the next study.

An attempt has been made in recent years to try and isolate some objective factors or some more modern suppositions to the medical practice of Mesopotamia. A particularly valiant attempt was made in the paper read at the thirty-third meeting of the American Association for the History of Medicine, Charleston, South Carolina, March 25, 1960, in which Prof. Martin Lavy attempted to elucidate the subject, "Some Objective Factors of Babylonian Medicine in the Light of New Evidence." This paper begins with the statement, "In the past the magical and exorcistic nature of medicine in Babylonia has been unduly accented. The last decade however, particularly since the publication of Sigerist's book on the subject, has seen the discovery of important texts which are antidotal in character. With a much greater objectivity
described by Sigerist as 'empirical rational' evidenced in these new tablets the framework of ancient Mesopotamian medicine is beginning to assume a more definite form. A new perspective now makes it possible to see the crude outline of this ancient medicine as revealing a fairly logical structure in its actual practice. Evidence for this tendency toward an objective system of medicine is to be found in the relationship among the various texts themselves." What is said herein about the arrangement and the system of the medical texts is certainly true but much can be questioned concerning the supposition that that which is empirical is necessarily rational, or that rationalism is of necessity objective. If anything, rational medicine is not necessarily objective because of the fact that rationalism presupposes a reasonable categorization of phenomenon. These phenomenon however have already been sifted through a certain amount of interpretation and this interpretation passes then on into the medical system. Nowhere and at no time was there greater evidence of rational medicine than in the eighteenth century when Aristotelian logic, perhaps in its purest form was combined with the humoral concepts of both Greek and medieval medicine. The problem is that mere observation of phenomenon which we may call "empirical aspect" when interpreted by an over rationalism is not enough. There must also enter into this
the modern scientific deduction of experiment and of abstraction of knowledge on the basis of experimental factors. There is at the present time no evidence that this sort of practice and experiment was carried on in Mesopotamia or anywhere else in the ancient world in regard to medicine. However, undoubtedly there was a great trial and error, and this trial and error in so far as it was recorded might be conceived as having had the same basic conclusion as a certain amount of restricted experiment would have had. In a world preceding the form, matter, motive of Pre-socratic philosophy it is somewhat irrelevant to speak of objectivity and subjectivity. Nowhere is this better seen than in the astronomical-astrological connotations and deductions made by Mesopotamian and other ancient peoples.

Concerning the Babylonian understanding of mathematics and of the The fact that there were in the heavens particular bodies and that these could be organized not only quantitatively in number but also qualitatively in position was known to the Mesopotamian astronomers as evidenced by their deduction of linear zig-zag functions for the measurement of ephemerides. Now this corresponded to the empirical side of observational science. The problem was that they then interpreted this on the basis of a pattern of cosmology. They were purely rational in this, there is no question about that, but this rational interpretation
presumed to project the topography of the earth and the various kingdoms into the heavens so that therefore certain constellations were indicative of what was to happen on earth. It is quite possible that Mesopotamian medicine suffered from the same kind of over-rationalism but a rationalism based on a faulty supposition. Admittedly, this is somewhat philosophic but unfortunately there is always a metaphysical supposition in any scientific endeavor and in the interpretation of any scientific endeavor. Unfortunately, very often this is overlooked; the end result is then to over-simplify both the culture and the scientific phenomenon which the culture produces. A great deal of work has been done by O. Neugebauer, and others to examine the precise extent of knowledge of the exact sciences in antiquity. Concerning the Babylonian understanding of astronomy and of the mathematical relationships of astronomy, Neugebauer has written, "One can only admire the elegance and skill which is reflected in all these arithmetical methods. We are still far from a full appreciation of them since we know so little about the underlying empirical material which was so skilfully applied to provide the basic parameters of a real mathematical theory."\textsuperscript{9} A statement similar to this could be expressed to Babylonian medicine, for there again, although there is a vast assortment

\textsuperscript{9} The Exact Sciences in Antiquity, Harper, N.Y., 1962, p. 135.
and systematization of medical knowledge, we are at a distinct loss to describe or even to discover the material and the kind of empirical observation which was utilized whether one accepts the basic premise, opposed or not, the studies which have been made by A. L. Oppenheim in the meaning of the term 'SA.GIG' so often applied to the whole series of prognostic and diagnostic Akkadian medical texts, there is still the factor that some rather sophisticated judgments were made by the Mesopotamian physician in connecting certain symptomatic signs and in prognosis on the basis of these signs. In certain of the medical texts death or recovery are placed at some considerable distance in time from the onset of the malady. For many years it has been presupposed that up until the appearance of the philosophers who lived in the islands of the Aegean there was no such thing as objective, empirical science in the ancient world. However with further studies into the mathematical, astronomical and medical texts it appears that there were, even before the Eleatic schools of philosophy, a large and continually growing body of scientific literature produced by the river valley civilizations of Egypt and Mesopotamia. The work of Needham and his assistants at Cambridge in early Chinese science is also beginning to tell in the modern, overall view of scientific phenomenon and learning in the ancient world. It is to be hoped that as more careful
studies of the Mesopotamian medical literature are expanded and
as they become better known to the academic community at large,
that the quest for objective aspects in Mesopotamian medicine,
like the quest for the historical Jesus, may be resigned to the
limbo of antequated methodologies. No better summation can be
made to this part of our study than to quote the close of Prof.
Oppenheim's speech given at the symposium on Medical Lore and
Practice in the Ancient Near-East at the thirty-fourth annual
meeting of the American Association for the History of Medicine,
Chicago, Illinois, May 19, 1961, where he said, "I would like to
terminate this paper on a 'pro domo' note. The study of Mesopo­
amian medicine is now nearly a century old. It has always been
hampered by departmental separation lines: either philologists
lacking knowledge of medicine, its history, or that of pharmacol­
ogy, or physicians without adequate linguistic training, have
dealt with this subject. Obviously, a call for cooperation be­
tween the two disciplines is appropriate and I heartily join in
this demand."

"Yet cooperation, however desirable and ultimately inescapable,
will not be either easy or contain 'per se' any assurance of
success. Above all, it will demand a much larger contribution
from the Assyriologist than he is likely to suppose. It will not
suffice to assemble a corpus of the medical literature in cuneiform, published as well as unpublished texts, or to collect special vocabularies concerned with the nomenclature of diseases, the pharmacopoeia, etc., essential as such preliminary steps are. The crucial task will have to be a thoroughgoing analysis of the text material as literature. This means that a typology must be established, forms and functions must be analyzed, in order to ascertain in which setting each text type evolved and what purpose it served, either originally or in one or more transferred applications. Without such investigations the study of the medical texts cannot yield satisfying results.

"The cooperating historian of medicine will have the difficult task of interpreting, according to an entirely different modern terminology, the symptoms correlated by the ancient physician; he will also have to draw heavily on the advice of experts familiar with the history of pharmacology and with the botany of the ancient Near East." This suggestion of Prof. Oppenheim's has been actualized as far as it can be with present knowledge in the commentary below on one small segment of Mesopotamian medical texts and the interpretation of them. On the other hand it will be seen in the commentary and interpretation that a heavy debt is due to those investigators such as, R. Campbell Thompson, R. Labat, and E. Köcher, who have collected and
edited large portions of the Mesopotamian medical corpus. Of equal and possibly even greater importance, are the lexicographers who, to the best of our present knowledge, have deduced the meanings and relationships of words and the morphology and syntax of the Sumerian and Akkadian language. Foremost of these are M. Civil, E. Reiner, W. von Soden, and the dean of all twentieth century Assyriology, B. Landsberger. The scholars who disregard the contributions made by these scholars and many others, to an understanding of the text itself have produced wholesale a large number of very inferior works in the history of medicine.

In the next study in this series a summary of just precisely what works have been produced in both the specific field of Mesopotamian medicine and the general field of history of medicine, will be detailed in chronological order.
II. The Study of Akkadian Medical Texts to the Present.

(Sections 4-6a)
We must now turn our attention to the study of the Akkadian medical texts to the present. Aside from Herodotus, whom we have quoted already, and the Bible, which will be discussed below, no other source making mention of Akkadian medicine was available until in the nineteenth century the excavation, the reduction, the transliteration, and the translation of the medical tablets themselves was accomplished. The initial publication of any medical tablets of any sort whatsoever was made by Sir Henry C. Rawlinson, the excavator, adventurer and scholar usually considered to be the Father of English Assyriology, born at Chadlington Park, Oxfordshire, in 1810, and died of influenza in 1895. In 1857 the trustees of the British Museum discussed the publication of the many new tablets which were being excavated and shipped to England from the Mound of Kukûnjik. This work along with an English translation and commentary was to be published in a series of folio volumes to be called the "Cuneiform Inscriptions of Western Asia". Each volume was to contain 70 plates of text. The edition of each volume was to be 250 copies, 125 copies to be sold to the public,
the remainder were to be reserved until the time when Rawlinson could supply the translations which were to be printed and bound up facing the original texts. In 1875 the fourth volume of the Cuneiform Inscriptions of Western Asia appeared and a number of medical fragments appeared in this particular volume. However only two of the tablets were clearly identified at the time of their publication as having medical significance. In the autumn of 1895 the trustees of the British Museum decided to publish a series of copies of the more important texts of the cuneiform inscriptions on Babylonian tablets and other antiquities in the British Museum which were to be issued from time to time with the view of making them more readily available to scholars. It was considered well to abandon the enormous format employed in Rawlinson's original work because of the fact that the plates of the texts in those volumes were too large for convenient study and the space required for a volume to be opened was rather considerable. At this time also it was decided that rather than use the old engraved lithography upon stone, it would be much cheaper and much quicker to use the then-improved photo-lithography. It was further agreed to limit the number of plates in a set to 50 and to publish them unbound in loose cardboard wrappers. By mid-October of 1896 part I of cuneiform texts from Babylonian tablets, etc., in the British Museum was
published. The size of the plates was, and has continued to be, thirteen and one-half inches by eight and one-half inches.

In 1903 part 17 was issued, the texts being drawn in outline by Bowler and his successor, Jankowski. Plates numbered one through twenty-eight of this volume were titled in the introduction, "Texts belonging to the series Ašakki Maršûti, i.e., "The Fever Sickness," and Ji'i, i.e., "Headaches." Portions of texts belonging to both Series were republished by the late General Sir H. C. Rawlinson, Bart., G. C. B., in the Fourth Volume of the "Cuneiform Inscriptions of Western Asia," but with the exception of two tablets these compositions were not clearly identified at the time of their publication in 1875. Subsequently, however, owing to the rejoining of many hitherto unidentified fragments in the Kouyunjik Collection, and the discovery of many duplicates in that and in the Babylonian Collections, much new material has been collected, which is published in the following plates for the first time. The Series Ašakki Maršûti contained at least twelve "Tablets," and at present portions of the First, Third, Ninth, Eleventh, and Twelfth Tablets have been identified and their proper place assigned to them. The Series Ji'i originally consisted of nine Tablets, of which portions of the Third, Sixth,
Eighth, and Ninth have now been identified and their proper place assigned to them."

Meanwhile in 1885, the Assyriologist, A. H. Sayce, Prof. of Assyriology in the University of Oxford, member of the Old Testament revision committee and gifted lecturer, had published in the German journal, "Zeitschrift für Keilschriftforschung" (the predecessor of the modern "Zeitschrift für Assyriologie"), and article entitled, "An Ancient Babylonian Work on Medicine". This of course was based on the text published in the Fourth Volume of Rawlinson's "Cuneiform Inscriptions of Western Asia". These few titles constitute all of the publication on the subject of Akkadian cuneiform literature dealing with medicine to the third year of the twentieth century.

In Leipzig in 1904, however, appeared a most important work from the press of J. C. Hinrichs "Buchhandlung" a volume entitled, "Beiträge zur Kenntnis der Assyrisch-Babylonischen Medizin. Texte mit umschrift, übersetzung und kommentar" by the Marburg professor, Friedrich Kuchler. To Prof. Kuchler goes the credit for having prepared the first scientific study and edition of a large number of Akkadian Medical texts. The tablets were grouped into three series which had been joined together in the British
Museum by Prof. Kuchler. They were K 191 plus 201 plus 2474
plus 3230 plus 3363; K 71b plus 238; K 61 plus 161 plus 2476.
The book contained 156 pages and 20 plates drawn from the
cuneiform tablets. It also however presented a translation,
a rather elaborate commentary, a word list, a register of plant
names, and a chart of ideographs. This of course made it far
more than a simple presentation of some medical texts. It made
it essentially the handbook from which all future studies of
medical texts were to begin.

In 1913 R. Campbell Thompson, an assistant in the Assyriological
section of the British Museum, began his work which was to last
for two decades on the Akkadian medical texts. The account of
this effort is given in E. Wallis Budge's book, "The Rise and
Progress of Assyriology", in which he says, "For many years
past Thompson has devoted much to the study of Assyrian-Babylon-
ian medical texts for the reading and translation of which he
has a special aptitude. He saw from the first that it would be
useless to discuss the medical knowledge of the Assyrians until
all the texts dealing with the subject were published and he set
to work to make a corpus of medical texts. He was actively
engaged in this work so far back as 1913-14 but his military
service in Bazra and Bagdad during the war interrupted his
studies and he was not able to continue his researches until the Kouyunjik Collection in the British Museum became once more available for students. It was well known to Assyriologists in 1914 that Thompson was preparing his corpus of medical texts of Kouyunjik tablets.\(^1\) At this point in the story enters one of those figures who often cause extreme controversy which, though it enlivens the history of Assyriology, to a large extent detracts from the continuous publication and the continuous sharing of scholarly information necessary for Assyriological progress. This man was Eric Ebeling concerning whom, Budge states, "Ebeling apparently lacking of full appreciation of the demands of modern science in this connection began a piece-meal publication of a portion of those fragmentary texts by bringing out in 1921 thirty-five and following it by a republication of those with about sixty more in his 'Keilschrifttexte Medizinische Inhalts I'. In 1924 he published sixty-two more in Heft II of his book. Such fragmentary work published piece-meal can hardly be said to satisfy the student, and in any case it was bound to be swamped and antiquated by Thompson's publication of 660 tablets and fragments in the spring of the same year, 1924. This edition was the result of a study begun nearly twenty years before which included persistent colation and handling of the texts and it is

gradually being followed by his translations which have the advantage of a rich field for research which so large a number of texts necessarily provided, especially in the difficult subject of drug names. It is only by the publication by so large a number of fragments that that great problem, joins, can be solved with satisfaction, especially in a class of texts which have suffered so much from the ravages of time and as a proof of this, it may be added that since the printing of this corpus of medical texts Thompson has made more than seventy joins among them, a result impossible from a superficial publication. Thompson has since issued facsimiles and letter press in which he deals with the identification of medicines, both vegetable and mineral, and for the first time, the student of Assyrian medicine has before him accurate copies of all the medical tablets in the British Museum hitherto identified."

However while Ebeling and Thompson were publishing the texts which had been excavated from Kouyunjik other European scholars were publishing studies of the texts which had appeared in editions both by Rawlinson and by Sayce, and the newly published "Kuchler edition. One of these, a physician, Baron Friedrich von Oefele, had published as early as 1899 an article entitled "Gynecological Stones" in a continuing series of studies con-
cerning Assyrian medicine and natural science, which appeared in ZA. From 1899 to 1919 von Oefele proceeded to publish some 13 separate articles dealing with Babylonian medicine and veterinary practices. In 1914, L. Dennefeld published through a Leipzig press, a Babylonian-Assyrian birth omen in Volume 22 of "Assyriologische Bibliothek". This he followed with an article on liver divination published in Strassburg in 1919. A very little known work used by very few of the scholars at the time was that published by R. Dumon in the French language in the "Journal Asiatique" entitled "The Profession of Medicine and the Preparation of Assyro-Babylonian Texts". For all intents and purposes this was the complete production of articles on Mesopotamian medicine up until the time of the publication of R. Campbell Thompson's "Assyrian Medical Texts" in 1924.

The same Ebeling who was so disliked by his British colleagues proceeded to produce over the years succeeding 1921, a large series of publications dealing with the cuneiform inscriptions excavated at Assur. These are the familiar KAR, KAH, KAJ and KAV. He also published in various journals, several smaller articles dealing with the translation and philological commentary on both the medical texts from KAR and the medical texts he had originally published, taken from the British Museum. In
1932 Ebeling published the first volume of the "Reallexikon der Assyriologie" which was published by Walter de Gruyter in Berlin. In the first volume, pages 164-165, appears the article on "Artz" (physician). This article rather well organized all of the known material about the position and person of the Babylonian physician.

This completes our survey of the publication of the texts and the drawings of the cuneiform tablets up to the publication of R. Campbell Thompson's "Assyrian Medical Texts". We must now turn our attention to the studies written on the medical texts which had been published to that date. The professor of Semitic languages and literature in the University of Pennsylvania, Morris Jastrow, began publishing articles concerning Babylonian medicine as early as 1914, when he produced his article in the Proceedings of the Royal Society of Medicine, Volume 7, entitled "The Medicine of the Babylonians and Assyrians". Much of the material for this was however drawn from an early article entitled "Divination Through the Liver and the Beginnings of Anatomy" which appeared in the Transactions of the College of Physicians of Philadelphia, Volume 29, in 1908. These articles on Mesopotamian medicine and medical practice appear to have grown out of his interest in Babylonian religion and particularly in
divination, and in the liver omens. For in the "Zeitschrift für Assyriologie", Volume 20, 1906, he had produced an article entitled, "The signs and names for the liver in Babylonia". This was followed in 1912 by another article, "The liver as the seat of the soul", studies in the history of religions presented to C. H. Toy, New York, and in 1913, still another article published in the "Religions Geschichtliche Versuche und Vorarbeiten", Volume 14, Section 5, entitled, "Babylonian-Assyrian Birth Omens and their Cultural Significance". In 1917 in the Journal of the Society for Oriental Research, Paul Haupt, the German Assyriologist, produced an article entitled "The Disease of King Tuman" which of course was based on the citation of King Tuman's Seizure in the Sennacherib inscriptions which were published by Daniel David Luckenbill in Oriental Institute publications No. 2. Probably the most important extra-textual production of this era, for the understanding of Babylonian medicine and one which is still not superseded is the treatise published in Helsinki and Leipzig in 1911 entitled, "Die Namen der Körperteile im Assyrisch-Babylonischen", by Harry Holma. This valuable word list and discussion was printed as Section B of Volume 8 of The Annals of the Scientific Academy of Finland. In the same annal of the Finnish academy appeared another paper by Holma entitled, "Kleine Beiträge zum assyrischen Lexikon". This brief 97 page Assyrian
dictionary particularly dealt with the names of diseases, the names of fishes, and the names of plants. Although it was part of the 1911 volume it was not actually printed and distributed until 1913. In 1923, again from Leipzig, Holma produced a book of texts entitled, "Omen Texts from Babylonian Tablets in the British Museum concerning Birds and Other Portents". He also produced several small articles which reproduced drawings of tablets of Babylonian medical literature. This, unfortunately, along with his bird omen volume, is extremely rare and not even cited in many of the standard bibliographies of the subject. Holma's name lists and lexicons are based upon the published Babylonian tablets as they were produced by Ebeling and Kuchler. He also refers to the originally known medical texts which had reappeared in CT 17. His work unfortunately was produced before the publication of the "Assyrian Medical Texts" by R. Campbell Thompson. Therefore it does not have the vast number of citations which would have been afforded by that later work. It does however have certain advantages over even R. Campbell Thompson's later work of his own publication of the texts, in that Holma attempts to stay clear of Arabic etymologies and to handle the Sumerian logograms with as much skill as was possible in the time in which he wrote. Already the study of Babylonian medicine had spread far wider than the restricted field of
Assyriology. In 1919 in the "Archiv für Geschichte der Medizin" E. Hammel had published an article concerning the history of anatomy in the ancient Orient. This article became standard for histories of medicine until the publication in 1938 of George Contenau's "La Médecine en Assyrie et en Babylonie" (227 pages). Although this later work which will be discussed below was a broad survey and not a discussion or translation of the texts themselves, it has had very strong influence on the ideas of Mesopotamian medicine which have appeared in secondary literature such as history of medicines, down to the present day. It is necessary however to speak of the publication of two non-medical texts which had a great deal to do with the revival of interest in Assyrian-Babylonian medicine. These were first, a cylinder seal which had been excavated in 1881 by de Sarzec. This cylinder seal was dedicated to Ninazu and mentioned the name of a man after which followed the adjective 'asu' meaning physician. In a small inset in one corner of this cylinder seal were what appeared to be instruments of medicine, pots for making drugs, a mortar and pestle and what may be, lances for certain types of surgical interventions. The other event was the publication of the Law Code of Hammurabi. One of the most immediate reactions of the Law Code of Hammurabi was an interest in the apparent medical laws, laws governing the practice of medicine. Although
almost all of the aspects of life are pictured in Mesopotamian art as in Egyptian art, there is no pictorial representation of the practice of medicine and certainly none of the practice of surgery. There has been a great deal of debate on exactly how far and in what manner the apparent incisions mentioned in the Code of Hammurabi are to be understood. The popular medical press of course takes this sort of operation as far as it can possibly be stretched. An example of this would be a quotation from "Science and Secrets of Early Medicine", a book published in England by a West German journalist named, Thorwald, who states, "Neither the Sumerians, the Assyrians, nor the Babylonians left a pictorial record of any such technique but a close study of paragraphs 213 and 218 in Hammurabi's Code left little doubt that the Mesopotamians by the eighteenth century B.C. knew and practiced the operation for cataract, i.e., clouding of the optic lense." Thorwald continues, "As philologists and physicians look more carefully into the sentence in Hammurabi's Code, 'If a physician -- has opened a spot in a man's eye with a bronze instrument -- ', certain points were clarified. It became apparent that the word for instrument could also mean needle. Moreover the word 'nagepti' which had been translated as spot was intended as a description of the symptom. It refers, Th. Musy wrote in 1916, to a symptom anyone can see plainly, a cloud-
ing of the cornea or of the deeper media of the eye. Day in and
day out an ophthalmologist will hear his cataract patients
complaining about a spot or tiny bit of skin on the eye. Musy
came to following conclusions. About two thousand years B.C.
cataract was known to the Babylonians. In those ancient times
couching for cataract was practiced. The operation consisted of
the reclination of the lens with a bronze needle'... Reclination
means pressing the lens downward into the lower part of the eye-
ball out of the field of vision, thus permitting a degree of
sight. It was done with a needle applied to the eye".2.

A brief commentary which is slightly more conservative and less
editorialized than Thorwald's appears in a textbook of ophthal-
mological history by G. E. Arrington, M.D., who says, concerning
the optical medical practice of Hammurabi's code, "Possibly the
earliest record of ocular therapeutics is to be found in the
Code of Hammurabi (1900 B.C.) in which there are indications
of the existence of the legal establishment of fees for treat-
ment and of punishments for mal-treatment or failure to cure.
For destruction of an eye one would lose his own eye (an eye for
an eye). If while operating on a abscess with a bronze lancet
the physician saved the patient's eye, he was to be paid ten

shekels of silver, but if he destroyed the eye during the operation he was in jeopardy of losing his fingers or in other cases of losing one half of his pay. The Code also differentiated strictly between fees and punishments involving individuals of varying social levels such as slaves and free men. Thus in the laws of Hammurabi, a Babylonian-Assyrian ruler, nineteen centuries before Christ; there in a setting of superstitious and empirical medicine where disease was considered to be caused by the insect god, Nirgal, government took control of the practices of physicians. Already the importance of the role of the oculist was in evidence." 3.

Professor A. L. Oppenheim of the Oriental Institute of the University of Chicago, has made the following statement in regard to the type of assertion quoted immediately above, "In popular books on Mesopotamian civilization and medicine one often finds the statement that operations for cataract are referred to in the Codex Hammurabi. This is not the case. The activities of a physician mentioned in this law code as possibly endangering a person's life concerns scarification meant to offer relief in certain diseases of the eye, a common practice in Alexandrian medicine." 4.

Although the three quotations above are somewhat anachronistic

to our general chronological survey of the study of Mesopotamian medicine they do demonstrate the degree to which the publication and translation of the Codex Hammurabi influenced and accelerated the study of the Mesopotamian medical texts. Over a period of many years R. Campbell Thompson proceeded to publish studies, transliterations and translations of the medical texts which he had edited in AMT. He published these studies in a series of articles which appeared unfortunately, not in Assyriological journals, but in most cases in journals for the study of the history of medicine, or journals of the various Asiatic societies. A lengthy list in all its details will be found under the name of R. Campbell Thompson in the Bibliography to this series of studies. Thompson however did not limit himself to texts published only in his own publication AMT. He also commented on texts which had originally been published as early as 1900 by V. Scheil. These however were not collections of texts but in most cases only fragments. All these publications appeared in the "Revue de Assyriologie" which was published in Paris. Again a complete list of Scheil's works as they were published in this journal appears in the Bibliography. It is unnecessary to list here all of the many single papers written by a variety of authors, most of them either on the basis of the BKEM of Kuchler or on R. Campbell Thompson's AMT. During the period 1924 to 1938, the
second volume of a series entitled "La Médecine a Travers le Temps et l'Espace (collection Publiée sous la Direction du Dr. Stéphén-Chauvet) appeared in Paris. The first of the two projected volumes was edited by Dr. Stéphén-Chauvet himself. It appeared in Paris in 1936. It was entitled, "La Médecine chez les peuples primitifs" and dealt specifically with pre-historic and ancient medicine. The second volume written by G. Contineau was entitled, "La Médecine en Assyrie et en Babylonie"; it appeared in 1938, containing some 227 pages, and although many of the conclusions reached are and must now be considered dated and disproven by later material, yet it was the largest single volume dedicated to a discussion of the principles and practices of Mesopotamian medicine produced up to its time. Despite its specialization and its rather large size much of the book was taken up with subsidiary ideas and its basic interpretation and supposition were intensely Helenistic, as though the author were writing from the point of view of the Hippocratic medical corpus, which in fact he most likely was, we shall see that in the works produced by R. Campbell Thompson, this is the one besetting fault. There is also, in Contineau's work, a definite lack of any real discussion of the texts themselves. There is for instance no basic coming to grips with the meaning of the many, many specialized Akkadian terms. Also, there are in many
cases quickly and easily supplied translations which may not be borne out by a close study of the texts themselves. In his admirable eagerness to systematize and formulate an overall picture of Mesopotamian medical understanding, Contineau at many points rushed into an all too simple and naive connection of various aspects of the society which had little or nothing to do with each other. Prime evidence of this is the fact that well over 40 percent of the book is taken up with varying practices of divination and explanations of these practices. Undoubtedly there is a connection between the type of divination practiced, as liver divination, and the quality and knowledge of anatomy which of course is suppositional to any medical practice. However to try and link the actual divination with the actual medicine is somewhat difficult and something in which Contineau and most other scholars have been totally unsuccessful. Despite its apparent difficulties this book of Contineau has continued to be one of the standard references for most writers on the subject of history of medicine.

In 1951 Henry E. Sigerist, M.D., research associate in the history of medicine at Yale University produced volume one of his "A History of Medicine". The first volume dealt specifically with primitive and archaic medicine. The last 120 pages are dedicated to Mesopotamia. Sigerist of course is not an Assyriologist and
for this reason he must depend largely on R. Campbell Thompson for translations. He also envolves the practice of hepatoscopy with that of medicine. The discussion offered by Sigerist suffers most grievously from being an interpretation of the Mesopotamian material on the basis of one rather complicated assumption which is drawn from primitive medicine. The difficulty with such assumptions of course is the fact that they are built on a recapitulatory theory, that is, they tend to accept the old Haekelian premise that the development and history of a single group is indicative of the development and history of the species as a whole. When this is applied to a sociological phenomenon such as medicine in a culture, its end result is to first of all start with primitive medicine in the world today, such as the primitive medicine of the Altais of Central Asia, or the shaman of the Eskimo cultures, then what is learned from these very primitive medical practices is extrapolated backwards to the cultures of antiquity. This of course is a very tenuous and completely unscientific approach. The fact remains that neither the Altais medicine men nor the Eskimo shaman write large medical papyri as did the ancient Egyptians, nor thousands of cuneiform tablets as did the Mesopotamian physicians. An excellent review of this book can be found in JCS, Volume 6, 1952, page 128 ff. In this review Prof. Labat congratulates
Sigerist on his profound knowledge of archaic and primitive medicine as found through archeological digs. He also commends Prof. Sigerist's research into many areas of technical Assyriology. However an interesting phenomenon which tends to place Sigerist's work in its chronological perspective is his misuse of terms. He has in many cases accepted older phonetic transcriptions of Akkadian words, for example, 'Labartu' for 'Lamaštu', 'ekimmu' for 'etemmu', 'Ninib' for 'Ninurta', and a number of translations which have in succeeding years been corrected, most outstanding of which is the meaning of "poison" for 'Šimmatu'. Labat then rightly criticizes Sigerist for attributing Akkadian medicine to Sumerian medicine. On page 385 of his book, Sigerist says, "The Akkadians took over not only the Sumerian system of writing, but also their calender, their weights and measures, many elements of their religion, science and medicine." This of course is patently untrue, as all that exists of Sumerian medicine is one small tablet, six by four and one-half inches, which is not even a medical tablet but actually a dosage-form recipe and along with this one other prescription on a badly defaced fragment. The notion that Akkadian medicine is essentially derived from Sumerian is quite a common one in these various generalized histories of medicine and we will see that popular treatises which draw heavily on
Sigerist remove this idea even further from its source and even more unrealistically from the evidence. In regard to Sigerist's general statements at the beginning of the section on the sources of Mesopotamian medicine, Labat says, "From now on and on essential points I regret that I cannot always share the author's views. He puts forward in the beginning a certain number of personal theories that we would have rather not seen exposed initially save possibly in the nature of his conclusion. They can be reduced thusly. In Mesopotamian civilization whose every aspect is impregnated with religion, medicine in spite of a certain rational acquisition, conserves throughout its history a magical religious character. I could never allow such an affirmation a priori, finding elsewhere the sense of the positive and the observational spirit that Assyrians and Babylonians often manifest. Yet it is not that the author does not honestly demand in himself what sources he can legitimately draw from. Leaning on the fact that demons, tabus and spells are often cited as causes of diseases and that conjurers are often called to the bedside of the sick, he allows that all the magical and divinitory literature should be utilized for the study of medicine, in the same quality as lists of symptoms, therapeutic prescriptions and the letters written by physicians. Nothing is more legitimate than that one should
draw profit from all these sources, but it would be still better, it seems to me, to make the necessary discriminations between them and not to dispose of them in a single synthesis if they belong in different levels, but this is not what Sigerist does, following naturally many others. Allowing that the different aspects of Mesopotamian medicine make one sole science he gives it credit for everything which is in the most diverse texts concerning the sick. In fact if we look at it a little closer we are forced to discover that there exists at least two distinct sciences, the conjurer's science, the 'âšipûtu', and the healer's science, the 'asûtu'. Each has its particular domain, its special vocabulary, its own methods. Magic rites and incantations are relevant to the first; treatment by means of plants or additional substances, to the second."

This point which Labat makes is extremely important and will be discussed in detail for its own merits in the next study. Labat mentioned for particular criticism the contents of Sigerist's fifth chapter on the content of Mesopotamian medicine. "The sickness which strikes man, H. E. Sigerist recalls, is due to the influence of demons made possible, favored for provoked by destiny, sin and black magic. We regret that the author is content with this traditional explanation or at least he has
given it an importance which seems exaggerated to me. It is false to believe that the Babylonians attributed all diseases to demons or spells. Very many of them already guessed at natural causes, either physical, drafts, heat, dryness, cold, etc., or physiological, intoxication, indigestion, development of a local infection, gall stones, teething in an infant, etc., or parasites, etc. If one took the bother to gather up all these references their study would not miss modifying obviously our conception of Mesopotamian medicine. Without doubt many diseases are qualified by the 'hand of a god or a demon' but no one has attempted to find out what these expressions exactly signified." Since these expressions are an integral part of an understanding of the 'SA.GIG' series they will be discussed below in Section 3.

It is important however to realize that Sigerist's approach and Sigerist's conclusion are today practically normative for all secondary histories of medicine. In 1951 also another important book appeared for the study of Mesopotamian medicine. This was Rene Labat's "Traité Akkadien de Diagnostics et Prognostics Médicaux". The first volume, a standard octavo contains the transcriptions and translation of the reconstructed 'SA.GIG' series. The second volume, a slightly oversized quarto
contains 68 hand drawn plates of tablets and fragments either poorly published, unobtainable or newly published in this work of Labat's. This volume was the first major publication of a series of Mesopotamian tablets since AMT. It has made available to the researcher a large number of new texts, a great number of joins and an outlined connection of all of the series. Unfortunately the work is marred by certain extreme defects. Defects, which I am afraid, almost obviate its practical use. Initially it is not numbered well. The internal citations are based on a tablet structure which at very best is only supposition- al. It suffers from the same difficulty that C. H. Gordon's collections of Ugaritic transcriptions been alleged to contain. Although it is clumsy, it is far better to arrange the texts by some numbering system based on the museum number of the tablets as was done in the 1914 publication, Kuchler's BKBM, or was done by R. Campbell Thompson in AMT. Otherwise, bibliographic citations to the Labat texts, which are standardly abbreviated as TDP becomes a monstrosity of conflicting Roman numerals, page numbers and foot notes. A practical example of this is seen in the problem encountered by both CAD and AHW in attempting to cite passages from Labat's text.

Another serious fault is the mixing up of levels of transcriptional
tradition. The medical texts are confusing and difficult because of their constant repetition of a large number of Sumerian logograms, many of them written without phonetic complements. These Sumerian logograms in turn have various Akkadian equivalents. Unless a syllabically written text can be located it is quite difficult for the editor to decide which of the whole series of common Akkadian words is meant by the use of a particular logogram.

Another problem is the fact that logograms at times have different inflections and different morphologies in their Akkadian equivalents. These of course are fundamental to any translation or proper understanding of the meaning of the diagnostic-prognostic phrases but on the other hand the necessary form eludes the editor due to the confusion of having been written as a mere logogram. Labat at times cites the Sumerian, at times the Akkadian. A far better plan, although it would have lengthened the book by at least 75 pages, would have been to write out as it stands the cuneiform text in its logographic and syllabic signs. These should then be normalized according to some standard system, but the lack of continuity and coherence in the system of transliteration makes it extremely difficult to restore in ones mind the original text as it was written on
the tablet. The texts are transliterated in Labat's TDP on the left hand side of the page. On the right hand side appears an equivalent French translation. These translations in many cases are either very generalized due to the nature of the material or subject to some modification. Labat has served a great need in editing one major series of canonical, Akkadian medical texts, however since the work took so much time and was of such great significance for the understanding not only of Mesopotamian medicine but of ancient scientific writing in general, it is a shame that more care and greater detail was not included in this initial edition of the text.

Another feature which would have added immeasurably to the useability of these texts for the student would have been the inclusion of the end as was done in the case of the Kuchler publication, an extensive glossary and concordance. This could have been done undoubtedly by one of Labat's students and would have simplified the work of comparison of the texts and aided researchers in other fields of Assyriology. Since 1951 Labat has published further studies on fragments which have appeared that seem to fit into the 'SA.GIG' series. He has not as yet published any overall commentary on the 'SA.GIG' series as it stands. The most detailed account written as a summation of
Akkadian medical practice by Labat has appeared in the series edited in France by Rene Taton, subsequently published in English as a *History of Science*, volume one, Ancient and Medieval Science. The article contained in pages 78-89 of this volume deal with Mesopotamian medicine and were written by Labat. Although this series was meant for the interested layman and the non-specialist the article by Labat is probably the best article at present obtainable on the general subject of Mesopotamian medical practice.

Another work of importance although not actually dealing with the subject of Mesopotamian medicine specifically is that written by Fritz R. Kraus as a Beiheft of the Archiv für Orientforschung. It appeared in Berlin 1939 and for that reason it was not distributed in the Western World until after the war. It did not find its way into most American Assyriological libraries until the early 50's and therefore in many publications appears at about the same time as Labat's TDP. The title of this monograph is "Texte zur babylonischen Physiognomik". It contains some 65 plates of cuneiform text dealing with divination by physiological signs such as the occurrence of moles, neoplasms and birth anomalies, as well as symptoms of diseases. As will be seen on the commentary on KIMIN I and KIMIN II below there is
a great deal in common terminologically, orthographically and morphologically between the pure 'asûtu' texts and these particular types of omens which deal with identification of parts of the body. Unfortunately no general translation or commentary of these texts has as yet appeared but a comparison of these particular texts with what is now in print of the Mesopotamian medical corpus, would prove to be a most interesting study. Incidentally, the last plate in the Kraus work is bound in upside down with somewhat humorous effect. The introduction by Kraus is quite useable, however, again like TDP it has a great deal of complexity in its number system. Kraus is of course trying to make the best of the existing three different types of number systems for the same basic cuneiform tablets. In trying to arrange these so that any one numbering system is suitable for finding the particular fragment and line desired he has only worsened an already bad situation.

In 1957, the Nederlands Instituut Voor Het Nabije Oosten produced Volume Two of "Tabulae Cuneiformes" from the collection of F. M. Th. de Liagre Bohl of the Leiden Conservatory. This second volume of plates of tablets was copied and edited by J. J. A. van Dijk. The twenty-first tablet, plate No. 24, is the oldest known medical tablet in Akkadian. The museum number
is LB 2126 and although badly defaced, it contains major fragments of approximately 22 lines and minor fragments of 11 more. The signs are older than the ones in most of the 'SA.GIG' series from Assurbanipal's library and in the texts published from tablets in the Museum of the Oriental Institute in Chicago. Unfortunately, again this text has not been transliterated, translated and commented upon adequately in any article that has yet appeared. The author of these studies intends next to turn attention to this old Babylonian text.

In 1956, J. V. Kinnier-Wilson published a pair of plates transliteration, translation and commentary of two medical texts excavated from Nimrud in 1955. Their museum numbers are ND 4358 and ND 4368. ND 4358 appears to be a catalogue of first lines of the 'SA GIG' series. Interestingly enough it fairly corresponds to the series as reconstructed by Labat in TDP. This article of Kinnier-Wilson's appeared in Iraq, Volume 10, 1956. On March 25, 1960, Prof. Martin Levey read a paper entitled, "Some Objective Factors of Babylonian Medicine in the Light of New Evidence", at the thirty-third annual meeting of the American Association for the History of Medicine in Charleston, South Carolina. This was later printed in Volume 35 of the Bulletin of the History of Medicine, 1961, pages 61 to 70.
The material for this paper was largely taken from TDP, particularly the French translation. It demonstrates a gross misunderstanding of the background of Mesopotamian science in general and medicine in particular. The effect of the paper is to popularize the point which Labat has stressed throughout his publication of Babylonian medicine that the practice of the diviner must be held separate from the practice of the physician. The conclusion of Levey's paper states, "A thread of objectivity persists throughout the history of Babylonian medicine. A preliminary observation would indicate that the second and third millennia produced a more rational medical literature than did the first millennium B.C. Two lines of Babylonian medicine operated side by side, often in harmony: the magical and the objective approaches. In practice one was used to complement the other. The objective approach in the practice of medicine in Babylonia is seen in the symptoms series of texts taken together with the therapeutic texts series. In the former are listed over three thousand syndromes and their resulting prognoses. The latter gives the diagnosis and the manner of preparation of prescriptions and their use. The two series serve to complement one another." What Levey has suggested is up to a point correct. However the determination of medical literature of the ancient world as "objective" or "subjective"
is highly questionable since almost all inductive reasoning is subjective at base. The other problem is his use of the word "syndrome" as indicative of the prognostic texts. By "syndrome" he means of course the association of a number of symptoms to indicate a particular malady. It is difficult to prove that this is precisely what is meant in the diagnostic and prognostic texts. A syndrome is essentially the sum of symptoms, however the ordering (which will be discussed below) of the 'SA GIG' series gives the impression that the various symptoms were actually dissociated, that is, they were listed not according to the disease and then from that recognizable entity back to the symptoms which occurred with this disease, but rather by isolating one symptom, the left foot, the right foot, the left hand, the right hand, and then associating with this, some other symptom. To obtain an actual syndrome one would have to compare a number of different prognostic statements, for example, the condition of the hand combined with a particular condition of the entrails and then check under the condition described for the entrails what would be the condition of, let us say, the face or the feet. By grouping these together, a tedious and difficult consideration one could actually produce a list of rather complicated syndromes, complex enough in fact to detail in modern terminology what disease is being specified. This is a
tricky business and so far it has not been attempted for more than a very few of these syndromes. The closest that any published article has come to this methodology is that of A. L. Oppenheim, in his article on the Observation of the Pulse in Mesopotamia, which appeared in *Orientalia New Series*, volume 31, 1962, pages 27 to 33, where he discussed at length all of the words and phrases connected with 'SA GIG'. Admittedly, his observations and conclusions are because of the nature of the case highly conjectural and subject to a certain amount of debate, however the method which he employed is certainly a good one and must be employed in other aspects and with other identifiable illnesses. Oppenheim has been active in the history of medicine in Babylon since his publication of an article in the *Journal of the History of Medicine and Allied Sciences*, volume 15, 1960, entitled, "A Caesarean Section in the Second Millenium B.C.". This article refers to the oft quoted statement that there were Caesarean Sections known in Babylonian medicine. The evidence for this is a somewhat insignificant statement in a legal text of the Old Babylonian period. As Oppenheim points out in his article this Caesarean Section was actually carried out after the death of the patient, a common feature in Syriac, Egyptian, Greek, and Roman medicine. Other Assyriologists have also chosen, as did Labat, to write
articles on Mesopotamian medicine in more popular publications.

Initially this had been done by R. Campbell Thompson who wrote a series of articles on Mesopotamia and specifically Mesopotamian medicine, in Volume III of the Cambridge Mesopotamian History, entitled, "The Assyrian Empire". The Danish Assyriologist, Svend Aage Pallis, in the Antiquity of Iraq, Copenhagen, 1956, has a number of pages not only on Mesopotamian medicine and its practice but possibly even more important, on the lexical lists which give names of the parts of the body. H. W. F. Saggs of England has continued this practice in his popularizing treat­ment of Mesopotamia, entitled, "The Greatness that was Babylon", New York, 1962. His thirteenth chapter, entitled, "Mathematics and Astronomy, Medicine, Chemical Technology, Art" has nine pages of detailed exposition of Mesopotamian medicine which includes much of the material that has been discovered by Labat in TDP. A student of Labat, Georges Roux, in his popular treatise, entitled, Ancient Iraq, London, 1964, surprisingly enough has only a few casual mentions of Mesopotamian medicine.

On the other hand, a similar work by A. L. Oppenheim of the Oriental Institute, entitled "Ancient Mesopotamia Portrait of a Dead Civilization", University of Chicago Press, 1964, contains considerable amount about Mesopotamian medicine, much of which is taken from the author's own technical publications on the
subject and added to this are detailed notes in the Bibliography. In the *Fischer Weltgeschichte*, Volume 2, entitled, "Die Alt-orientalischen Reiche I, vom Palaoolithikum bis zur Mitte des 2. Jahrtausends", edited with articles by Adam Falkenstein, Dietz Otto Edzard, and Jean Battéro, there are only occasional notifications of Babylonian medical literature but these notifications are reinforced by an excellent bibliography.

Although there is a great interest in Mesopotamian medicine on the part of medical historians, yet few and far between are the scholars who are willing to learn Sumerian and Akkadian to deal with the texts themselves. Therefore most of the more historical treatments written by medical practitioners and medical scholars are to a large extent dependent upon a few of the popularizations which Assyriologists themselves have written. To illustrate this fact the following are quotations concerning Mesopotamian medicine as they appear in the more popular and specialized histories of medicine. Despite some woefully incorrect material and a total reliance upon secondary sources, the best general outline of Mesopotamian medical practice and also the history of the study of Mesopotamian medicine is to be found in the Thorwald book mentioned above. He devotes close to seventy pages to this study and includes such interesting side-lights as
photographs of the leading Assyriologists who have concerned themselves with these studies. This book both in its original German edition and in the English translation has the most up-to-date and complete bibliography of studies of Akkadian medicine. The ophthalmologist, Benjamin Lee Gordon, M.D., published in 1949, an 817 page volume entitled, Medicine Throughout Antiquity. This book like Sigerist's presupposes a recapitulatory transformationist theory. In other words, the pre-literate origins of Egyptian and Mesopotamian medicine are sought in the primitive medicinal customs of stone age tribes around the world living in modern times. His bibliography is replete with secondary sources. The most recent Assyriological publication being R. Campbell Thompson's AMT. The author does not give evidence at any point of being familiar with Contineau's survey of the subject, nor is he familiar with any of the Assyriological journals which carried individual articles on texts, transliteration, and translations. One redeeming feature of the book is that although it tends to attribute a great deal of Helenistic etymology and Helenistic (particularly Hippocratic) thinking to the Assyrians, yet he does mention the letters of the physicians as published by Waterman. Although the book is large in proportion and contains a vast amount of material, its interpretation and conclusions are highly questionable. His
closing paragraph on page 195 is indicative of this, "Influence of Assyro-Babylonian medicine. It is clear from the texts in our possession that although the trend of Assyro-Babylonian medicine towards magic detracted much from its science, enough was accomplished in practical medicine to influence posterity. Out of primitive notions arose a real medical science. When the ailment could be located and the natural remedy determined a more materialistic, rational view of therapy was taken. Many herbs and drugs originally used for supernatural reasons when tried and found effective lost their magical significance and were viewed in a natural light. It is curious to note that magical formulas and amulets were employed in ailments considered incurable, such as epilepsy and snake bite, but in curable disease recourse was had to natural remedies." Gordon draws heavily both in his material and in his citations upon still another book which has had great influence on modern historians of medicine. This is a little 85 page paperback in the Clio Medica series entitled, "The Beginnings - Egypt and Assyria" by Warren R. Dawson, fellow of the Royal Society of Medicine. This book originally appeared in England in 1930 and was reprinted in 1964. It contains no other citations on Babylonian medicine that are not taken from R. Campbell Thompson. So that although the book has been republished in 1964, its essential information must be
dated to 1924 and a careful reading of the section dealing with Assyria will recognize this criticism as a kindness. The medical textbook by F. H. Harrison entitled, "An Introduction to the History of Medicine" has gone through many editions, now in its seventh. This book however is simply a rehash and restoration of the views of Thompson as expressed in his articles in the various Asiatic and medical, historical journals. The standard history of medicine now in vogue is the second edition of Charles Singer and E. Ashworth Underwood entitled, "A Short History of Medicine" and published by Oxford University Press, 1962. This volume of 854 pages devotes precisely five to Mesopotamian medical practice. His bibliography mentions Contineau, Dawson, Hammel, Jastrow, Sigerist, and R. Campbell Thompson but says nothing of Oppenheim and Labat. Here again, although the book supposedly underwent a major revision in 1961, its most recent citation on Mesopotamian medicine is 1938 and there are no primary sources mentioned at all.

The Abt-Harrison, *History of Pediatrics*, appeared initially in 1926 and has had successive revisions, the most recent in 1965, devotes seven pages to Sumer and Akkad entitled, "Assyro-Babylonian Civilization 3310 B.C. - 2800 B.C.". The sole authority quoted is Jastrow and his most recent work is 1911. Here again
there is reference to the Code of Hammurabi who is dated 2250 B.C. and the citations of the Code are taken from R. F. Harper, The Code of Hammurabi, Chicago, 1904. However further on a Jastrow article on Babylonian-Assyrian birth omens and their cultural significance, which appeared in 1914, is cited. The final example may be cited from W. D. Foster, M.D., A Short History of Clinical Pathology, published in Edinburgh, 1961. This 151 page volume although it discusses both post-mortem examinations and bedside or clinical pathology, begins its study quite abruptly with Hippocrates and makes no mention of any type of the vast number of Mesopotamian lists of pathological signs and symptoms of disease, many of which undoubtedly passed into the later Hippocratic corpus. In the first volume of the Standard Introduction to the History of Science published in 1927 by the dean of historians of science, George Sarton, starts abruptly with the "Dawn of Greek and Hebrew Knowledge". The opening paragraph states, "It is not yet possible to give a continuous account of early Babylonian, Egyptian and Chinese knowledge and therefore it is seen more expedient to begin our own survey with Homer." It is plain from this survey of recent publications in history of medicine that a new and general synthesis put in terminology understandable to the layman and not made over-technical by linguistic or Assyriological jargon is long over-due. Although
it is most desirable, it seems simply impossible to expect either the physician or the historian of medicine to accomplish such a feat, given the difficulty of the Assyrian medical texts, the vast problem of the bibliography and the inherent inscrutability of the method of writing.

In the near future, Kinnier-Wilson is expected to produce a major article on the various names and titles for mental diseases in Mesopotamian medical texts and in the further analysis, Franz von Kücher is to produce a twelve to fifteen volume collection of all known cuneiform tablets to be followed soon there after with transliterations, translations and commentary, and finally to be summarized in a major glossary with concordance to all the texts published. The first three bands of this work have appeared from the press of Walter de Gruyter, Berlin. The title is, "Die Babylonisch-Assyrische Medizin in Texten und Untersuchungen". Of equal importance is the continuing publication begun by Erich Ebeling and Bruno Meissner of the "Reallexikon der Assyriologie". By 1965 there had appeared two full bands and three fascicles covering the alphabet from "A to Geschwulst". Prof. R. Labat, the author of TDP, has written for this encyclopedia articles on a number of medical entities and offices including, "Fieber, Fehlgeburt, Geisteskrankheiten,"
Gelenkschmerz-Gliederkrankheiten, Geschlechtskrankheiten, Geschwulst, Geschwür, Hautkrankheiten", and in the future he is to produce a number of further articles on such topics. Also in 1965 Labat published an article in Revue de Assyriologie of additional notes on texts in the Louvre museum, numbered AO 11447, AO 17617 and AO 17624. Of basic importance to future students of the Assyrian medical corpus will be the publication within the next few years (it is hoped) of the fifteenth tablet of Harrabu-Hubulu under the editorship of Benno Landsberger and Miquel Civil. This particular lexical text lists in alternate columns Sumerian and Akkadian word equivalents for names of the parts of the body.

From the point of view of a general synthesis, the best article which has appeared to date detailing all of the modern discoveries and innovations in our understanding of Mesopotamian medicine, was written by R. Labat in the September 1963 twelfth annual Revue mensuelle de Association des Médecins Israélites de France, entitled "La médecine Assyro-Babylonienne". This thirty-three page article contains much that is similar to Labat's article of a few years ago which was published in the Taton History of Science. However it has been reorganized and greatly expanded. As far as the text study of Akkadian medicine is concerned, there
is still a number of texts to be published, to be transliterated, and to be commented upon. A number of these are located in the Iraq museum in Bagdad, a number in the British museum, and surprisingly enough, a number in the Free Library of the City of Philadelphia. There is also the problem that since the initial texts were published as long ago as 1875-85 it is now necessary that they be redrawn, re-translated and reissued on the basis of the newer sign lists and the much enlarged lexigraphical aids. Throughout this historical survey it has been, because of space limitations, impossible to list every singular article published by each scholar. However as complete a list as can now be obtained will be found in the second volume of this work which is comprised of chiefly bibliography. Under the name of each writer is listed all of his works in the field either of direct Assyriology or history of medicine whenever either one or both relate to the study of Mesopotamian medical literature.
Fundamental to the understanding of the Akkadian medical texts is the point reiterated by R. Labat that the 'ażipu' and the 'ašu' were not only two different professions but two entirely different ways of looking at disease phenomenon. There are a number of citations readily available which demonstrate that these two were in fact separate and distinct entities.

In his review of Sigerist's book on the *History of Medicine*, Labat states, "It clearly follows from the facts that these two sciences are independent one from the other. For example, take the texts, extremely numerous, that have treated of the 'hand of the ghost' (qāt ātemmm); they divide strictly into two groups, one magical, the other medical. Moreover, various indications underline the possibility that the two methods were applied separately. Thus it is said in AMT 97, 6, 1-2 (equals 94, 6, 1-2) 'if....the 'hand of the ghost' cannot be cured either by the medical treatment or by the magical treatment ...'(lū ina epešti ąșūti lū ina [epešti ąșițitī]. Elsewhere CT 23, 44, III,
7-8, the announcement of a rational remedy is preceded by the observation: 'as for the exorcisor he must do thus what he knows'. Elsewhere again AMT 95, 1, 4-5, c.f. AMT 70, 2, 24:95, 2, 8 equals KAR 184, 19:99, 3, rev. 11., a medical treatment is prescribed to deliver a sick man from the affects of a persistent 'hand of the ghost' that the conjurer could not extricate. One could multiply these examples. For example the Hypatrosptic commentary, Comm. IIIa, 8. "It will not be propitious for exercising either the 'asūtu' or the 'āšipūtu' (ana epešēn asūti u āšipūti išallim). Labat continues, If one wishes to study Mesopotamian medicine correctly it is important then to divide the texts we possess judiciously between these two sciences. For certain texts the choice is easy; for others discrimination is more difficult. This is the case notably for the Neo-Assyrian therapeutic collections which is so because their compilers often seemed to mix the two types of literature."

The reason for this latter confusion in the Neo-Assyrian literature is that in later times the medical texts were the sources for a scribal canonization of the 'SA GIG' series. Therefore the copyists of the medical texts no longer understood the empirical implication of the texts they copied, in the same fashion that a modern secretary might type a medical research paper with only a
superficial and imperfect knowledge of its content and import-
ance.

A proper differentiation of the text types in Mesopotamian
medicine becomes more imperative as more and more of the texts
are published. From the time of Sayce to the publication of
AMT there was no differentiation made between the various types
of medical texts. They were collectively called "medical"
irrespective of their origin or their purpose. As will be seen
in Study III, below, there is a considerable difference between
KIMIN I and KIMIN II, and the other texts which they closely
resemble, entitled the 'SA GIG' series. It is our contention
that a clear separation must be understood between the four
major types of Mesopotamian medical literatures.

The first of these, and by far the most common, are the 'ēšipu'1
texts. These texts deal with the practice of divination and
exorcism. The diviner was to illuminate the extent and degree
of disease and the outcome of it. He was also to locate the

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1. This word 'ēšipu' is cited in a number of non-medical con-
texts as Ludlul II:110, 'ūl ušapi ēšipu šikin mursiya', "the
exorcist has not diagnosed the extent of my disease". Von
Soden understands this term and similar forms as (w)ēšipu
(AHW Bd I, p. 80).
etiological agent if it was other-worldly. A very interesting progression of the types of priests is given in the extremely poetic series, Ludlul Bel nemeqi. In the second tablet of Ludlul a religious man is lamenting his current state of misfortune and he declares the futility and inability of the various religious officers to aid in solving or ameliorating his condition. It is possible that these officers are not listed in any chronological fashion, that is, that this is not the order in which a man in dire circumstances would consult them, but the order is interesting as it may in fact show a progression from the more commonly consulted to the least commonly consulted by degree of severity of one's case. In line six, the 'bārū' is mentioned; line nine, 'mašmaššu'; line 108, 'mašmaššu'; line 109, 'bārū'; line 110, 'āšipu'; in line 111 which is parallel to line 110, the 'bārū' again appears; and in line 112, the deity, 'ilu'; in line 113, the goddess, 'ištari'. The line notations in this case are from Lambert's BWL. These 'āšiputu' texts are often connected with omens of other types. The terminology used to describe the anomaly, injury, or disease entity is in most cases identical to that found in omens both for the birth of animals and humans, as in those collected in YOS 10.
The second class of texts necessarily to be defined are dosage-forms. These are lists of mineral, botanical and animal products in directions for their preparation so that they may be administered to the patient. Much of their preparation is involved with their being formed into suitable doses. The doses known to the Babylonian were embrocations or linaments, products to be taken internally normally mixed with beer or honey, additives to be put in enemas, powders to be mixed and eaten with the food, and suppositories. Topically applied salves are also mentioned which would be used in maladies affecting the ear, eye, nose or any of the external mucous membranes. There is no indication that medicines were introduced beneath the skin by inoculation, however there is a possibility that solutions of medicinal value would be introduced into wounds. It is highly doubtful that these texts were utilized by any but pharmacists, those who would be active in the actual preparation of dosage-forms. A number of collections of botanical names with particular medicinal value have been published from cuneiform texts. It is difficult however to isolate these pharmaceutical lists from lists of botanical products which were written, not for the instruction of pharmacists, but simply as lexical aids. Part of the series 'Harrabu Hubulu' is a collection of such botanical names. The most important such series has appeared in 1955 written by Franz Kocher entitled,
"Keilschrifttexte zur Assyrische-Babylonischen Drogen und Pflanzenkunde, Texte der Serien: 'uru.an.na: maltakal, HAR.ra: hubullu und Ú GAR-šú, Akademie Verlag, Berlin, 1955; Deutsche Akademie der Wissenschaften zu Berlin Institute für Orientforschung Veröffentlichung, Nr. 28." This publication contains 85 plates of cuneiform tablets encompassing 150 fragments of botanical texts. Fragments of botanical texts are widely scattered in the ancient Near East. Fragments of this type of material have been found in Hittite excavations in Mari, in Iran and in Syria-Palestine. Many of the texts which have appeared in AMT which were later transliterated, translated and provided with commentary by R. Campbell Thompson, are of this dosage-form type and in substance cannot properly be considered medical texts.

The third type in many cases has four facets: symptomology, etiology, diagnostic and prognostic. Such texts are frequent in the 'SA GIG' series. In fact all but the first two tablets of the 'SA GIG' series both KIMIN I and KIMIN II and the unclassified fragments, belong to this class with slight modifications. These texts in many cases have little or no divination, incantation, or magical activity attached to them, except for the one possible exception of etiology. Many of these texts
end with the Sumerian phrase 'ŠU DINGI(R)' followed by the name of a god, a goddess, a demon, or even a personified malady such as blood, fever, seizure, wound, drainage or lesion. Some have normalized, translated and understood this phrase as meaning "the hand of the god X disease"; others have taken it as a causative and interpreted it as "the result of the hand of X god". However a careful comparison of the deities from point to point in the 'SA GIG' series demonstrates that there is no overall pattern to the use of a particular divine name at any one point. At times 'Ištar' is associated with drainage, at times with fever, at times with chills; in the same fashion 'Šamaš' appears. Also there does not seem to be any connection between the disease entity with which the god is connected and the actual attributes or position of the god, either in the Mesopotamian pantheon or as we understand their position in worship in the cult. The phrase involving the name of a deity does not always begin however with the Sumerian logogram 'ŠU'. It may be written as 'hāṭṭu ša', "scepter" or "rod" of this or that god, or in other cases as 'māhāšu', "to strike, beat or bruise". This is normally written with the Sumerian logogram 'GIG' and the substantival form is to be understood, 'mištāu', "a blow". The phrase would then be translated, "the blow of the god X"; also 'Šābātu' and its substantive 'šibbitu' to be understood as
"seizure" of a particular god. In certain texts 'mašādu' appears and its substantive 'mišittu', "contusion, oppression", to be understood then as "contusion of the god X". There is also a possibility from what is said in the diagnostic portions of such texts that this word 'mišittu' refers to malignancy. There is also the use of the word 'lapātu' and the substantive 'liptu', meaning "a touch, a blow". This then would be interpreted as "the touch of god X". In the case of demons, witches and certain demonic creatures the verb 'rakāsu' is sometimes used and even 'kašādu' and the substantive 'kišittu', "a stroke, an attack upon, a hold". If however the scribe wished to indicate a purely natural phenomenon involved in the illness a phrase 'mišu lā išu', literally translated "there is no stroke or blow" and a substantival equivalent 'ūl mišittu', "no contusion", possibly "no malignancy" is inserted previous to the word that describes the natural phenomenon. Labat lists such phenomenon with the relevant citations in his introduction to TDP I, "It is not rare for the Akkadian medical texts to attribute purely natural causes to certain diseases. We will pick out a few from the treatise, sometimes physical, cold, dryness, wind, emanations of stench; sometimes physiological, teething or constipation in a child, sexual relations, congenital malformation, possibly internal rupture or even psychological, love; also many different
types of mental disturbances." In order of frequency the noun 'ŠU', Akkadian 'qāt', meaning "hand" is used with the names of the following deities. The number following each is the number of frequency in the 'SA GIG' series: Ištar 72, Šamaš 35, Šīn 33, MAŠTABBA 23, Gula 23, and an indeterminate phrase "his god" 22, a construct "of the god" 15, of Adad 14, god of his city 10, Nergal 8, Ninurta 7, Sulpana 6, Dilbat 6, Marduk 6, "god of his father" 4, Enlil 3, Mah 3, Ningizzida 3, Ningestinnunna 3, Sibi 3, Uraš 3, Baba 2, Ea 2, "his goddess" 2, Išhara 2, Ningirsu 2, Papsukal 2, the simple adjective 'GAL' 2, Anu 1, Ešil 1, Dapinu 1, Ereškigal 1, "goddess of his city" 1, Lugalgirra 1, Lugalbanda 1, Meš lamtaea 1, Nusku 1, Ra'ibu 1, Tir-anna 1, Šar mūti 1. Quite a number of ghosts or demons are mentioned in the same type of context, to list just a few: "hand of a ghost" 47, Kubu 20, Lamaštu 18, Šulak 4, "the evil-committing Alū" 3, Ardat-lili 3, Aḥhāzu 2, Mukil-reš-lemutti 1, and Bennu 1. It is rather surprising that in KIMIN I and KIMIN II a vast variety of demons and ghosts are mentioned, although for instance, 'MAŠTABBA' is only mentioned 23 times in the whole 'SA GIG' series, it is mentioned twice in KIMIN I; other such deities repeated in KIMIN I with very low frequencies in the 'SA GIG' series are: Ninurta, Sulpana, Anu, Uraš, Baba, "goddess of his city", Lamaštu, and Bennu, which appears only in the 'SA GIG'
series in the parallel text from which apparently the KIMIN I
citation was adopted. This same kind of attribution of differ-
ing diseases to one god or the same disease to two different
gods or the same calamity or the same horrendous event is also
found in the omen texts where many times there is a double
attribution, if X event takes place, the hand of Y god; or
if X event occurs, the hand of X god and Y god. This kind of
double attribution is familiar in the 'SA GIG' series and it
presents insuperable difficulties in trying to get any basic
other-worldly etiology for these diseases. Although sin,
failure and impiety are also noted as disease entities and as
etiological agents yet in the medical series there is nothing
that can be approximated to the activities of, let us say,
Ludlul Be1 nemeqi where a vast host of differing diseases are
all attributed to an apparent action of a deity. In almost
all cases, however quite surprisingly the iniquity of the
individual is phrased in cultic terms. No crime of violence
is hardly ever stated, such as murder, rape, adultery, or
other such, and in turn, the god (with the exception of the
word "to strike" 'mahagu') normally is said "to touch, to blow
upon". The demons are actually, in their diabolic activity,
said to strike and the word used for this is far stronger than
that applied to the deities. Both in and out of the 'SA GIG'
series the other-worldly entity most frequently accused of
direct intervention in the illness and injury of man is the
'elêmumu', "the insatiable ghost to whom rest is denied eternally";
his personality is often defined by the instance of his death
and his resultant inability to find rest in the nether world.
Concerning this catalogue of unearthly beings and their dire
affects upon men, Labat says, "Though one is often content to
incriminate the ghost's hand, it is also not rare that one
specifies his identity. Here the restless spirit wanders in the
desert or who haunts ruins; there the unconsold ghost of a man
who died by drowning, who was burned in a fire; elsewhere that
of a criminal or one who was assassinated. In other signs the
seizure of a deceased member of the family is recognized, or
the posthumous vengeance of a slighted stranger. Also frequent
though more specific are the ills attributed to the female
demon 'Lamaštu', a prototype of the fallen angel whom the gods
supposedly hurled down to the earth because of her wickedness
and insatiable glutton consumed with impossible maternal desires,
she attacks pregnant women and newborn children above all. The
'Ardat-lilî' and the 'Lilîtu' hover round about her. These are
virgin vampires who are prey to inextinguishable sexual lust
and who torment men at night, and the Lilū, the demoniac incubus
who ravishes sleeping women. The hand of 'Kubû' is no less
feared, the demon issuing from a fetus expelled before its due time, who could in popular Akkadian belief become an evil-doing ghost, the same as a dead man left unburied. Here also we discover the 'Rābisu' crouched in the river, in the beds or at the edge of the road, who clutching his victim nourishes himself at the others ruin. 'Šulak' of whom it is said elsewhere that his touch is mortal; the diabolical 'gallû'; the 'Ahhāzu' who provokes jaundice in his malevolent incarnations; 'Mukillerēš-lemutti' the agent of evil; 'Namtaru' the angel of death; 'Bennu' the personification of epileptic seizure; the evil-committing 'Alû' who it is said covers a man like a garment; and 'Bēl-Uri' (lord of roves) who provokes attacks of sleep-walking and a pernicious seizure which in a hot dry climate such as Mesopotamia where many of the inhabitants spent the nights of the dry season sleeping on the roof tops would mean quick death or sustained injury. The treatise gives few details on the pernicious activities of witches and werlocks, outside of the allusion to potions mixed with food in figurines that one puts into bed to inculcate illness in those that they are made to represent. It mentions, without demonstration of any detail, witchcraft and evil prayers. By far the majority of victims are young children at their mother's breast. There is also some importance attached, as in the omens, in the time of day
and the season of the year at which the attack befalls the patient. As would be expected, the preceding section dealing with all of these other-worldly beings to whom is attributed either the etiology or the causality, or if nothing more, the simple terminology of specific disease entities, indicates that the Babylonians had little concept of mechanistic causality. This of course would be expected as the form, matter, motive with its causal relationships and mechanistic processes does not appear in the pre-theoretical societies of the ancient world until the Pre-socratic philosophers of Greece. However this is far from saying that there is not a completely rational and empirical observation of results due to various activities and injuries which may be noted in the prognostic-diagnostic texts particularly.

The fourth class of texts which must be distinguished is that which we may call "mixed". These are in most cases late and they give details both of a prognostic-diagnostic type and also with such information include therapeutic and even dosage-form recipes. In all cases these are the most difficult to transliterate and translate because they are built upon a vast tradition of well known and canonized medical literature; as with so much of the recovered textual information from Mesopotamia, these
were in the nature of things discovered first by the initial Assyriological researchers. It is these texts to a large extent which are dealt with by Rawlinson, Sayce and Kuchler. As indicated in the bibliography they were also dealt with by Langdon.

One other aspect of Mesopotamian medical composition needs to be investigated. That is the ordering of the texts. Between apparent joins, colophons and the Nimrud catalogue, it is possible to fairly accurately reconstruct the order and association of the tablet of the 'SA GIG' series. Interestingly enough within this series there are five major divisions showing that it was probably joined together many decades after the independent appearance of these five parts. In Sumerian lexical lists the order of sounds is normally "u", "e", "a". In Sumero-Akkadian lexical texts which would of course follow the Sumerian column this Sumerian order of sounds is maintained. However in the Nabnitu lexical list which includes parts of the body and disease entities the order appears to be from head to toe. Now there are of course divergencies from this order when inflected forms or homophonic terms with completely different semantic relationships are interposed between the terms of the original head to toe series. The following few pages gives an abstract of names of the parts of the body with disease entities as they appear in order in the Nabnitu lexical list.
SIG₇·ALAM equals nabnītu

**Sources:** Fr. Delitzsch, *Asyrische Lesestücke*, 1885, pp. 84-85.  
Zurich Vocabular (c.f. K 40: CT XII, 1901, 46 ff).  
CT VIII, 1901, 33-50.  
CT XLI, 1931, 49-50.

### Tablet I

<table>
<thead>
<tr>
<th>Line</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>sig 7 plus al-am equals nab-ni-tum</td>
</tr>
<tr>
<td>5.</td>
<td>egi equals bu-nu</td>
</tr>
<tr>
<td>75.</td>
<td>sa-an du sag equals ka-ak-ka-du</td>
</tr>
<tr>
<td>97.</td>
<td>sag plus ki equals nak-kub-tu</td>
</tr>
<tr>
<td>104.</td>
<td>suk equals zi-mu</td>
</tr>
<tr>
<td>110.</td>
<td>blank equals pa-a-nu</td>
</tr>
<tr>
<td>173.</td>
<td>egi equals e-nu</td>
</tr>
<tr>
<td>206.</td>
<td>pad-tu equals a-ma-a-ru</td>
</tr>
<tr>
<td></td>
<td>Line 212 blank equals ša-lib₃-bi</td>
</tr>
</tbody>
</table>

Nab-ni-tu IV is made of two segments, A and B belong to two different versions. The Ninevite version, A, indicates the total number of entries for each section but fails to give the figure for the whole of the tablet. When completed it may safely be assumed that it offered an approximate total of 380 lines as shown by the fourth column which can fully be restored with the help of the other extant lines. Each column has about the same number of lines, for the colophon hardly occupies any space at all.
Section B which represents the Assur version is provided with the initial word at every tenth line, contains 306 lines according to its Column I. As A and B do not offer divergent texts in their preserved parts it is to be supposed that one or more sections have been omitted by B.

C. 1. ka equals pu-bu-tu-ru . . . . . . . . . . . . mouth
Line 50. šag equals emitum . . . . . . . . . . . . shoulder
Line 64. dug₄ equals ka-bu-u . . . . . . . . . . . . to say
Line 144. sal ša₃ times a equals eritum . . . . . . a pregnant woman
Line 220. šag equals re-e-šu-tu . . . . . . . . . . . . head or slave
Line 292. nu equals za-ka-rum . . . . . . . . . . . . male

Nab-ni-tu V is badly damaged; most of Column II is unreadable.

Column I is Sumerian; Column II is presumed to have been Akkadian.

Tablet 10, Column X
Line 10. zu equals zu-um-ru . . . . . . . . . . . . body
Line 103. mal times šal.da.ri equals zi-ib-ra-a-tum . . . . . . . . labor pains
Line 137. ka-bu-i equals mag-a-gu . . . . . . . . to be paralyzed
Line 138. ka-gu-tu bu.bu.e equals me-tan-gu-gu . . to be paralyzed gradually
Nab-ni-tu XXI

Line 1. se-ig-pa equals ma-ha-su-ša₂₃-lu₂₃ . . . to strike a man

Line 3. egi-ib-tu dug₄ ga equals me-še-ids pani strike in the
     face

Line 4. u₂ te-ra-ra equals ma-ka-zu ša₂-li-ti = strike the cheek

Line 5. kab-šu-ra-ra equals ša₃-kab = . . . . . . . . . to be abreast

Line 125. šag-a-na₂₃ equals na-ar-pu-zu
     ša₂ma-na-akti = . . . . . . . . to be afflicted
     by fatigue

Line 222. bu.ud.bar equals lu₂₃ har šum = . . . a crippled man

Line 311. x.z.zu.ku-tu equals ri-is-bu = . . . blow or scar

Nab-ni-tu XXII

Beginning in Line 8, Tablet XXII, there are a series of words and
their equivalents meaning "to bend" or "to flex" various parts of
the body. The Akkadian column however has lost the actual part
of the body.

Line 8. sag.šu.kilim equals ša-tu lu-tu = . . . to bend, to flex
     parts of the body

Line 172. ki₄ equals e-ke-mu = . . . to be deformed, referring parti-
     cularly to the surface of the body

Line 179. a₂kum equals na-ki-im-kum = . . . a disease, possibly
great heat
Nabnitu Tablet XXIII

Line 149. bar.kab gir₂ zi-rip-tum ša₂mur-zi . . . a disease

Nabnitu, A Bibliography of the Tablets and their Order in the Series.

Tablet I

K. 2034 80-7-19, 300; rm 359, Zurich vocabulary AL 3 04 ff.
K. 12907, K. 4600.

Tablet IV

BM 38120, VAT 9716, K. 244 plus 13621, K. 5422a, K. 197 plus
Sm 294, K. 7697, VAT 10911.

Tablet V

Rm 2, 25.

Tablet X

K. 39.

Tablet XXI

K. 4230 plus 4250 plus 4544b plus DT 9, K. 11926 plus 81-7-27,
278, K. 11206.

Tablet XXII

K. 40 plus 243 plus 248, Rm 351, CB 513924 Lm 10597 app K. 14819.
Tablet XXIII. It is the point in the history of the study of K. 4324 plus 4359 plus 4362 plus 5446a plus 7743 plus 13596 plus 14137 plus 14319 plus 64087 plus 16223, rm 344, rm 2-414, K. 11890 plus 13584. The date comes from varying parts of a great empire and spans a historical perspective of almost two thousand years. It is not quite accurate as the final statement is not quite down to 1920. Seldom radical text, but it is our feeling that the following few points can now be maintained with a fair suggestion of accuracy.

(a) That there was in Mesopotamia a strict dichotomy between the diviner-healer and the practicing physician.

(b) That there was a school and practice of pharmaceutical knowledge and the preparation of dosage-forms.

(c) That medicine as a profession became fixed in the society, and contributed a large body of traditional literature encompassing a whole host of practical, empirical observations and abstracted suggestions, developing in time both a medical science and a terminology all its own.

(d) That the Mesopotamian physician became fairly well known in his own era and that his knowledge was spread either by text or by practice in other lands of the Mediterranean area.

(e) That the terminology of medicine was considered peculiarly exact and of special literary significance and was
It is difficult at this point in the history of the study of Akkadian medical literature to take any overall synthesis or summation of the jumble of disconnected data. It is necessary to recognize that the data comes from varying parts of a great empire and spans a historical perspective of almost two thousand years, from the Sumerian medical tablet down to the Selucid medical text, but it is our feeling that the following few points can now be maintained with a fair supposition of accuracy.

(a) That there was in Mesopotamia a strict dichotomy between the diviner-healer and the practicing physician.

(b) That there was a school and practice of pharmaceutical knowledge and the preparation of dosage-forms.

(c) That medicine as a profession became fixed in the society and contributed a large body of traditional literature encompassing a whole host of practical, empirical observations and abstracted suggestions developing in time both a materia-medica and a terminology all its own.

(d) That the Mesopotamian physician became duly well known in his own era and that his knowledge was spread either by text or by practice to other lands of the Mediterranean area.

(e) That the terminology of medicine was considered peculiarly erudite and of special literary significance and was
used by authors of other types of composition to indicate not only their intellectual prowess but also their comprehension of the state of man in the universe, for it must be remembered that in any ancient Near Eastern culture medicine and the healing arts represented at one time a mystery and the competence on the part of the physician to pierce through and comprehend the roots of that mystery. In only one source and that from the Hittite lands do we have a visual description of a Mesopotamian physician. In the tale of "The Poor Man of Nippur", edited by O. R. Gurney in an episode reminiscent of the Arabian Nights tales, a poor man named Gimil-Ninurta seeks to even up a score with the major of Nippur, dresses himself as a physician from Isin and disguised as such induces the mayor to enter a dark room with him with the ruse that his cures work only in darkness. There he ties and beats the mayor. His preparations to appear as a physician are of special interest to this study.

115. [Gimil-d Ninurta ana ma-har 1úŠuginaki(?) (Š[U.G]I.NA)]

116. ú-gal-lib-ma kal pi-ir-ti [na?] me X[117. na-aq-me-e ši-kin išāti um-tal-[li zu-mur-šu?]

118. ana bāb Iha-za-an-ni Nippuri Ki šu-u [i-tag-giš?] 
119. ana lubāti mu-kil bābi a-ma-tam [i-zak-kar] 
120. qī-bi-ma lu-ru-ub-ma lu-mu-ra [Iha-za-an-na?] 
121. man-nu at-ta šá ta-mar-[ra-šu] 
122. a-su-u i-lit-ti I-ši-in Ki ha-a-[a][-iš] [x x x] 
123. a-šar mur-qi û ta-ku-li-e ina [x x x] [x x x] 
124. îGimil-[dNinur]ta ina ma-har Iha-za-an-ni ina e-re-bi-šū 
125. a-šar [zumu?]-šū û-ra-si-be mi-hi-îš-ta-šū û-kal-lam-šū 
126. hazan[nu ana š]u-ut rēšiš-šū a-su-u li-'u-ma iqbi(DUG,GA) 
127. be-lí ina ek-[e-t]i i-šal-lí-mu bul-țu-u-a 
128. KI X TAR-at? [ u]k-ku-lat a-lak-ta 
129. ú-še-ri-b-šū-ma [i?-na?] bīti a-šar la a-ri 
130. a-šar ib-ri u tap-pu-u [la] i-raš-šū-šū re-mu 
131. na-aq-me-e it-ta-di ina līb-bi išāti 
132. ir-ši-ma ina dun-ni qa-qa-ri V giš sikkātiš 
133. qāta šēpēII qaqqada ú-pak-kir-šū 
134. ul-tū qaqqadi e-di ki-bi-is šēpēII-šū mi-na-te-šū 

ú-ra-si-ba na-za-qu e-me-su

"115. Gimil-Ninurta [entered] into the presence of the barber.
116. He shaved off all his hair . . . [ . . . . . ]
117. He covered [his body] with ashes, the deposit of fire,
118. (and) [proceeded] to the gate of the Mayor of Nippur."
119. To the porter, the keeper of the gate, he spoke these words:

120. "Say I wish to enter and see [the Mayor]."

121. "Who are you who are sick?"

122. "A doctor, a native of Isin, who examines [ . . . ]

123. "Where diseases and . . . . . . . . . [ . . . ]

124. When Gimil-Ninurta entered into the presence of the Mayor,

125. he showed him his bruise where he had beaten his [body].

126. The Mayor said [to] his attendants: "the doctor is clever."

127. "My lord" (said he) "my cures are completed in darkness,

128. " . . . . . . . . . . . . . . . the way is dark."

129. He took him into a private room,

130. Where his friends and companions would not take pity

131. He cast the ashes into the midst of the fire,

132. drove five pegs into the solid ground,

133. bound his hand(s), his feet and his head,

134. (and) from his head to the soles of his feet he beat his whole body and inflicted pain upon him."

We note from this citation that the Mesopotamian barber was apparently tonsured, apparently dressed in robes of office
and therefore visually identifiable. The significance of the ashes however eludes us. It is hoped that once Franz Kocher's complete corpus of Mesopotamian medical texts is produced a much more detailed account may be given of the general outlines of Akkadian practice and of the position of the physician himself. The intensive commentary on KIMIN I and KIMIN II below will deduce from these two rather neglected texts theories and more specific information on the actual mechanics of Mesopotamian medical texts.
III. Texts dealing with the diagnosis and prognosis of disease.

(Section 7-11.)

1. TABLETTE 'KIMIN' I. II. 1-13. LXXIV (facsimile); LXXV (reverse)
2. TABLETTE 'KIMIN' II. I. 11-30.
3. TABLETTE 'KIMIN' II. II. 2-23.
5. K22F4. XXII (only face) LKU 91.
7. HQP 11. II. 2-14.
8. XII (only face) HQP 11.
10. XXIX (only face) LKU 91. K. 6422.

1. TPP I. 9-212 ff.
2. N.B. The subscript numbers beside the earlier designations are introduced here to facilitate the identification of the sources-fragments in the following discussion.
Section 9.
Grammatical-Philological Commentary on the texts edited by
R. Labat as, "Textes Inclassables".

Included in this discussion are the following tablets:

<table>
<thead>
<tr>
<th>Title and Identification in TDP I</th>
<th>Plate No. in TDP II</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: TABLETTE 'KIMIN' I 11. 1-73.</td>
<td>LXIV (face);</td>
<td>A 3440</td>
</tr>
<tr>
<td></td>
<td>LXV (revers)</td>
<td></td>
</tr>
<tr>
<td>A2: TABLETTE 'KIMIN' I 11. 43-60.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3: TABLETTE 'KIMIN' I 11. 48-63.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B: TABLETTE 'KIMIN' II 11. 2-23.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C: LKU 93 K.22F4 11.1-6; F-24.</td>
<td>XXII (only face)</td>
<td>LKU 93</td>
</tr>
<tr>
<td></td>
<td>K.22F4</td>
<td></td>
</tr>
<tr>
<td>D: K6F1F 11. 2-14.</td>
<td>XII (only face)</td>
<td>K6717.</td>
</tr>
<tr>
<td>E: LKU 92 K.6422 11.2-10; 11-24.</td>
<td>XXIX (only face)</td>
<td>LKU 92</td>
</tr>
<tr>
<td></td>
<td>K.6422.</td>
<td></td>
</tr>
</tbody>
</table>

1. TDP I p. 232 ff.
2. n.b. The subscript numbers besides the series designations are introduced here to facilitate the identification of the source-fragments in the following discussion.
The organization, edition and publication of the Mesopotamian medical tablets of the SA-GIG series by Professor R. Labat seems to be reasonably correct. The few necessary qualifications and additions to their accuracy have been adequately discussed above. The five series differentiated in TDP I apparently represent to the degree our present knowledge allows the scheme of the Akkadian medical corpus as it was traditionally held. However in TDP I Labat presents a small but well preserved group of texts which he designates as, "Textes Inclassables". These tablets and the texts they contain do not clearly fit into any one of the five canonical categories isolated by Labat. They demonstrate no common characteristic peculiar to one or another single class. They do however contain phrases, words and ideas found scattered throughout several of the five series. They also add material not present in any other extant specimens of the Mesopotamian medical corpus. Their actual relationship with the canonical material will be considered in the following section 10.

The largest and most complete text in this unclassified grouping is that enumerated as A 3440 in the collection of the Oriental Institute of the University of Chicago, R. Labat as noted above has included a line drawing of high quality as Planche LXIV (face) and Planche LXV (revers) in TDP II. However beside the entry in
his 'Index des textes publées p. V,' there appears a note which states, "I après une photographie." This qualifying statement may well account for the several inaccuracies of the plate in TDP II. A collation of this plate with the tablet itself has demonstrated various deficiencies which are mentioned in the ensuing commentary at the respective loci. The nearly impossible task of successfully drafting an accurate scientific illustration in either line or half-tone from a photograph can be justified only by collation of the drawn plate with the tablet before publication.

Such an instance again demonstrates the superiority of a well organized and executed drawing over the finest photograph available for the purposes of the cuneiform scholar. It is, to say the least, to Professor Labat's credit that he added the extra but explanatory note to his index. The second tablet to be examined below, B: TABLETTE 'KIMIN' II, will be seen to have a great deal in common with A 1 plus 2 plus 3 TABLETTE 'KIMIN' I.

A 3340 is a fairly large clay tablet, its dimensions are as follows: the height or long dimension of the tablet is; as measured on its left face or largest extant surface. Its width where unbroken is, \(93\text{ mm}\). It is probable that the original before accident was at its maximum no more than \(150\text{ mm}\) in height,
at the minimum 150 mm. In lieu of this maximum, a formula
\[ R\% = \frac{A_1}{A} \times 100 \]
may be utilized, where \( R\% \) equals percent age of area remaining and \( A_1 \) equals area lost while \( A \) equals area of surface remaining. The both surfaces derived from the formula for area of an oblong solid body minus the difference between that formulation: \( 2(ab + bh + ah) \) and the surface area of an oblate sphere \( 2\pi a^2 + \frac{\pi b^2}{E} \log_{1-E} \frac{1 + E}{1-E} \) which is determined as that body formed by the rotation an ellipse about its minor axis. (The necessity for this additional topological step lies in the mathematical problem brought about by the actual procedure of making clay tablets. The tablet starts as a kneaded clay sphere slightly obl都是 due to its lack of cohesion and gravity. This already obluated sphere is patted or rolled into an oblong or flat cake of clay and the superior flat surfaces are use for writing. The corners however remain the inferior or minor surfaces of an oblate sphere.) \( R\% \) equals about 67\%, thus representing a loss of approximately 33\% of the text or about 18 lines. The chief and insurmountable difficulty to a final and exhaustive interpretation and subsequent translation of the tablet is the loss of the first line. Unless a fortuitous "join" with some as yet unrecognized fragment should be forthcoming the first line of the series must remain problematic. The only other possible solution would be the indentification of some catchline or title
in a literary catalogue. The absolute equation of one line or half a line is tenuous even if it is known. In the commentary which accompanies the texts below semantic parallels with other scientific and medical texts are noted and certain philologic "joins" are considered. Even though defaced and truncated, a good deal of information can be obtained by careful study and comparison of these 'Inclassables'.

The tablet denoted as A 3340 contains about 73 lines of script of which only about 28 can be said to be complete or approximately 40%. The full lines indicate that the whole composition was a list of various afflictions and prognoses of ill persons. These are highly stylized and abbreviated and may have been copied frequently as a school text or manual of the medical arts, the maladies are described in terms of symptoms in relations to specific parts of the body. As with other medical types this composition follows a specific organization throughout its sections. As an example of this structure line 43\(^3\) will suffice. (normalized) 'Š. KIMIN-ma ine šašallīšu ša šumēli maḥiš u urappad qēt ilīšu ina qablīti maḥiš imāt.' "If - Ditto - and (he) is stricken on his left side of his back and (his speech) rambles, (it is) 'the hand of a god', his speech is stricken, he (is dying) will die." If

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this sentence is analyzed in the following manner it will be seen to be essentially a conditional sentence.

'š.' equals [Introductory Conjunction] plus: KIMIN-ma [Protasis] plus 'ina šašalšu ša šumēli mahš u urapped' [adjectival clause modifying the protasis] > < 'qāt īlišu' [causal phrase] plus: 'ina qabīlti mahš' [adjectival phrase modifying apodasis] plus: 'imāt' [Apodasis]. The stylistic similarity between this prognostic statement and sentences found in the typical Mesopotamian law codes and royal inscriptions is more than accidental. As an example let us compare by similar analysis law number 16 of Codex Hammurabi. 'Šumma awīlum lū wardam lū amtam halqam ša ēkallim ū lū muškēnim ina bitīšu irtāgīma ana šisīt nāgīrim lā ušēšiam bēl bētim šū iddāk.'

4. "If a freeman has harbored an escaped slave or slave girl of a palace or of a half-freeman in his house and then has not produced them at the summoning of the messenger, that owner of the house shall be slain." If this law is distributed as was the law above the following organization is apparent. 'Šumma' [Introductory Conjunction] plus: 'awīlum' [subject of the protasis] plus: 'lū wardam lū amtam halqam ša ēkallim ū lū muškēnim ina bītišu' [Objective and adjectival phrase modifying the protasis] plus: 'irtāgīma' [Protasis (verb)] > < 'ana šisīt nāgīrim lā

ušteši 'am bēl bitim' [causal clause with the apodasis] plus: 'šū iddaš' [resumptive pronoun and apodasis].

Such comparisons are synthetic at best and do not hold for all aspects of the material nor for other types of literature. Poems, epics, annals and the like will not distribute themselves in this fashion. It may be argued that ultimately the respective styles of specific Akkadian literary works are influenced by their Sumerian precursors. This may in fact be true but the present paucity and restriction of our knowledge of Sumerian medical texts makes some other source more probable. As seen in the first line of the diagram the text presupposes on the part of the reader a knowledge of the full introductory formula. It is simply denoted by ditto marks. However in the medical and scientific texts even these conventions have their specific function and meaning. The first of these is the vertical wedge of medium weight and length set with its center in the middle of the line of print. This is known in its most basic phonetic form as the 'DIŠ' sign, its range of homophonic equivalents including: TIŠ, TIŞ, TIS, gâ, DÂŠ, TAŞ, EŠ₄, IŠ₄, IL₄, and HAR₆. The Sumerian word DIŠ is of course the numerical sign of unity, the integer '1' and equals Akkadian 'iššet'. However the ease and simplicity of the sign and its lack

5. Diemel in S.L. II Teil, Ed. 4 No. 480, p. 927; and W. von Soden in An. Dr. 27 Das Akkadische Syllabar p. 103 reads this value as HAR₅.
of definite phonetic and semantic character allowed its common
development as an abbreviation or symbol for a wide range of com-
mon words and concepts. It designates units of number, measure,
weight and volume as in YBC 10522 line number 2 where especially
large script is in evidence. One of its most characteristic uses
is that shown in line 1 of the text to be discussed.

A 3440 (Labat TDP II, LXIV.)

1. ḫ. KIMIN [-----------------]
The sign transliterated as '_errno' is the 'DIS' sign, it is used here
to represent the conjunction 'šumma'. This is a common phenome-
on in medical texts. Attention was first drawn to this data by
Kuchler who said concerning its occurrence in texts which he
studied that it marked the conditional sentence. The consid-

6. O. Neugebauer and A. Sachs, Mathematical Cuneiform texts
(A.O.S. 29) 1945 Uc plate 18.

7. K 191 plus 201 plus 2474 plus 3230 plus 3363, line 1. "Der
senkrechte Keil am Anfang eines Abschnitts bezeichnet lediglich
den Beginn eines Neuen, wie auch z.B. in vielen Vokabularen, von
denen dies immer als selbstverständlich gegolten hat. Man hat ge-
meint, er bezeichne die Konjunktion 'šumma'; für diese Annahme
lässt sich aber ein Beweis nicht erbringen, wie das z.B. eine
gelegentliche phonetische Schreibung oder ein phonetisches Kom-
plement waren. —dem Sinne nach fraglos Konditionalen Satze." 
Beiträge zur Kenntnis der Assyrisch-Babylonischen Medizin;
Leipzig 1904.
ation of all such introductory conjunctions was accomplished by Speiser in his, Studies in Semitic Formatives, which was enlarged and brought up to date in J.C.S. number 1, in which he stated, "Whatever the origin of 'šumma' may be, and whatever the syntax of the 'šumma'-clause, it is a fact that the term came to possess the force of 'if'. There is no need for circumlocations, especially when these imply a derivation which bids fair to be wholly erroneous." In the early days of the study of the medical texts there was some difficulty about this matter as in other types of technical literature the 'DIS' sign is used for other conjunctions. As in the reports of astronomical observers, where there is no question as to the possibility of the phenomenon in question the only less vivid aspect is its precise time of appearance. In such cases it may represent the conjunction 'ana' with the more precise connotation "when". Its importance in this text, A 3440, is that it marks this as a "hand-apparat" to be used and consulted in prognostic learning and or practice, its clauses being of the

8. JAOS 56, pp. 22-46, 1936.
less vivid and therefore only hypothetical sort. We may there­
fore take the meaning of the first legible word in the text as
"if".

The following word is in fact another dittographic sign. The
punctuation sign read, 'KIMIN' is to be analyzed as a combination
of the sign 'KI', Sumerian for "place", "location", "earth";
Akkadian 'erētu' used in various contexts for "earth", "world",
"territory" and even "quarter or locality", also 'ašrû', "locality",
"position", "place"; (cognate of Ugaritic 'aṭr) with the numerical
sign 'MIN', Akkadian 'šina'. At times the combination does
occur used for its phonetic value alone as in, 'SAG-KI-MIN-NA'
(V R. 21:8;4.) However its use in later periods is restricted to
the ditto signification. As such it is found frequently in both
botanical and pharmaceutical directions as well as the instruct-
ions for dosage-form preparation. It is also found in grammatical,
lexical and vocabulary lists and texts especially those dealing
with semantic equivalents and phrase formulations. In such texts
the 'KIMIN' sign indicates the locus where a part of a phrase is
to be duplicated and carried on from line to line as in the frag-
ment number 17 of the series ḤAR.ra:hubullu. (Column III; lines

11. Deimel, ŠL number 461:480.
10, 11 and 18, 19 the most famous occurrence of the combined sign in literature occurs in the Eleventh Tablet of the Epic of Gilgameš. The context deals with the grounding of the vessel carrying Utnapištim and the survivors of the deluge. Describing the landing of the vessel on Mt. Niṣir the text says, (line 141) "šadû Niṣir elippa ṭabma ana nāši Īl iddin", "Mount Niṣir held the ship fast and did (does) not allow it to heave (rise)". The next line then continues the thought, "ašten ūma šina ūma šadû Niṣir KIMIN," "One day, a second day Mt. Niṣir 'repeat this same place again!'". The same formula occurs in the next line again where each time it is indicating repetition. The most lucid translation is probably, "same place twice" or simply "repeat".

The 'MIN' sign alone without 'KI' is used upon occasion to represent repetition particularly the repetition of one syllabic sign or group of signs under their original in a series. An example of such may be found in certain syllabary lists, as the phrase: 'LU-UM-MU' where in each successive line the word 'LU' is marked with a simple 'MIN'. (CT XII: 24 obv. 1, lines 1-10)

The extant first lines of the tablet A 3440 only yield the translation, "If - ditto -".

12. CT 14:29 et F. Köcher; KADP Nu. 36, lines as indicated above.

(Note! The numbering of the lines given throughout this study is purely arbitrary as the initial portion is broken off and the numeration refers only to those lines which can be placed. There must of necessity have been a first full line or even section to which the ditto marks refer.)

2. §. KIMIN

The close vertical proximity of this line and its three initial signs to that preceding shows it to have been the beginning of a new phrase or statement of the composition. The two are so close in fact that the previous line must have been fully contained between the dextral and sinistral edges of the tablet. This means that the full initial statement could not have been at all lengthy as by normal proportion only a minimal percentage could have been written above the first extant line. A surface chip has carried with it the indentation at the top of the 'MIN' sign.

3. §. KIMIN-m[a

After the three signs which appear in lines 1 and 2 above, is visible the prior horizontal wedges of a 'ma' sign. This reading is demonstrable from all the extant lines of the text. This is not a common feature of the medical tablets and is known from only one other medical text. A similar but not identical reading is found in a Neo-Assyrian prognostic and omen text, of the same
sort as most of the late medical compositions. This text, deals with maladies of the feet and supplies detailed instructions for preparing recipies for both magical and pharmaceutical treatments. Initiating several of the series within the composition is the phrase, '§. KIMIN' used as a ditto mark but at no point does the 'ma' appear. The only other text as yet published which contains the 'ma' enclytic after the ditto mark is the small tablet discussed below in this study, B:TABLETTE KIMIN II (VAT 14546).

It is our contention that this enclytic marks the alternation between the clauses of each medical instruction as it succeeds a general statement describing the situation of the physician-exorcist and his patient. A valuable comparison may be made between A 3440 and A.O. 6680.15 The latter tablet lists various diseases and offers diagnostic instructions and then lists various maladies and offers for each the requisite formula for treatment both magical and pharmaceutical. The 'KIMIN' sign appears in two uses in this text. In lines 43 and 55 it appears in the middle of a sentence and refers to a specific and delineated phrase, not a clause, as found in the preceding sentence. (Even though a long clause immediately succeeds.) In line 58 however, a long series of similar and grammatically equivalent statements beginning with,

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14. KAR Nr. 192 Col. II lines 23-33; 44-46. (VAT 8772) c.f. BAMTU Nr. 124.

15. TDP I Quatrième Sous - Série (D) TAB, No. 26; TDP II pl. XLVIII ff.
"š muร’a", "If a disease", are marked off by a series of the signs, 'š KIMIN'; written of course, 'DIŠ KIMIN'. At no point in this list does the enclytic 'ma' appear. In fact the presence or absence of it is most probably a scribal variant, simply introduced by stylistic idiosyncracies. However in A 3440 it seems to determine certain aspects of the text. Actually the only possible solution is to be found by comparing A 3440 with the opening lines of texts which are most closely parallel to it.

Since a number of the phrases in this tablet are similar both in content and order to phrases in other medical texts, specifically TDP I TABLETTE No. 10 pp. 80 ff. and TDP I TABLETTE No. 11 pp. 88 ff. it is necessary to examine the extent opening lines of these two texts. Although there are many factors which are not comparable between the 'KIMIN' tablets and numbers 10 and 11, yet there are also certain incontrovertible and peculiar similarities


17. Lines 1-56, rev. 1-60. BM 65698 (TDP II pl. XXIV-XXVIII).
which indicate definite relationship. If we suppose the enclitic 'ma' of A 3440 to be indicative of the end of the clause for which 'KIMIN' stands, then careful investigation of the parallel phrase in 10 and 11 may offer some insight into the missing portion of A 3440. Both of these similar texts are far from being free of difficulties. Both of these tablets belong to that section of the Babylonian medical canon assigned by Labat to 'DEUXIÈME PARTIE sous-série B' and opening with the statement, "When you approach the stricken one", 'ana marši ina ṭahēka --'. The proper praxis is then supplied: 'DIS.GIG.GU-šù ana XV NİGIN.NİGIN.18 MEŠ ŠU-šù u

18. The normalization of the Sumerian logograph 'NİGIN.NİGIN.MEŠ' is a difficult problem. As with all Sumerian logographs the exact equivalent in Akkadian can be supplied only on the basis of texts where the Sumerian sign is followed by a syllabically written Akkadian equivalent or the Sumerian reading is glossed by its semantic equivalent. Where it may be found a phonetic complement can be the solution to normalizing the text. Labat has taken 'NİGIN.NİGIN' as equal to Akkadian verb 'saharu (m)' a reading supported by the lexical equation, 'NİGIN equals ni- gi - in equals R equals sa- ha- ra' as stated in CT 35: 1, 26 and the Yale Syllabary 37 (c.f. ZA 27:395 ff.). However in the fragmentary text of a literary catalogue of Babylonian medical texts excavated during 1955 by the British School of Archaeology in Iraq at Nimrud, (ND 4358, J. V. Kinnier-Wilson: Iraq XVIII, 1956 p. 130 ff.) the signs 'NİGIN.MEŠ' appear in the title of a medical text of the 'SA.GIG.MEŠ' series which is as yet unidentified. It reads, 'DIS.NA IGİ.MEŠ-šū NİGIN.MEŠ-du [- - - - - ]'. Since the phonetic complement 'du' was in this case written,
The normalization of such a line offers great difficulties, in fact without syllabary citations such a line is inscrutable. The most probable reading is, 'šumma maršu kišassu ana imitti issanahir qāṭīšu u šēpīšu amša

18. (cont.) Kinnier-Wilson suggests a normalization, 'issanundu' but includes no translation of such a form. The verb 'šamadu' and the substantive 'qimdu' mean to bandage/bandages; to dress/dressings either to stop flow of blood or as restrainers for poultices and embrocations. If indeed Kinnier-Wilson's reading is correct a plausible translation would be: "If a man, his face is continually bandaged --." The use of the infixed "tan", i.e. /3 forms is indicated by many citations from the medical texts themselves. A fine illustration is to be found in the text KK 191 plus 201 plus 2474 plus 3230 plus 3363, (Küchler BAMTU pl. 2, ii; 18-20) 'Šumma awīlu akala ikkal šikara išattīna išebbi libbašu iktanassušu išanabbassu qerbūšu ittanpūhū u Īsil libbašu MU.ŠE.KIN.NIM marš ana balatīšu.'; 'If a man eats and drinks food and beer to his capacity so that his stomach cramps him and pains him, his bowels are distended and he is afflicted continually with constipation (then) his stomach is stricken with --(meaning unknown), his life --.--."

In the actual writing of this and most other medical texts the phonetic complements do not appear, only the bare Sumerian verbal roots are given. However a /3 form is indicated by the repetition of the logograph. n.b. Poebel:G.S.G. pgh. 443, p. 168 ff. "Die Verbalformen mit reduplizierter Wurzel werden im Akkadischen ganz überwiegend mittels der Themen ukaššad und uktaššad (II₁ und II₂) oder der Themen iktanašad und ittanakšad
"If the patient twists his neck his eyes are closed, rolled up, saliva flows from his mouth and he makes a rasping sound, he is an epileptic." The most interesting aspect of this quotation is its similarity to statements in the Hippocratic corpus. These statements are found in, 'ΠΕΡΙ ΙΕΡΗΣ ΝΟΣΟΥ'. They are contained in a context where the author is making a mockery of the attribution.
"If the patient twists his neck his eyes are closed, rolled up, saliva flows from his mouth and he makes a rasping sound, he is an epileptic." The most interesting aspect of this quotation is its similarity to statements in the Hippocratic corpus. These statements are found in, 'ΠΕΠΙ ΣΕΡΦΕ ΝΟΥΣΟΥ'. They are contained in a context where the author is making a mockery of the attribution.
of various symptoms to certain gods." \(^{19}\) "Καὶ ἡ ὁμοιοὶ γὰρ ψάχαι μιμῶνται, καὶ ἡν βρόχωνται, ἡ τα δεξιὰ σπόνται, μητέρα θεῶ φασὶν αἴτιην εἶναι. ἡν ὁ δὲ ὅξυτερον καὶ ἐνυσώκτερον φθέγγηται, ἦπερ εἰκάζονσι, καὶ φασὶ ποσειδόνα αἴτιον εἶναι. --ἳν ὁ ἀφρον ἐκ τοῦ στόματος ἀφιν καὶ τοῦτο ποσὶ λακτίζῃ, ἥρης τὴν αἴτιην ἑκεῖ." "If the afflicted one imitates a goat (by rasping noises) and if he roars, or has convulsions involving the right side, they say 'Mother of the gods' is responsible. If he emits a stridulous and louder cry, they say he is like a horse and blame Poseidon. --If he foams at the mouth and slashes out with his feet, Ares is blamed." In the first few lines of tablet 10, the word 'amša' is unusual and difficult; it occurs in other contexts in the medical corpus, TDP I:XI; 20 and KIMIN, I, line 18. In both other occurrences it is read with the verb 'tarāšu(m)'; "to spread out, expand." Landsberger has suggested the translation "fever, heat". \(^{20}\) The precise meaning of the quadrilateral verbal adjective 'nabalkutama' in this context is reasonably clear. The word is well known from its appearance in the Codex Hammurabi, Laws 68 and 125, where it is written out syllabically and apparently means

\(^{19}\) Hippocrates:Loeb Vol. 148, "The Sacred Disease", paragraph IV, line 20 ff. The authenticity of authorship of this work does not concern us herein, suffice it to say that Erotian accepted it as genuine.

\(^{20}\) JNES; 8, 285, 120.
"to cross over", "to go over". In the medical texts the word is used after 'katama' in the context of the eyes closing and then rolling up, that is the anterior portion; iris, pupil, etc., rotates upwards into the orbit. The occurrence of nystagmus phenomenon along with epilepsy and other sorts of convulsive seizures is well attested in the Hippocratic Corpus and in modern ophthalmological literature. The verb of the next clause, 'harāru' is also common in the medical literature. It denotes or rather describes in onomatopoeic fashion the rasping sound which accompanies faulty respiration and the low rumble of the transition of gasses within the body. In TDP I No. 10, it is used of the phenomenon colloquially called "the death rattle". The text simply and eloquently states, 'šumma ur'ussu iharrur imāt'. While the CAD properly distinguishes between the various semantic developments of the root 'harāru(m)', while AHW derives it from a root 'arāru(m)', however the majority of citations have the first radical as 'ha' rather than 'a'; In UM 2, 2; 104 line 5 it is used of the rumbling of the large intestine. The verb appears repeatedly in a list of omens and incantations found in CT 39,
which deal with the flights and actions of birds. It denotes the characteristic "cawing" of ravens. It is interesting to note its absence from the descriptions of many other types of birds.

There is a possibility that this is the verb in question in the difficult line 154 of the Eleventh Tablet of Gilgameš. The scene is the releasing of the birds from the window of the vessel by Utnapištīm after it had grounded on Mount Niṣir.

The text states, "--ikkal išahhi itarri ǚ1 issahhra --", although a number of translations have been put forth from the time of George Smith's initial publication, the two verbal forms 'išahhi' and 'itarri' have been problematic. It is possible that the form 'itarri' is derived from the verb 'harāru/arāru', meaning "to rasp", or in this specific case "caw". The last word in the extant section is 'antašubbî' a word which appears in the fourth section of the 'SA-GIG' series. This line is found in TDP I TABLETTE 26, line 37. "Šumma qât etemmī ana antašubbî itaršu awilu šū qât il ališu mariš --"; "If the 'hand of a ghost' turns into 'that which has been thrown down from above', that man is stricken with the 'hand of a god of his town' --". This line apparently

starts another tablet in some recensions of the 'SA-GIG' series. This is indicated quite clearly in the literary catalogue of the 'SA-GIG' series excavated from Nimrud. This damaged tablet, ND 4358, as the twenty-eighth tablet of the series reads, 'Šumma ŠU-GIDIM-MA ana AN-TA-SUB-BA GUR-šú.' This is of course identical to the above. Interestingly enough the author offers the inane translation, "If in his case ŠU-edim-ma develops into antašubba." It is doubtful that the two technical terms are bona fide sumerian word-phrases. However they can be translated in any case, 'ŠU-GIDIM-MA' must be understood grammatically as 'ŠU-GIDIM-AK' equals "hand of a ghost" (Akk. 'qēt šēmmi' as in CT 3, 3 line 41.) while 'AN-TA-SUB-BA/U' must be understood in a more complex form. 'AN', substantive in initial position, 'TA' preposition and 'SUB' a verbal root. The final element of the word appears in some texts as 'BA' in other as 'BU' and it is in this latter form that it is found in the lexical texts as equal to 'miqtum'. This is no

24. J. V. KinnieWilson, Iraq XVIII, 1956 pp. 130-146.
25. ibid p. 135.
26. BM 4197 to which must be joined the unpublished fragment 4550 (former appears as CT 19, 10). It is a list of cuneiform Sumerian ideograms arranged in sequential order after an initial sign. On the basis of this text Delitzsch lists the equation: 'KA-TA-SUB-B equals mi-kit pi-i' HWB Vol. II, p. 425 a.
immediate aid as this is also a difficult word. It is our contention that the last element of the phrase is actually the suffixial particle of nominative actionis of the form 'LAL-a'.

This would be combined with the final consonant of the preceding word, in this case the verb 'ŠUB' (Akk. maqētu) meaning "to fall, throw down". The meaning would appear to be, "that which has been thrown down from above/from heaven." This may well be the type of terminus technicus discussed in section 2 above. From the description given in No. 10 above, it is most probable that the loan word 'antašubbû' means epilepsy in the classic sense. As a parenthetical note it must be added that there is evidence that 'ŠU-GIDIM-MA' was read not as 'qāt eṭemmi' but as a loan phrase, 'ṣugidimmakkû'.

The opening lines of TABLETTE No. 11 are badly preserved. In fact the whole upper one third of the tablet is lost altogether along with the entire dextral half from top to bottom of the extant fragment. Labat has attempted reconstruction from various

27. Poebel, para. 693, 694 (GSG) c,f, Falkenstein, GSGL plus .1, para. 43 a - b.

sources so that the resultant is at best problematic. '([šumma marṣu] rit-ṯā [šu ša imitti ikkālšu qāt(il) Šamaš ana ikrib gebet pišu iballuṭ]).' This construction is translated rather guardedly by Labat as, '[Si, le malade,] sa paume [draite lui fait mal: "main" de Šamaš; à la prière que prononcera sa bonche, il guérisa].' 29 Such a passage yields little for our comparison with KIMIN I. However one other line of evidence must be examined. The body of medical texts within the corpus called by Labat, 'TROISIÈME SOUS-SÉRIE (C)' begins with a tablet numbered 15 in TDP I. 30 The first line is missing, however the colophon of the preceding tablet in the 'SA-GIG' series preserves the first line of 15. This first line appears to have some vague but important similarity to the organization of KIMIN I and II. The actual contents of the two KIMIN texts are not parallel or based on that of (C) No. 15, as Labat states, '--mais aussi que ces observa-
tions (symptômes, diagnostics et pronostics) sont directement et
textuellement empruntées aux douze tablettes de la devxième partie
du traité.' 31 (C) 15 opens with the statement, 'DIŠ UD-I-KÂM
GIG-ma SAG-šú RA-īš za [---]', 'šumma uma iš ša qaqqassu-ma
maḫīš za [---].' This means, "If after one day's illness

29. TDP I, p. 89d.
30. LKU 68 a plus b plus c.
31. TDP I, Introduction p. XX.
his head is afflicted", to propose a reading and translation for the solitary 'za' sign would be pure hypothesis. It is interesting to note that in the literary catalogue from Nimrud, ND 4358 a slightly variant form of the title of this series is given. 

'[

[D]IŠ UD I KĀM GIG-ma SAG-su KŪ-šú' the word after 'qaqqadu' in this case being 'ikkālšu'. This demonstrates that various recensions of the 'SA-GIG' series existed not unlike the minor divergencies of style in the various recensions of 'HAR-RA; hubullu'. The '-ma' enclytic attached to 'GIG' is in this case conjunctive and may represent the same usage as that attached to 'MIN' in KIMIN I and II. If so, then the KIMIN dittograph represent only the single word "patient". This although possible is highly improbable in light of the inclusion in a number of the KIMIN propositions of only names of parts of the body. Since the Mesopotamian physician treated and regarded the various afflictions symptomatically, therefore diseases affecting only a part of the body are stated to be "stricken" and the prognosis follows. In the series KIMIN I the formula is, ' - X - šú mahiš - - - - - imāt', " 'Name of an organ' - his, is stricken, - - - is dying". The nature of what lies behind the dittograph must be only supposed and the usage of the enclytic '-ma' is problematic. However the above evidence indicates the following assumptions
concerning A 3440 are applicable. A. The text must have consisted of two clause conditional sentence, the initial clause of which was in effect the apodasis. In the first few lines of the text the condition or situation of the patient-practitioner encounter was detailed. The first statement would have said, "When you approach the patient and --," or possibly, "When you examine the patient then --". Both these and similar statements have been found as initial lines of tablets,\textsuperscript{32} as calophous and in literary catalogues. After the locus and modus of the initial meeting were stated the ditto mark was used where this initial statement was to be supplied. The second clause was the protasis which gave specific details about the symptoms of a particular malady, the name and then the prognosis. In the 'KIMIN' texts the last word of each statement may have been 'imât', a point which will be discussed in section 10.

Another line of evidence which must be considered in this connection is the material appearing in the tabular texts containing Babylonian ephemerides. Ephemerides, literally "day to day", are in fact lists of the positions of the sun, moon and

\textsuperscript{32} c.f. line 1 and 2 of ND 4358, Iraq XVIII, 1956 plate XXIV; and initial lines of TDP I TABLETTE I and III.
cry abbreviations in the entire composition. The traces on the tablet resemble the sign, 'ṣi' and in view of the fact that the 'ṣi' does in fact appear in the last quarter of line 19 a valid comparison can be made. If this supposition is correct the line may have referred to symptoms concerning the eyes or face of the patient since the Sumerian logogram 'IGI equals ṣi equals i - nu equals panū'. Such a logogram appears in certain medical texts dealing with ophthalmology and general diseases. For an example the reading 'IGI-II-šú', "his two eyes" appears in a series of internal disease symptomologies with remedies of an old but extremely clear set of fragments. The supposition that this is the 'ṣi/'IGI sign is greatly strengthened by the appearance of that sign in the next line almost under this citation in line 4.

5. ≈ KIMIN-ma IGI-MEŠ-šú u[...]

In this line the logogram 'IGI' is clearly visible. However it is immediately followed by the 'MEŠ' sign. The appearance of the plural determinative and the lack of the 'MIN' sign prohibit the normalization of this logogram as 'Inu'. The value must be 'panu'

33. Hh. I, 134 (MSL vol. V, p. 18) IGI equals i - nu; also SB I 351. Izi V 13 f. also Emesal Voc. II 185 f. (MSL vol. IV p. 24) IGI equals i - nu; IGI equals panū, line 186.

34. F. Kécher BANTU Inr. 92 (VAT) plus 10850 plus; KAR 200: 2; 11.
planets as computed for regular time intervals and relative a
fixed point in time and space. The basic assumption for the
calculation of such is the existence of a number "d", such that
\( y(n) + y(n + 1) = 2m + d \) allowing the calculation
of a linear zig zag function, where the two parameters \( 2M = d \)
(upper limit) and \( 2m - d \) (lower limit) are known. In such texts
the 'KIMIN' is used as a final word in the tablet. As an example,
AO 6477 line 10, 'ina KUR ŠU-šú DIB-iq KIMIN', "in its morning
disappearance, will pass by, similarly". (Neugebauer, ACT vol. II,
No. 801, p. 366) is clear enough as an illustration. Identical
phrases may be located in many other astronomical texts. However
in one such the term 'KIMIN-ma' appears. In the tabular text
made up of joined tablets, BM 34081 plus BM 34622 plus BM 34846
plus BM 45851 plus BM 46135 line 3, the text reads, '---ME-maš
u KI-meš KIMIN-ma --', "dates (days) and longitudes (grounds)
similarly and --". After this enclytic the tablet is broken. The
data is important in that it may indicate ever so inchoately that
the same school or associations of scribes wrote both the medical-
pharmaceutical and the mathematical-astronomical texts. This whole
problem of the text families should be more carefully investigated.

\[ \text{4. Š. KIMIN-ma [--- --- --- --- --- --- --- --- --- --- --- --- --- ---]} \]
The sign next 'ma' is just below the limit of resolution. However
it does not resemble any other sign subsequent to the introduct-
which would accord with the plural sign.\textsuperscript{35} The third singular masculine pronounal suffix appears in the text for the first time although its restoration in all preceding though damaged lines is assured. The antecedent of this pronoun, presumably the patient, is specified in the prodasis for which the 'KIMIN' stands.

6. s. KIMIN-ma KAŠ[- - -] LAL[- - - RU]K-šú[- - - - - - - -]

Since the sign 'KAŠ' is almost exclusively concerned with manufactured beverages and their consumption the value 'bi/be' is to be preferred. However the reading 'bi' offers no solution to the reconstruction of the lacuna. A reconstruction on the basis of the signs, 'LAL-X-A' with X supplied as 'AG' yields a normalization 'mahāšu' as in CT 12: 42, 21a. The chief difficulty with such a supposition is the common usage of 'PA' plus phonetic complement for 'mahāšu'. This would make the specific usage here out of place. Until a join or duplicate is available this portion of the tablet must remain in abeyance.

7. s. KIMIN-ma u[r-us-su] haniq NĪG gig [ili-šu ikul uš-te-zib]—

Other than 's. KIMIN-ma', 'ur', and 'haniq' most of the line is illegible. Labat has offered a reconstruction on the basis of

\textsuperscript{35.} von Soden, GAG 61 h.
X:28 (p. 84; 28-9) which reads, 'š. ur 'ud-su (GU-HUR) haniq asak ili-šu ikul uš-te-zib'. As can be seen above there is scarcely any more evidence for such a reconstruction other than the verb 'haniq'. This stative I/1 of the verb 'hanaqu' is used in a number of medical and biologic-omen texts. The meaning lies within the semantic range of, "to strangle", "to constrict", "to compress" and even "to be annoyed". This verb appears in its basic meaning twice in the Old Testament, 2:13 and II Sam. 17:23, 'ḫa-nu-qu'. Both of these passages are under strong akkadian influence. The participial form appears as a hapax legomenon in Job 7:15, 'ḫa-nu-qu'. In the Mesopotamian medical texts the stative carries the special connotation of "constriction" or "compression". It is often found with the substantive 'ur 'udu'. The phrase is then to be translated, "constriction of the trachea" or more properly, "tracheal constriction". This could arise from a number of sources and describe a symptom of wide variety of pathological conditions. If however this is the only and primary symptom then the translation, "tracheostenosis" would be in order. Since 'GU-HUR' is used exclusively of the trachea, this appears probable as the meaning. The verb 'hanaqu' is used to describe other maladies in the medical literature. TDP itself offers a number of citations; 'š.

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36. c.f. Ludlul Bel Nemeqi III:30. (Si 55 q.r.)
lā'ū urrusu haniq qāt (ilat) gula', (TDP 228:91; XL:91) and 'š.
lā'ū libbe-MEŠ-šu ebē u burrašu haniq qāt (ilat) gula', (TDP 228:95; XL:95). The same sort of formula is evident in certain omen texts as, 'šumma ur'udu šīra edīh u haniq'. 37 The I/2 form is used in an omen list, K 10930; 'hitnuqa' in the passage it refers to 'libbašu'. 38 The III/1 appears in TDP itself in 88:6 (X:6), 'ušāhiq', the more common II/1 appears again in an omen in YOS 11, 17; 4 ff. as 'uhannaq'. A noun formed on the root, 'hiniq' or 'hiniqtu' both forms are known, meaning a stenosis with no special reference to the part of the body afflicted is common. It was so widely utilized in the medical literature that it became the name of a malady. As a prime example the phrase in a tablet from the library of Aššurbanipal states, 'lū hiniqtu mariš lū hiniq KU lū
hiniq LAGAB-IM', 39 "he is stricken with stenosis, either analstenosis or cystic-stenosis." This form of nomenclature was extended to other animal parts and veterinary maladies; 'hiniq immeri' 40 and 'hiniq immeri'. 41 The classic occurrence of the term

37. A. Boissier, Choix de textes relatifs à la divination assyro-babylonienne. 1, 70, 9.
39. AMT 22:2, 7, c.f. KAR 203 i-iii, 21.
40. TDP I, 78:74 (IX:74).
41. KAR 26:42. c.f. CT XIV, 36, 81-4 and KAR 157:4 ff.
Also R. C. Thompson, Revue d'Assyriologie et l'Archéologie Orientale, No. 2, 1929, "Assyrian Prescriptions for
in a juridical text is in a tablet describing legal procedure in a murder trial, 'ina wardim hanāqim ubtirru', "they have indicted PH for strangling the male slave." In line 7 above, the word after 'haniq' is quite difficult to make out. The initial sign, the superior portion of which is badly damaged, may be the 'NIG' sign while the reading of the next sign as 'GIG' is problematic. Supposing that this reading and reconstruction is correct, the Akkadian equivalent is found in an Hittite lexical list. A difficulty becomes apparent when the list and citations of the word are examined. The Hittite word in the lists which is written with the 'NIG.GIG' signs is 'irmaniya' a substantive which also appears in the dialectal form 'armaniya' as derived from the verbal root 'irmaliya' which means, "to be ill", "to be sick". It is also used for the passive aspect, "fall ill", "be stricken"

41. (cont.) Diseases of the Stomach." p. 53, h. 4.

42. A. P. Riftin 64:24, and ZA 43:315, 1936.

and in some restricted cases, "not permitted", "taboo", "interdicted". It is in this latter sense that it is equated with Akkadian 'maruštú', and 'ikkibu'. In this sense the signs 'NIG.GIG' represent the Babylonian idea of "sin" or "iniquity" which is essentially not transcendental but essentially ethical. The idea indicated in Ludlul Bēl Nāmeqi and the Royal Annals is one of neglect and indifference to cultic obligations. Sins both of omission and commission are determined as violations of the custom, whether known or unknown to the transgressor. The cultic obligations were many and exact, but the worshipper must obey all in spirit and in letter. To be in good standing, to have satisfied one's cultic obligations was to be 'ellu'. In fact both words are used by the Assyrian kings to add religious justification to their acts of barbarism and war. The difficulty to which we referred above concerns the proper interpretation of the term 'NIG.GIG' equals 'ikkibu'. If 'ikkibu' is understood in this passage as transgression and the malady as the requisite judgment, then the transcendent aspect of medical practice in


45. As noted in CAD a fine example of the usage of this term and its synonyms appears in 'Šurpu' VIII 79-80. 'NIG.GIG anzīllu arni šerttu gillatu hiṣitu turtu mašaltu mîhrī la ṭābu lisse ṭiriqu niṣṣu mamīt arni hiṣīṭu --'. "taboo, interdict, sin, trans-
Mesopotamia must be considered as fundamental. Indeed the problem cannot be solved because of the fragmentary condition of the text. At best the translation, "If, ditto, then, tracheostenosis (due to) transgression --" will have to suffice.

8. 'š. KIMIN-ma n[i-ip-ku-šu q] it-ru-bu[u tēm-šu lā šabīt --'"

A fraction of the 'ni' and 'ip' sign can be made out, while only the upper portion of the 'qit' sign is visible. However the spacing of these signs is similar to that of AO 6679 (TDP II pl. XX, line 34). On this basis Labat has reconstructed the line by analogy to TDP I 84:34 (X:34) and I think justly so. The word 'nipku' is somewhat difficult and Labat notes, 'Parties non identifiées de la gorge: les amygdales?'. The precise meaning of this term is difficult to determine as there are only a limited number of citations of it. Labat's translation seems somewhat forced but may prove to be correct. It is well known that tonsilitis was known to the Greeks. It is mentioned in the "ΠΕΠΙ ΟΔΟΝΤΟΨΥΧΗ" where all of the sections XVIII to XXVII are concerned with diseases of the tonsils and adenoids,

45. (cont.) gression, crime, error, retaliation, questioning, bad luck move away, be far off; the invocation, oath, sin, error --" (Reiner's translation).

46. TDP I, p. 84, n. 163.
and the equally classic passage in the "ΑΠΟΙΛΜΟΙ", "πρεσβυτεροίοις δὲ γενομένοις, παρῆσθια —", 47 "As they grow older, (they suffer from) tonsilitis". However the translation of the other words in the passage of A 3440 add some evidence for the meaning of 'nipku'. The phrase 'ṭēmu' plus 'šabātu' is found in many contexts in Akkadian and means simply "to take action". A phrase such as this preceded by the negative 'lā' appears in many medical texts as a symptom of a disease or as a disease entity in itself. An example may be seen in TDP I 106:iii; 34 (XII:3, 34) and 104:iii; 21 (XII:3, 21) as 'ṭēmušu lā šabit'. It is at times specifically associated with drunkenness in such statements as, 'ina dabališu upaššat ṭēnušu lā šabit'. 48 The standard translation is, "not able to act"; "not able to reason". 49 However this symptom is combined with others to portray a probable syndrome, v.s. Section II. It is combined with observations of inebriation, 48 hyphosis, 50 nephralgia 51 and gastralgia. 52 This special usage of 'šabātu' must be kept separate from its more common usage as, "seize" or

47. Loeb No. 150, Hippocrates vol. IV, Aphorisms, III.XXVI line 1.
49. c.f. CAD Comm. on 'Šabatu' ad loc.
50. TDP I, 106; iii:34.
51. TDP I, 104; iii:21 et passim.
52. Labat, Syria 33; 122:24.
"attack". In the context of line 8 it has the intent of "immobility", "inability to control oneself". The translation then appears as, "If, Ditto, then his tonsils are near each other (due to swelling), and he is not able to act [he is dying]". The translation of 'qerēbu' I/2 is governed by its usage here with some organ connected with the throat, a supposition based on the appearance of 'ur 'udu' in TDP I 84:34 as mentioned above.

9. š. KIMIN-ma A-šū ša XV KU₁₀-āt EME-šū Kaš-rat[ - - - - - - -]
This line is normalized as, 'š. KIMIN-ma A-šū ša imitti tarkat lišassu kašrat[- - -]'. In the writing of this line there is a space on the tablet after 'rat' so that presumably the remaining portion of the tablet may have contained no text at all. However, judging by all other fully extant lines there was probably a clause or sentence ending in 'imāt'. The sign '／' is the standard Sumerian word for arm, which may be normalized in Akkadian by a number of terms among them being both 'ahu' and 'īdu'.

53. Ur-e-a equals nāqu, (MSL 2) CBC 12751, c. p. 139.
'DA', which differs from 'Á' only in the loss of the vertical wedges parallel to the upright axis of the sign, is also used for some of the Akkadian words. In the medical literature it is often quite difficult to determine which is the proper connotation "arm" or "side" as the 'Á' sign can stand for both. With only rare exceptions the tablets of the 'SA.GIG' series utilize the 'Á' sign with a pronominal suffix. The only citation in TDP I where the phonetic writing 'c'-di-šu' appears is found in the Fifth Section (Tablette 40), line 3, which is quoted in the CAD, "I/F" pp. 11. Holma treats them as synonyms, except for the fact that 'idu' is fully developed in Ugaritic, Hebrew and Phoenician while 'ahu' is not so found, this appears to be true. One of the classic passages where 'ahu' is spelled out phonetically occurs in The Descent of Ištar, 'murus ahi ana ahiša', "malady of the arms upon her arms". It seems that while 'ahu' has certain idiomatic usages for parts of the arm, 'birti ahi', "upper bend", "arm pit"; 'kubur ahi', "upper arm"; 'uppi ahi', "shoulder"; 'idu' does not develop in a similar fashion.

55. CT 15, 46:71.
56. Diri IV and HAR-gud equals imr0 equals hallu B, IV.
57. ABL 1452, Harper Series.
58. TDP 88:14; (X:14).
Examples of 'A' are frequent in TDP I as the condition and posture of the arms was held to be of special diagnostic significance. In TDP I 86, twelve lines are concerned with maladies of the body which effect symptoms about the arms. The first line of the tablet (X) is identical to line 9 or A 3440.\textsuperscript{59} The adjectival phrase 'ša XV' is an interesting one and is well known from medical, omen and incantation texts. The libateral symetry of chordates was of prime importance to the Sumerians as evidenced by their omen and incantation texts. In Akkadian medicine the same concept is in evidence. It was of importance not simply that the hand or foot was afflicted but which hand or foot. The following discussion will investigate the usage of this and similar numerical logograms. In A 3430 only the lower one-third of the unit wedges is still legible but the "ten" is still visible. The sign, 'UIA'\textsuperscript{60} when it appears as a number in Akkadian was to be pronounced 'hâmisšerit',\textsuperscript{61} a combination of 'hâmiš' equaling 5 and


\textsuperscript{60} von Soden in Akkadischen Syllabar does not list the sign, while Labat assigns it the arbitrary value 'UIA' and Deimel ŠL T. II, Bd. 3 No. 470, p. 921 simply notes as sign for No. 15 and divine name Ištar.

\textsuperscript{61} ḫh (MSL V) K 4338a plus K 4358a and VAT 11299; line 539, 'giš-ma 15 gur equals ha-meš-ša-rit gurri', p. 160.
'ešer' equaling 10. Note the decimal value given these signs by the Akkado-Babylonian users. In Sumerian the sign would of necessity stand for both "15" and 15/60 or 1/4 the decimal non repeating .250.... A fine example of the sign as a number 15 can be seen in line 19 of the Problem Text YBC 4675 where its value is reinforced by the numerical computation of the problem. An example of the second or fractional usage of the writing is seen in a table of reciprocals such as YBC 11127, line 4, column B. In this text the 'UIA' sign represents the reciprocal of the fraction 4/1 or 15/60 that is, 1/4. In standard literary and didactic texts it stands for the topographic "right" as "right hand side". In this capacity it may stand for 'immu' or imittu'. A splendid example of this writing is the omen text with rituals where the priest is instructed to pay attention to the 'padanu' at, '15-ka', "your right (side)". Of special significance is the variant to this recension which reads, '[im]-ni-ka'. The term 'immu' is very widespread in its usage. It appears in a number of O.B. texts and royal inscriptions. In an inscription of Samsuiluna there is a citation, 'uwa 'iranništi in immi dilak', "He commissioned us, we shall go at your right (side)".
In the Codex Hammurabi the deity is praised, "d-Zababa - - āliku īmnīza", "Zababa who walks by my right (side)". Nevertheless not only 'imnu' but also 'imittu' are written with the No. 15. In fact this latter equivalent is more common and is found written both logographically and phonetically in the medical literature. In a medical text from Nippur excavated by the Oriental Institute in the campaign of 1949-1950 there are parallel formations to many found in the 'KIMIN' texts. In line 16 the text reads, 'DIŠ GIG MIN KALĀM-su ša ZAG KU.KU-šu [- - -].' The normalization would then follow as 'šūmma marašt inruš maršu kalīsu ša imitti itanakalšu', "If the disease, his (the patient's) right kidney continually pains him - - -". Here the 'ZAG' sign indicates the orientation. In the lexical lists this sign is only found translated by Akkadian 'imittu'. Another example is to be found in

65. (cont.) with the indeterminate term "side" thus negating the citation. (I/J p. 137).
67. Labat, Une Nouvelle Tablette De Prognostics Médicaux (Syria, XXXIII, 1956, pp. 119-130.).
68. Sª, Fragm. AE, B7, rev. Line 13'(MSL 3, 85) 'Za-ag equals ZAG equals i-mi-id [-du] (equals imittu); translated, "right side".
texts dealing with contexts dealing with ophthalmological maladies.

One such text states, 'š. LUGI ZAG-šu-', "If a man's right eye--".68 There were then two ways to abbreviate logographically the right or left orientation, either with '15' or 'ZAG'. In the 'SA.GIG' series, medical texts with the phonetically written, 'imnu' or 'imittu' are very rare indeed. A report of an astrologer in Neo-Assyrian times contains the older abbreviation, 'ina 15 MAN' glossed by the phonetic writing, 'i-mit-ti Ḥamaš'.69

It is apparent that such preferences are due most likely to scribal choice and style. The verb immediately following the subject and its modifiers is written as 'GIG' plus the phonetic complement '--át'. Both 'GIG' and the less common 'GIG' are used of illnesses, deseases and maladies both physical and spiritual. In 27 out of 46 lines still legible on the medical tablet 2NB336 the 'GIG' sign appears apparently representing the substantive, 'maršu'70 yet in A 3440 and other texts in the 'SA.GIG' series, 'GIG' is the norm. However in the titles of the texts in the series as listed in the Nimrud tablet ND 4358 all the subjects are written 'GIG'.71 The sign 'GIG' is equated as follows,

68⁴. AMT No. 13, (2 K 2444) r. 11, line 4. PRSM; Thompson, 1926, pp. 44 ff.
70. Labat, Syria XXXIII, 1956 p. 122-123.
'gi-il equals GI\textsubscript{G} equals mar-šu',\textsuperscript{72} while another syllabary reads, 'gig-ga equals mar-šu'.\textsuperscript{73} Whereas 'GI\textsubscript{G}', the Sumerian GI\textsubscript{6}(G) equals Akkadian 'šalān̂n/šalmu' as in the stock phrase, 'SAG-GI\textsubscript{6}-GA' (SAG-GIG-AK) equals Akkadian 'šal-mat qaq-qa-di'.\textsuperscript{74} It is also used for kindred words such as 'ērebu' and 'mūšu', it is also used for 'tarāku',\textsuperscript{75} but very rarely if ever for 'marṣu/marṣu'. The medical texts seem to favor 'GI\textsubscript{G}' possibly because of its simplicity or orthography. It seems that in the major citations 'tarāku' and 'marṣu' are used synonymously. The phonetic complement certifies the form whichever of the two verbs was meant, either 'marṣat' or 'tarākat' both of which are well known in other literary traditions. The substantive 'EME' is another development of the Sumerian word and sign 'KA'. 'EME' is equated in the lists with 'lišānu(m)' and forms such as 'e-me-tu-ku'.\textsuperscript{76} This sign is used with the personal pronominal suffixes to indicate not only speech but also the power of speech.

\textsuperscript{72} S\textsubscript{b}, CT XI, 16. Col. III, line 18.
\textsuperscript{73} K 246 plus K 156 which are published as No. 82-99; Fassey, La Magic Assyrienne. (ASKT).
\textsuperscript{74} Lexical list from V R, 12:37:A.
\textsuperscript{75} K 6450 unpublished. K 6720, CT 31; 48-9, 1.21.
\textsuperscript{76} Ur-e-a equals nāqu; (MSL 2, 153, line 16) 'e-me KA ME li-ša-[num]'; and H-h Tab. XIV (MSL 8/2, 8 line 16) 'MUŠ-EME ZBI equals pēr sība li-šā-na-šu'.
It appears with a variety of verbal roots and forms, among the more common ones, 'ebētu' as in the phrase, '[pija] usabbitu kišādi utarriru EME(KA),MU ubbitu', "—they (the demons) have gripped my mouth, shaken my neck, caused my tongue to cramp". However the verb 'egēru' is also used in certain contexts, 'lišānka là tattanigir ina šaptēka', "your tongue shall not stammer on your lips", this is a rare instance of a IV/3 form. The most common usage is that in our text with the verb 'kašāru'. This verb occurs in a number of similar statements in TDP I TABLETTE 7, where the whole tablet is concerned with the tongue, 'lišānšu' and the mouth, 'pā', in line 18 the extent text states, 'š. lišānšu ikkašir—', "If his tongue is tied—". Interestingly enough the medical texts rarely use a logogram for this word, although 'KAD₄,₅' appears in the lists it was probably too ambiguous to be written without confusion. A probable translation of line 9 would be, "If - ditto - then, his right arm throbs, his tongue is tied —". The translation, "throbs" rather than "stricken" is supplied simply on the basis of the context. It seems that the verbs are in addition to a main idea of the

77. PBS 10/2 18; line 15.
78. Craig, ARRT 1;5 line 10.
79. c.f. No. 10 line 27 (TDP I, X:27).
80. ŠbB (MSL 3, 133 line 26) 'Ka-ad equals KADₓ equals Ka-ṣa-rum', Labat reads, 'KAD₄'.


patient's, the subject, being stricken, therefore any subsequent
verb must add further data about the specific case.

10. 𒈗.KI.MIN-ma 𒊏-𒆠 ša CL.GIG-át u idam[---

This line is identical to line 9 with the exception of the
orientation and the copula and the last extant word. The word-
sign used for "left hand", "left side" is interesting. It is the
numerical sign 'MIN-EŠ' which represents the sexagesimal notation
'2,30', where 2 is the number of '60's' or sexagesimal units and
30 represents the number of tens. Thus $2,30_{\text{six/ten}}$ equals $150_{\text{ten}}$
in decimal notation. The 'MIN-EŠ' is to be understood as: $(6 \times 10$
plus $6 \times 10)_{\text{plus}} (1 \times 10 \text{ plus } 1 \times 10 \text{ plus } 1 \times 10)_{\text{or}}(60 \text{ plus } 60$
plus $10 \text{ plus } 10 \text{ plus } 10)_{\text{plus}}$. It is interesting that this number is
equal to: $15 \times 10$ the notation used for "right hand", "right side".
The writing of the number 150 is difficult to locate on a tablet.
There is even less evidence as to how it was pronounced, probably
something like 'hamšame' at' put together as "50 plus 100". The
occurrence of the natural number is limited to problem texts of
the type which deal with calculations of fields and areas of
ground by surveyors. The use of such sexagesimal cardinals is
most likely Sumerian in origin although there is no evidence that

\[\text{\textsuperscript{81}}\text{ VAT 6598 (O. Neugebauer, MKT p. 277); Thureau-Dangin,}
\textit{Textes Mathématiques Babyloniens: p. 130, line 4.}\]
the Sumerians themselves used this notational device. The
Sumerian logogram for "left", 'KAB,GUB' is found in the succeeding line of the tablet 2NB336 to that which is discussed above in reference to line 9. The text reads, 'DIŠ GIG MIN KALÁM-su ša GUB KU.KU-šú [- - -].' The word 'GUB' is the only variant from its predecessor on the tablet. The standard pair of terms for this type of text appears to be right, ZAG/GUB, left. In earlier times the 'ZAG' sign was written in the compound 'Â.ZI' and 'Â.ZI.ZAG' meaning the right, the right side and drawn with an arm to the right, while the sign 'GUB' is written with an arm pointing to the left, drawn in its earliest stages with the hand.

The word 'GUB' appears in the Gudea cylinder A 4, 19 in the sense of "left", "left-words". It also represents the Akkadian, 'kamēru', "to leap up", "to pile". It however is hardly ever written with the 'GUB' sign when it appears in medical contexts, as in the series, 'Âšakki marşūti' where the headache is to be driven away, and 'kit-mu-ru' is used in the simile of the headache's cure.

In the parallel line to the opthalmological statement quoted under line 9 above there is the reading, 'Š. LŪ IGI

82. Labat, Une Nouvelle Tablette De Prognostics Médicaux (Syria, XXXIII, 1956 pp. 119-130).
84. CT 17, plate 26, line 79, (K 2869 plus K 5025. K4840: K 9303: 46301 and R. Campbell Thompson, The Revils and Evil Spirits of Babylonia, ḫiʾiʾiʾ, "P" line 79.
GUB-šú--, "If a man's left eye--".\textsuperscript{85} The term 'šumelu' is not often spelled out phonetically, however instances of its usage are extant as for example the phrase, 'ana šumu-li'.\textsuperscript{86} Of special interest are those readings which contain both orientations in a single line, since many omen and incantation rituals call for casting away some small objects such as stones in several directions or the swinging of a censer, such citations are common, however in the medical literature they are scarce. One such exists in TDP I 98:39 (XI;39), 'š. ubānāt qatar ša XV u CL damā malā --', "If the fingers of his right and left hand are engorged with blood--".\textsuperscript{87} It may be seen from the two previous lines which repeat the text, first for the right and then for the left, that the 'SA.GIG' series is to a large degree successful in preserving a uniform textual tradition. The copula following the 'GUB-šú' introduces a little known form, 'i-da-mu'. This verb is noted in a school-text of syllabary equivalents from Assur it contains three parallel columns quite similar if not identical to VAT 10243 lines 1-4, and CT 11, 36, the school-text reads, 'ku-uk-ku equals GE\textsubscript{6}.GE\textsubscript{6} equals da-'-mu'.\textsuperscript{88} It is also

\textsuperscript{85} AMT No. 13, (2K2444) r. 11, line 6. PRSM; Thompson, 1926, pp. 44 ff.
\textsuperscript{86} BE 66, 25.
\textsuperscript{87} The CAD here has the wrong line numeration, the line 40 has an extra word omitted in CAD quotation, but included in line 40, excluded in line 39.
\textsuperscript{88} Köcher, AfO 17, 1954-56. Line 5.
found in a physiogamy omen, 'DIŠ du-'u-mu-ti DIR', "If he is covered with dark moles". 89 This word in verbal, nominal and adjectival forms is used frequently in TDP as a diagnostic sign. Some examples are quite informative, 'ʾā. appašu du 'um imāt', "If his nose is dark he will die"; 90 'ʾā. ʾešēŠērašu du 'um murussu irrik', "If his backbone is dark, his affliction will be long"; 91 ʾš. tulī imittišu du 'um murussu uzabbal --ʾš. tulī šummēlišu du 'um murussu išanni', "If his chest on the right side is dark, his affliction will linger --If his chest on the left side is dark, his affliction is variable". 92 The translation of line 10 would read, "If - ditto - then, his left arm throbs and is dark --". A line in TDP I 86;rl (X:rl) is much like line 10 except that the two verbal forms are missing and the verb 'imāt' is still legible at the end of the line. It seems applicable that this last verb can be added to line 10, the prognosis like all other 'KIMIN I' symptoms is fatal.

11. ʾš. KIMIN-ma ʾ-A-MIN-šū tur-ra ʾā ZU-e [ - - - - - - - - ]

The addition of the dual notation 'MIN' after 'ʾĀ' is interesting

89. Kraus, TBP; 38a, 20.
90. TDP I, 54, 2 (VI:54).
91. TDP I, 104, 29 (XII:29).
92. TDP I, 102, 15 (XII:15).
in contrast with the singular with modification of which of the two was meant. The verb 'turra' is here taken as a I/1 present of 'tarû' a not uncommon idea in the medical texts, the verb after the negative element is also to be taken as a I/1 present and therefore should be normalized from 'le'ûm' as a form 'ile''e'. The lexicographical equivalence of Sumerian 'ZU' and Akkadian 'le'ûm' is simply established. The close similarity of this line to TDP I 10, r. 2 (X: r.2) has led Labat to reconstruct the 'KIMIN' reading on the basis of it. However a few words are still hypothetically reconstructed. The citation in tablet No. 10 reads, 'ä.idâII-û turra le ile 'e u[ina pîšu - - ] damu isarrur imât', "If he is unable to move his arms and from his mouth blood seeps, he is dying". This might possibly be a good translation for both passages as it is possible and probable that the line in 'KIMIN' was excerpted from tablet No. 10. The verb 'šarâru' meaning "to flow", "to drip", "to seep" or "to ooze" is used a number of times in the 'SA.GIG' series. It is written with the logogram 'SUR' and upon occasion with the 'LUM' sign. It is used with a number of body secretions, as,

93. Sb, 220a (MSL III, p. 115, line 220a) 'zu-u equals ZU equals le-'-u.' n.b. citation as given in AHW p. 547 col. A ad loc. omits MSL volume number.
94. Ea III; 288, 'šu-ur equals SUR equals ša-ra-rum'.
95. A V/1; 12, 'hu-um equals LUM equals ša-ra-rum'.
'šumma amēlu TA uznišu 𒌍.BABBAR ｉṣarrur', "If pus oozes out of a man's ear --"; 96 'ina mušarīšu damu iṣarrar qāt 𒄀Šamaš --', "If blood flows from his penis (it is) the hand of Šamaš --"; 97 'šumma ina šuburrišu martu iṣarrur --', "If from his rectum, bile oozes --". 98

12. しかない KIMIN-ma 𒈗-MIN-ŠÚ turra lā ile' e [

This line as much as is extant is identical to No. 11, on this basis Labat reconstructs the remaining segment from Tablet No. 10, line 4, however since lines 1 through 4 are identical in their first nine words the more logical reconstruction would seem to be from line 3, especially in regard to 'KIMIN' I, line 10 being equal to No. 10, line 1 and 'KIMIN' I, line 11 being identical to No. 10, line 2. Line 4 of No. 10 which Labat prefers, states, 'šumma idāšu turra lā ile' e u dama i'arru qāt 𒀀Ištar urrukma imāt', "If a man is unable to move his arms and he is vomiting blood (it is) 'the hand of Ištar', it will continue and he will die". The more plausible reconstruction is based on line three which reads, 'š. idāšu turra lā ile 'e u dama itešši arkatu mahīs imāt', "If a man is unable to move his arms and he

96. AMT 36; 1, line 12.
97. TDP I, 134, II line 37, (XIV:2, 37).
98. TDP I, 26, 68 (III:68).
continually emits blood his buttocks are stricken, he will die."

There are a number of terms in this passage which can be studied with profit. The term 'damu' found in line 3 is common to almost all Semitic languages: Ugaritic 'dm', Hebrew 'ת', Arabic 'ـس', Ethiopic 'ጆ', and is used in all of them for "blood". By extension it may be used for "life" or some other biologic activity. The actual reading in line 3 is the 'BAD' sign which is read in Sumerian as 'US'. Two other forms related both lexically and semantically to 'damu' are found in omen and medical texts and biologic contexts in literature. The term 'adamatu' is found in TDP I, 64:47' (VII:47') which states, 'š. ina pīšu itarrak/haššal u adamatu innada --', "If from his mouth he vomits and continued to throw up black blood --". If the second choice of verbs is read the meaning is more obscure. It seems strange indeed that in the list of symptomatic descriptions found in TABLETTE 7, lines 47'-52' the Akkadian preposition is 'ina' and yet Labat translates all but this one phrase as 'par' while line 47' is trans-

99. The cuneiform text appears in AMT 107, 2 (K 3607) line 3-4.
100. A large number of passages are collected in: Oppenheim, "On the Observation of the Pulse in Mesopotamian Medicine", Orientalia NS, 31, 1962, pp. 27-33.
lated with the preposition 'de'. It seems reasonable that the two verbs which may be read in this case both refer to vomiting
followed as in hemolytic malaria, (the so-called "black-water fever" known from pathologic studies of ancient mortuary remains)
by vomitus cruentus. Such a possible translation for 'hašalu'
becomes even more likely when the other occurrence of the verb
in TDP I 218, 9 (XL:9) is compared, the text reads '—qerbūšu
ebtu irrušu išeru u iḥtataššil mehra išbassu', "(If an infant's)
bowels are contracted by cramps, he has diarrhea and continually
wretches, he is afflicted by 'blockage'. The substantive
adamatu is usually written with the Sumerian logogram 'UŠ.MI'
as in line 47 and many other medical contexts. The other

102. The difficult word 'mehra' must be separated and distin-
quished from the homophone which is usually written with the
Sumerian logogram 'GABA.RI' and means "equal", "equivalent" or
"peer" as in C H where it is written out phonetically in para-
graph No. 200:68 and logographically in the Neo-Babylonian law
paragraph No. 6 (Peiser, SbKAWB, 1989 XXXVIII, p. 825, line 9)
which reads, 'u GABA.RI IM.DUB'. The word transliterated
'me-eh-ru' in XL:9 is most likely the same as that which appears
in Gilgameš XI:102, where it is written 'mi-ih-ra/ri' and means
a dike, dam or levee (cf. RA 35:1874). However the 'eh/ih'
reading is represented by one and the same sign and the reading
'me-ih-ru' is passable and does exist. However it is also

103. AMT 52:9, line 5.
related word is 'adamu' which is the common Hittite-Akkadian logogram for "blood". The verbal for 'uteışı' which appears in No. 10, line r. 3, is to be understood as a II/2 present from the double weak root '(w)ğsu'. The substantive 'arkatu' is written in line r. 3 with the Sumerian logogram 'EGIR'. When this term is written out syllabically it is difficult to distinguish 'warkatu(m)' from another form 'warkiatu(m)', this latter word means simply "previous", "past events" or "history". The word is spelled out twice in three lines in K 8627 plus K 12275. The remaining portion of the line is of common usage in the medical literature. A 3440 line 2 should probably be reconstructed

102. (cont.) written logographically as 'GIS.GIG' as in Thureau-Dangin, Huitième Campagne de Sargon line 210, cf. note 5. An additional complexity is added by the fact that in texts involving parts of the body it commonly is derived from 'mahar' and has a prepositional, directive meaning, "posterior", the "hind part". The translations offered for this word are purely conjectural. n.b. Holma, Körperteile, p. 158.

104. KBo 1:51 r. line 17, c.f. Güterbock Ar. Or. 18/1-2, 228 n. 65 b and also Krozny, Monografie Archivu Orientál nIho Bd 1, Prague 1933, III; 228 h. 65b.

105. Kraus, TBP Tfl. 18, Nr. 11b rs, VIII col. lines 1 and 3.
and translated, "If - ditto - then, he (the patient) is unable to move his arms and he continually emits blood, his buttocks are stricken, he will die".

13. 'š. KIMIN-ma ŠU-su ina LI.DUR-šú GAR-ma ŠU-II-šú u GIR-II-šú kašā

14. ZIG-bi u DÛR-ab ina LI.DUR-šú SIG AN DIL.PAT [- - - - - - - - - -]

This is the longest statement on the face of the tablet. It has the ends of both lines broken off which adds some difficulty in its translation. After the 'ŠU' is written indicating the singular possessive form 'qāssu', "his hand". Normalization is problematic but a probable one is 'šumma KIMIN-ma qāssu ina abunnatīšu šaknatma qāṭāšu u šeṭāšu kašā ina [lā idō urappad] itebbi u uttasab ina abunnatīšu mahīš qāṭ ilat dilbat [imāt]'. The reconstructions are made on the basis of smaller elements in tablet 11 of series II, which as mentioned above, closely resembles 'KIMIN' I. 106 The feminine substantive 'abunnatu' has the basic meaning of middle, or center as in the phrase, 'abunāt ummānīka nakrum ilappat', "in the center of your army, the enemy will come in contact". 107 Its equivalence with the Sumerian 'LI.DUR' is

106. c.f. TDP I, No. 11; Series II, p. 90, line 9, and note No. 172.
107. RA 27, 142:30 & 31.
attested in a number of citations from the lexical texts, 
\[\text{gisLI.DUR.MAR.GÍD.DA} \text{ equals a-bu-na-tu}^{108}\] The word appears in TDP I in No. 11 of series II in a nearly identical context and in No. 35, series V, line 85 where the text is written out syllabically. The verb represented in that case is 'pašir' and 'abunnatu' is used substantively modified by 'rēš'. The translation generally accepted of "navel" is probably correct when the center of the external surface of the abdomen is being discussed. Otherwise more specific and definitive uses must also be considered. A major aspect of the usage of the term is found in contexts dealing with women involved in, during and after pregnancy. In the omen text K 6212 (K 6190) the phrase is found, 'šumma ainništu abunnassa ḥabšat', "If a woman's umbilicus is distended".¹⁰⁹

In the succeeding lines the same phrase occurs with the verb 'narbat' meaning in such a context "flaccid"; and in the next line 'kaṣrat' meaning most likely "edematous". This last word 'kaṣaru' in most references means "to knot", "to tie", "to bind", but in medical texts it appears to refer to the distention and immobility of edema. There is the additional observation that edematous tissue reveals networks of subcutaneous capillaries with a blue

₁⁰⁸ From a list of types and parts of wagons, MSL 6, 12 line 83. Hh. Tab. V; and 118:34 and 104:241.

₁⁰⁹ Kraus TBP 11c, vii’line 8'. (KAR 206 II line 8).
coloration of unoxygenated, "reduced" blood. This network of
knots may have some bearing on the use of the word 'kaşaru' in
such a passage. The verb 'ḥabašu' in K 6212 is to be understood
as "distended".\textsuperscript{110} This is readily understood in view of the
normal prolapsing of the umbilicus which occurs after the third
month in a primagravidia case, the fifth month or later in others.
During pregnancy this distension is hard and bulbous while
immediately on delivery it becomes flaccid. That this observa-
tion was made by Mesopotamian practitioners can be deduced from
TDP I, 208:85 (XXXV:85), 'šumma ʾilittu ʾēš abunnatiša pašir',
"If the protruberance of the umbilicus of a woman who has given
birth is flaccid". In birth omina the navel is also mentioned
as a particular index of inspection. 'širrešu ina abunnatišu
wašū.' This should be translated, "his intestines herniate
through his umbilicus."\textsuperscript{111} The infinitive of the verb 'kaşū',
meaning "chilled", appears in the subsequent phrase of line 13
in A 3440. The subject is the phrase 'qatāšu u sēpāšu', "his
hands and his feet". The verb 'kaşū' is often found in medi-
cal texts denoting the symptoms of decreased circulation in the
extremities. However the classical usage of the word appears in
Gilgomeš XI, line 285, 'inurma būra Gilgomeš kaşū mūša', "Gilgomeš

\textsuperscript{110}. CAD misunderstands these terms in that it does not seek
medical connotations.

\textsuperscript{111}. c.f. KAR 195 i. line 29 and AMT 14, line 5.
saw a well, its water was cool". The superficial coolness of the limbs was known as an important prognostic sign to various ancient peoples. A good comparison may be made between this phrase and the Greek prognostic literature. Line 13 may be translated, "If - ditto - then, his hand lies on his umbilicus, his hands and feet are cold --". The Hippocratic statement is akin to this observation. It states, "Κεφαλή δὲ καὶ χεῖρες καὶ πόδες ψωχρὰ ἐδύνα κακὸν τῆς τε κοιλῆς καὶ τῶν πλευρῶν θερμῶν ἐδύναν", "It is a bad sign if the head, hands and feet are chilled while the abdomen and sides are warm." At the end of line 13 a lacuna of approximately five percent of the line has been reconstructed by Labat after the analogy of TDP I 104:21 (XII:21) and this is quite a plausible reading in view of the initial words of line 14. The phrase before the break supposes a statement, 'Ἰδό οὐραππᾶ', "he unknowingly runs (around)"; a more agreeable rendering, though removed from the literal sense is given by CAD, "he roams around in a daze." The next few signs, 'ZIG-bi u ĐUR-ab' are normalized as 'itēbbî u uttašab', "he rises and he sits". The whole should be understood, "he roams around in a daze continually rising and sitting --." The diagnosis is then supplied, "in his umbilicus he is stricken, the hand of (divine) Dilbat, [he will

112. ΠΡΟΓΝΩΣΤΙΚΟΝ XI, Loeb vol. 148, p. 118.
113. CAD vol. 7, I/J p. 30a.
die]. As discussed elsewhere in these studies syndromes are hard if not impossible to extricate from the mass of empirical symptomatology found in the Mesopotamian medical corpus. However in this case there is a plausibility that the disease entity in view is some acute internal infection such as pericolitis or peritonitis which in terminal stages would account for the patient's loss of memory and apprehensive behaviour. The phrase, 'qāṭ 
AN DIL.PÂT is the first of only three locations in the 'KIMIN' text where the name of a god appears. The third is in line 50 on the reverse of the tablet. That phrase ends with 'AN/DINGIR UIA/XV', the divine determinative and the cardinal number 15', which is to be read, "the goddess Ištar". However in line 14 there is a difficulty, the name 'DIL.PÂT' is normally used of the town 'Dilbat', a city near Borsippa, the precinct of the lesser god Uraš. This town is mentioned in Hammurabi's code, 'ilu šarri m'udî igigîn hasîsiR mušaddêl mērišîtim ša Dilbat mugarrîn kârî ana dUraš gáišîm', "the one who extended the plow land of Dilbat who heaps up grain for mighty Uraš". However the term is also used as the proper name of an astral body. In this sense it is often preceded by the 'DINGIR' sign. In many tablets listing ephemerides the word 'dîl-pât' is used for the planet Venus,

114. C H. Prologue III line 16-23. c.f. Streck, Aššurbanipal; Ann. 6:vs, 5. an Uraš - gate was known in Babylon, c.f. Unger, E., Babylon, p. 73, 74 r. 3 ff.
specifically in phrases such as, 'dil(i)-pāt šu' in a list of sightings of the planet over a twenty-four year span at Uruk.\textsuperscript{115} A list of such sightings of Venus as last visible morning star, 'dil(i)-pāt ina kur', "Venus before sunrise", for eight year intervals.\textsuperscript{116} There are other interesting mentions of the planet in a lengthy procedural series from Babylon. The text made up of a series of joins from the British Museum, gives ephemerides for Venus (Dilbat) and Jupiter (Mūl-babbar/dSAG.ME.GAR). There are several interesting rules of procedure in observing this planet which are enjoined in the tablet, 'šumma dili-pāt ina ŠU ina absin īgi 4, 19, 15 tabma ina ŠOŠ 6, 15 gurma ŠU', "If Venus is initially visible as evening star in Virgo, then the stationary point will fall 4, 19, 15 degrees later, thereafter a retrogradation of 6, 15 degrees will bring us to a point at which Venus will disappear as evening star".\textsuperscript{117} On the basis of this evidence it is doubtful that any but the astrolally significant usage of 'dil-pāt' is in view in A 3440. It is interesting to note that although the older orthography was 'DIL-PĀT' in the later texts it is simply 'dil-pat'. It is also necessary to note that the texts from the British Museum are part of the Spartali Collection.

\textsuperscript{115} Neugebauer, ACT, No. 400 (A 3415) lines 1-12.
\textsuperscript{116} ibid. No. 401 (U 179) lines 1-16.
\textsuperscript{117} ibid. 812, section 27 r. II, line 2-3 (BM 34221 plus BM 34299 plus BM 35119 plus BM 35206 plus BM 35445 plus BM 45702).
a large portion of which, Ungnad has shown, were excavated from ancient Sippar and Dilbat, but from Dilbat no religious texts have ever been identified. It is therefore probable that the town 'Dilbat' had no ordinary temple, but an observatory and the temple and the town derived their names from the planet to which they were dedicated. The planet Venus was later assigned as an effulgence of Ištar, however as pointed out above, the name Ištar as it appears in line 50 of A 3440 is not written with the 'Dilbat' signs. That a distinct deity did in fact exist is demonstrable from the many texts of the temple of Dilbat as published by Gautier. It is best therefore to translate 'AN,DIL-PÂT' in line 14 of A 3440 as "the hand of Venus". In this line occurs the initial use of the stative 'mahâš̄' meaning "stricken", "afflicted" for details on this word and its formations it is necessary to refer to the article by M. Held, JAOS 79 (1959).

15. ṣ. KIMIN-ma ŠU-II-šu ina SAG-du-šu GAR-MEŠ-ma lā ur-ra-da-ni lîb-bê-MEŠ-šù IL-MEŠ BÎ-úh ina SAG [ - - - - - - - - - - ]

A proper normalization appears to be, 'ṣ. KIMIN-ma qaṭâšu ina qaqqadīšu šaknāma lā urradani libbēšu našî nuppûh ina reš [ - - - ]'. From TDP I, 90:25 (XI:25) no aid can be forthcoming for although

118. Ungnad; VAS p. 6, p. XII.
119. Gautier, Archives d'une famille de Dilbat an temps de la première dynastie babylonienne, Cairo, 1908.
the two are identical XI has a dextral break which destroys the
signs after 'lib-bê-MEš-šú'. A slight portion of the 'lib' sign
can be made out, and this has prompted the reconstruction,
'I [ibbi-šú maḫiš (?) imāt] by Labat. The phrase 'lā urradani'
is of interest, the II/1 present of 'warādu' is used here with
the suffix of the subjunctive. No list of the various technical
phrases and semantic relationships involving the substantive
libbu has ever been published. In the medical texts the form
'libbu' means simply "entrails" or in our more familiar association
"heart". It often stands for, or is written with the Sumerian
'SÂ' as in the Dossin text of 'ur-e-a equals nâqu', which reads,
'sa-a equals SÂ equals li-ib-bu-um'.120 Such an equation also
appears in the "Practical Vocabulary of Assur" edited by Landsberg-
er and Gurney, 'UZU.SÂ equals libbu'.121 The word succeeding
'libbu' in line 15 is the infrequently used 'IL' sign, usually
normalized in Akkadian as 'našû'. This means that his internal
organs are "troubled", "raised up", actually "nauseous". The use
of the phrase is seen in other medical texts, such as K 61 plus
161 plus 2476, which states in column III, 'libbišu našû akala u
šikara utarra amīlu šuatu zumra kalašu muršu ---- imāt', "his

120. Dossin, RA 21:178, corrected in RA 30:90 (MSL 2, p. 149,
line 23).
entrails are stirred up, food and drink return, this same man's body is drying up --- he shall die. The verb 'napahu' which follows in line 15, is written with the logogram 'Bl' plus the phonetic complement 'Uh', the equation of 'napahu' with Sumerian 'Bl' is given by a number of citations, and means "to light", "to kindle", "to ignite". The phrase next read is, 'res libbisu' which is a technical term for the "upper abdomen" or "epigastium" and is found in many medical contexts. Of particular interest is the passage in K 61 plus 161 plus 2476 which states, 'š. amīlu SAG.ŠA-šu ikkalšu', 'šumma amīlu rēš libbīšu ikkalšu', "If a man's epigastrium hurt him". This full reading may aid in supplying the missing word in an old Babylonian medical context, apparently

122. Kuchler, BKBM Taf. XVIII, line 5, and note "Z 5" p. 141. "Die hier vorliegende Wendung 'libbīšu našu' findet sich auch in Sp. IV, 44 in ganz ähnlichen Zusammenhang; sie bedeutet 'seine inneren Teile werden gehoben'; das soll wohl heissen, das der Kranke das Gefühl hat, als ob seine inneren Teile gehoben würden, d.h. dass er Brechreiz empfindet; das kommt gerade bei Gallenleiden sehr häufig vor." n.b. a similar usage will be found in CT 36, 23, line 15.

123. II R, 39 line 28 gi and CT 19, 40 line 6.


125. Kuchler, BK BM Taf. XIV, line 1.
diagnostic which reads, 'š. maršu [---] ši-šu i-ta-ra-ka-la-a-šu,' the space broken off is just large enough for the 'SAG' sign and so can probably be supplied at that point, "If a patient's epigastrium pains him continually -- " 126 The proper translation of A 3440 line 15 is, "If - ditto, then, his hands grasp his head, he has no sensation (fear) of falling and his entrails are stirred up, burning, he is stricken in his epigastrium, he will die". The sensation of burning may have reference to the acidic feeling of the patient due to vomiturition, although there is no evidence of such in the text itself.

16. š. KIMIN-ma ŠU-II-šú ana KA-šú ú-hab-bat DIB-su it-[ta]-nan- suk lu-um'-a-tú ŠU [---] The normalization reads, 'š. KIMIN-ma qaṭāšu ana pīšu uHabbat šubassu ittanasesu lu'atu qaṭāšu [--- Imat]' . There is a divergence between the version of this symptomatic statement as recorded here and the version in TDP I, 92:28 (XI:28) which reads 'ina pīšu' as published by Labat. However a careful inspection of the tablets as published in TDP II show them both to have the 'DIŠ' sign representing 'ana' and both to have the sign 'KA'. Therefore Labat's note in the text-commentary section of KIMIN I which states

126. de Liagre Bohl, Tabulae Cuneiforme, II (TLB II), No. 21, line 23-24.
"A vec la variante: 'ana pî-šú' " is somewhat irrelevant.

Labat had followed line 15 of KIMIN I by reading the signs in question as 'ina SAG-šú', 'qaqqadi-šú' but this comparison of the signs between the two lines is patently impossible. The verb 'habat' is difficult in this context; the only other citation of such a verb in a medical context is that from Revue Biblique 59:242, line 10 lit., 'bēlīšēu dūli ẖbutu imannu inhi inahū ipašār UAGEūm', "to his lord the young man recounts the hardships he has suffered, he reports the tasks at which he has strained." However the verb 'abātu' appears in a II/2 form in a medical context in LKA 160, line 8, but the tablet is fragmentary. The tablet states, 'I[UZ]U,MES-šū Ú-tabbaba-tū,' "his body is continually breaking apart." The verb as it is used in A 3440, line 16, is probably a II/1 with a semantic range that is confused by the hyperdizing of 'abātu' with the many homophones, both Akkadian and West Semitic of 'habātu'. The next word in the phrase is 'DIB-su' a logographic writing of 'ṣubassu' meaning the long garment worn externally, similar to the Biblical '. The I/3 of the verb 'nasāku' next occurs followed by the substantive 'lu-u'-a-tū' a word found in other pathological contexts. It is found in TDP I 180:24 (XXIII:24); the text is

127. after CAD, vol. 6; "H" p. 12d. under a form labelled, 'habātu E.'
almost inscrutable except for the last phrase, 'lu-a'-ti isbassu', "he is seized by 'filth' ." Another occurrence is found in Ludlul Bēl Nēmeqi Tablet II, line 78, 'lu+tu imtaqt eli birkīya', " 'filth' (skin disease) fell upon my knees/penis." The statement of line 16 as best as can be read in translation, "If - ditto, then, his hand on his mouth (beats?) his clothes he continually throws down, (it is) skin disease, the 'hand of X', [he will die]." This line is extremely difficult and may be left in question until more evidence becomes available.

17. ṣ. KIMIN-ma ŠU-II-šú LÚ-ūŠ-šú ū-lap-pa-tú ina GIG-šu GĪD[-ma imāt]. Normalized as, ṣ. KIMIN-ma qātāšu pagaršu ulappatu ina murgīšu urram[ma imāt].' The substantive 'pagru' is synonymous to the more common words for body, 'zumru' and 'qūku'. It occurs in the Neo-Assyrian royal inscriptions as the common word for "corpse", along with 'šalamtu'. The noun appears in the disease-description series of Ludlul Bēl Nēmeqi Tablet II, line 75, 'kal pagrīya itahaz rimutu', "all my body is assaulted by malasie". The word 'pagru' is discussed by Lambert as it occurs in the so-called "Counsels of Wisdom", line 68, 'pagarka

128. Lambert, B.W.L., p. 42, line 78, Lambert's translation is unacceptable.
129. ibid. line 75. The word 'ri-mu-tú' is very little known, some propose the meaning "rot".
130. An interesting account with commentary of this text is
lā teṣṣir", "you shall not move your body". For the rendering of 'pagru' as "yourself", Lambert says, 'pagru' may have the meaning of "self" here. Cf. Maqlû VII. 23 (equals CT 23:10, 26); A. Finet, L'Accadien des Lettres de Mari, paragraph 18c; Anatolian Studies V.110, and Akkado-Hurrian Biligual 2(p. 116). The Maqlû passage in this case is of some interest, 'arahika ramani MIN pagri kima dGira --', "I myself will inseminate, Ditto, my life like the Fire-god." In neither of these passages is 'pagru' used strictly for the idea of the reflexive pronoun "self". This supposed secondary development is based on the possibility

130. (cont.) found in S. Du Toit, Bybelse en Babilonies-Assirise Spruuke, pp. 130-163.

131. "D'antres substantifs penvent également faire office de pronouns réfléchis. Tels sont: 'pagrum' ≡ le corps ≡, 'qaqqadum' ≡ la tête ≡, 'napištum' on 'napeštum' (voir pgf. 5c) ≡ la vie ≡: 'ša na-sa-ar pa-ag-ri-ka e-pu-uš' ≡ occupe-toi de ta propre protection ≡ IV, 34, 18-19;
that 'pagru' suffers a similar semantic development as Hebrew יָדַע, which is often used with a reflexive or even emphatic connotation of "self" as for example I Kings 19:4, 'וַיַּעַדוּ יָדָיוֹ', "And he requested for himself that he might die". From the texts it appears however that this possibility does not exist for 'pagru', and it must in all cases be interpreted as "body" or "life". The following word 'ulappatu' a II/1 of 'lapatu' is used often in medical literature and means, "to affect", "to befall". It occurs in TDP I 76:53 (IX:53) and 78:79 (IX:79), 'ina reš mūši TAG-it', "at evening it was touched". This refers in the text to a convulsive or spastic facial tic, 'pānū.MEŠ iššanundū', the verb 'lapatu' may also refer to the annoying sting of such a facial tic, though not as severe as trigeminal neuralgia, (tic douloureux). Prof. Held has written about this verb in connection with its occurrence in Col. II, line 20 of an Old Babylonian love poem which says, 'it-[ta]-tu-ja ū-la-ap<-pa>-ta-ni-[-in-ni]', "I sense my beauty spots". In commenting on this line the author states, "For 'lapātum' in the sense required in our line, rate the following occurrences

132. similarly in: Lev. 11:43; 11:44; Deut. 4:15; Josh. 23:11; Esth. 4:13; 9:31; Job 19:4; 32:2; Psal. 131:2; Isa. 5:14; 46:2; 47:14; Jer. 3:11; 17:21; 37:9; 51:14; Amos 2:14; 2:15; 6:6; Jon. 4:8.

in medical texts: AMT, 90, r. iii:27 šer‘ān sūn immittišu
TAG.TAG-su (equals iltanappassu) "If the artery of his right
upper leg repeatedly bother him"; ibid., 105:10 uzum šumēlišum
TAG-su (equals ilappassu) "his left ear bother him"; Labat,
TDP, p. 110:7 nakkapti šumēlišu TAG-su. We infer from these
passages a sensation weaker than pain (ikkalšu), stinging
(vzaqqassu), etc. In TDP I 76:53 and 78:79 the stative
'lapit' is translated by Labat as, "touché". This does not seem
to fit the semantic range of meanings, and von Soden's reading of
it as 'infiziern' is to be preferred. The two ideas of "a
sensation weaker than pain" and "touché" in the sense of infection
or injection would account for the apparent difference of mean­ing.
The temporal idiom 'ēš mōši' is similar to other such
expressions with 'ēš' the noun in construct followed by a
genetival form to express the initiation or beginning of a
particular sequence, as 'ēš šatti', (which is not the grammatical
equivalent of Sumerian 'ZAG-MU-AK') but which means "New Year".
For line 17 of A 3440 the translation would be, "If-ditto, then,
he continually touches his body (with) his hands, he will linger
in (his) affliction, he will die."

134. ibid., p. 18, note II:20.
135. von Soden, AHW p. 534 under 'lapēatum'.
136. 'ZAG' equals "border" or "threshold", c.f. Landsberger,
JNES 8, 255 note 39.
18. 'š. KIMIN-ma ŠU-III-šú am-šà-ma LAL 13 DA-e u KU-šú laš DIB ŠU UTU ---[imāt].'

This sentence should be normalized as, 'š. KIMIN-ma qātāšu amšama tarāša laš ile'e u ūšmu laš šabit qāt Šamaš [imāt].'

The phrase, 'tarāša laš ile'e u ūšmu laš šabit' is found in a number of other medical contexts such as TDP I 106:33; 34 (XII:33; 34). Line 34 states, 'š. esensišrašu qaninma tarāša laš ile'e ūšmu laš šabit urrašma imāt,' "If his spinal column is twisted and he cannot straighten up, he loses his ability to act, it will linger on and he will die." A similar citation is found in TDP I 104:21 (XII:21); Syria 33 (1956), p. 122, line 24, '[š. GIG.MIN] u ūšmu laš šabit [- - .'] Although Labat refers the citation of line 18 A 3440 in TDP I, p. 232, back to 90:20 (XI:20) the text in that tablet is badly damaged so that only the words, 'š. qātāšu am-šà-ma ta-ra-ša laš ile'e u ūšmu [ - - ' are still legible, there is no doubt that the 'KIMIN' selection was borrowed from, or based upon the tablet XI citation of the 'SA GIG' series. An interesting factor is that 'tarāša' is written out syllabically in this line, while in most other instances it is simply written logographically as 'LAL' as in A 3440 above, this word also appears written by syllables in line 16 of the third column of Surpu, 'mamit and dIZI.GAR SU-II ta-ra-šu',
"the 'oath': to stretch out one's hands towards a lamp."  

Line 18 of A 3440 may then be translated, "If — ditto, then, his hands are chilled, he is unable to stretch them out and he loses his ability to act, (it is) the hand of Šamaš, he will die." The notion of disease as an action of a god or demon was discussed above. The use of the 'MIN' sign as 'UTū' is common in the omens and horoscopes.

19. 'š. KIMIN-ma ŠU-II-šú u GIR-III-šú am-šá-ma LAL 1ā DA-e u KU-šú 1ā DIB ana ši-rit GIG — — [imat].

This sentence should be normalized, 'š. KIMIN-ma qātāšu u šēpāšu amšama tarēša 1ā ile'e u ṭēmšu 1ā šabit ana ši-rit murši [imat].'

This line differs from the preceding in the addition of the feet as subject and the word 'šīrit'. This term is unknown and any meaning assigned must be conjectural.  


138. Labat notes: "XIII Col. I 12 parte: 'ana KI GIG imāt' qui, à première vue, paraît signifier 'il mourra à l'endroit où il est tombé malade.' Si les deux expressions sont semblables, cette interprétation ne convient pas à notre texte, et il faut voir dans KI une idéographie de 'šīrit'; le sens même de 'šīrit' est incertain; il semble toutefois préférable de la dériver de 'šāru' (šyr) "se pencher" que de šaru "commencer" ou šēru "atteindre son point culminant". Dans ce cas, KI pourraitsignifier šapālu: 'ane šupal murši?' TDP I, p. 235, note 403.
with line 12 of Column I, A 3506 (TDP I 110:12'(XIII:12') which states, 'š. rēš libbēšu šabissu u lisāssu he-em-ret ana ašar maršu imat.' Labat translates this passage as, "[Si] son [épi] gastre est pris et si sa langue est d'un rouge ardent? à l'endroit où il est tombé malade, il mourra." However other occurrences of 'hemēru' are known and a more precise meaning can in fact be established. It is found in several lexical lists where the equation, 'ha-aš KUD equals hu-um-mu-rum', is given. However this is not the base form of the verb, in a Neo-Babylonian commentary on the 'SA GIG' series; the reading, "tu-ha-am-mar" may be found this supports von Soden's reading of the root as, 'hamāru', while interestingly enough CAD lists the root 'hamāru' as a derived or deviant form of 'gamāru'. The connection Labat has mentioned in footnote 138 is critical as both 'hamāru' and 'šīrit' occur together in line 33 of A 3440, 'hamāru' means, "to be contracted", "to contract". At present the problem of 'šīrit' must remain unsolved and the translation of line 19 must remain problematic. Such a translation would read, "If - ditto, then, his hands and feet

139. ID A equals na-a-qu (CT XII) III:5, 113 and V R. 45 (K. 253, ii:8).
140. GCCI 2, 406 line 1. c.f. Kraus, TBP 33:r. 48 and 38 ar. 14'.
142. CAD "G", vol. 5, p. 30.
are chilled, he is unable to stretch them out and he loses his ability to act, (he is stricken with decay?) he will die."

20. 'š. KIMIN-ma ŠU-II-šú u GIR-II-šú a[m -] šá-m[a - - -] - e iqabbi AN URU-šú SIG-su - - - - [imāt].

A large chip from the face of the tablet has carried away an area of about 5% of the extant face. The upper edge of this resulting lacuna includes about four signs to the left of the line of center of the tablet. The gap has effaced sections of lines 20 to 26 and some of the least indented portions of signs in lines 19 and 27. This line follows the pattern of 18 and 19 except for the inclusion of the word 'qabû' and the mention of the town deity. The profanation of a deity was considered a high crime and the deity of one's city was especially to be reverenced and in return would aid the citizen-worshipper in distress. This protection afforded by the town deity is seen in action in Codex Hammurabi, 'šumma ina bīt AN.URU-šu ša pašarīšu lā ibašši,' "If there is nothing with which to redeem him in the temple of the god of his city." The signs which Labat reads a 'iqabbi' are nearly illegible in the drawing in TDP II, but this reading seems as satisfactory as any in the context. The translation would be,

143. CH:32 line 25 and 30, and Ebeling, Handerhebung, 32, line 24.
"If - ditto, then, his hands and feet are chilled - - - he said - - - his city god - - - stricken, he will die."

21. 'š. KIMIN-ma ŠU-šú u GIR-šú [ - - - ] KA-šú ú-rap-pad ina AN.IZI SIG-is ŠU DINGI(γ) UT[Ø - - - im]'t].

The normalized version of this line should read, 'š. KIMIN-ma aššášú u šúrapšú [ - - - ] KA-šú urappad ina qaršúri maḫš šú dšam[aš - - - imat]'t]. The signs which occur before the break are identical to lines 19 and 20, and should be translated, "If - ditto, then, his hands and his feet - - -." On the edge of the break the upper portion of a sign is still visible. This appears to be a long vertical stroke in close proximity to the next sign. The sign after the break is 'KA' plus the pronominal suffix 'šú' written together in the fashion in which they normally appear in the '5A.GIG' series when they stand for 'pīšú'. The difficulty involved in this case is the verb 'rapādu' which follows. Because of the divergence of this phrase from the usual semantic relationship, Labat reads 'KA' not as 'pô' but by its syllabic value 'ka' he translates the form as, "si dams (?)". Actually the previous sign is probably part of this word and the word and its translation are unrecoverable. After the preposition 'ina' follows the

144. c.f. TDP I 64:40'-52'(VII:40'-52'), K.2952 plus 3678, CT 37:40'-52'.

Sumerian logogram 'AN.JI' this combination can be read as 'mušlalu', "midday", a maqtal form from the verb, 'šalālu', "to lie asleep", "to fall asleep", the meaning "midday" apparently derives from a "siesta" or noonday rest. The other reading of the logogram is, 'qarūru', meaning "sunstroke". In the medical texts this is a difficult concept as it could simply be the action of the divine sun, Šamaš or the objective malady which is meant. Insolation or so called "thermic fever" is common enough in the Mesopotamian plains but it is not clear if this is what is meant in text A 3440. Labat transliterates the text, 'ina qarūrī mahiš(is) qat (il) s[in (?) imât],' and translates, "il a été "frappé" au plus chaud de la journée; "main" de S[in (?) il mourra]." The tablet clearly has the 'DINGIR' sign and the first horizontal open wedge of the 'NIŠ' sign and the upper and anterior portion of the second horizontal wedge, this is read as in line 18 with the difference that in this case the 'DINGIR' has been inserted between the 'ŠU' and 'UTU' signs. In so far as it can be read the text should be translated, "If - ditto, then. his hands and his feet [— — — ] his X caused to walk? he is stricken with insolation by the hand of Šamaš, he will die."

22. 'š. KIMIN-ma ŠU-IL-šū u[GAIR-IL]-šū [ - - - ]u ûŠ BURU₈ ŠU DINGI(R) UGUR [imāt].'

This line may be normalized as, 'š. KIMIN-ma qātāšu u [sēpā] šū [ - - - ]u dama i'arru qāt dNergal [imāt].' This line again follows lines 19 to 21 initially, the middle of the line, approximately 33 percent is missing. The equation 'ûŠ equals dama'¹⁴⁶ is noted in a number of lexical texts. The equivalence of 'BURU₈' is more difficult to ascertain. The verb 'arāru' is a difficult one, it has writings of various forms, 'i-ár-ru-ru',¹⁴⁷ 'i-har-ru-ur',¹⁴⁸ and 'ir-ru-ru'.¹⁴⁹ Often what appear to be three separate roots, 'harāru', 'arū' and 'arāru' get badly confused in the transliteration and translation of texts.

A prime example of such confusion is found in the quotation of a

¹⁴⁶. Proto-Ea, (corrections and additions to MSL 2 in MSL 3 p. 218) 3N-T714, line 5/9, ûŠ BAD mi-i-tu
           ûŠ BAD da-mu
           ûŠ BAD sé-ke-e-rum
           ûŠ BAD uš-šum
           ûŠ BAD hi-iš-rum.

¹⁴⁷. AMT 43, 5 line 8.

¹⁴⁸. KAR 442 r. 3.

¹⁴⁹. AMT 90, 1; III line 13.
medical formulary given in CAD vol. 16, 'Ṣ' page 38, 'ina šamni halṣa lišānu DIB-bat išatti i'arru' which is subsequently translated, "you put halṣu-oil on his tongue, he drinks it and vomits." In this text the actual written form appears as, 'i-är-ru'. In CAD vol. 8 'H' page 92, a citation appears under the article titled, 'harāru D (arāru)' the verb cited is written, 'i-är-ru-ru', and the translation "rumble" is suggested. A problem arises in cases where omen texts deal with the flights and outcries of birds, one such text actually repeats the verb in question three times in a single paragraph, and in three different forms, 'i-är-ru-ru', 'ih-ru-ru', 'išrur', all these verbs by usage and context must have the meaning "croak" in various senses. In the 'SA.GIG' series the verb appears in both forms with and without the 'H' as in TDP I 128:25'(XIII:25'), 'š. irrūšu it-ta-na-'a-ra-ru', "If his bowels continually rumble/croak." However in TDP I 84:29 (X:29), 'š. ur'ussu i-har-ru-ur imāt', "If his throat rumbles/rasps he will die." Labat notes after this line that, "Il semble que, à côté de 'hārāru' 'creuser', il faille admettre, en akkadien, une autre racine 'hārāru' "ronfler" (c.f. arabe harra, syr. har "raucadine laboravit", 'hurha0 ra0' "ronchus" (horninis))." However

150. Küchler, BKBM pl. 12, IV line 14, and AMT 45:6 line 14.
151. AMT 22:2 line 4.
152. CT 39:25 lines 5, 9 and 3.
153. TDP I 80: note 152.
von Soden rightly divides 'arāru' into two roots 'arāru I' meaning "to curse" as in Gilgameš VII col. III, line 5, 'šamhat -- -- ša a-ra-ra ubla', "tucurse the whore, his heart encouraged him", and Enûma Eliš VI:97, 'a-ra-ra', in the context, "(they declared among themselves a) curse." The other homophone von Soden designates 'arāru II' and includes in this the forms with 'h' or 'w' meaning "to tremble", "to rumble", "to croak", as in Gilgameš XII col. I, line 21, 'edimmu i-ar-ru-ru-ka', "the spirits would tremble/rumble on your account", and as cited above in TDP and AMT. The nearest possible translation of line 22 would be based on neither of these but on confusion of them with another verb 'arū' as shown by the lexical lists, only this verb is equated with the Sumerian 'BURU₈', this verb, the present of which 'i 'arru' appears frequently in medical texts means "to vomit." It is this verb which occurs in line 22 and so it must be translated, "If - ditto, then, his hands and his feet [ -- -- ] and he vomits blood, (it is the) hand of Nergal, he will die."

155. B. Zimolong, Das sumerisch-assyrische Vokabular Ass. 523 from the Ea series, Breslay-Leipzig 1922; 21 line 18 and CT 18, 36 II line 19; 'bu-ru equals BURU₈ equals a-ru-ū'.
156. Additional citations may be found in: TDP I 118:22 ff., as noted above; RA 40:27; CT 23:42; KAR 195:1.
23. 'š. KIMIN-ma ŠU-II-šu u[gIR-II-šu - - ] u-har-ra-aš ŠU DINGI(R) be-en-nu šáni DINGI(R) BA GAM.'

This is the first full line on the face of the tablet, in it the final 'GAM' sign may be seen, however a substantial portion, as much as 40 percent of the line is missing. This line repeats the initial phrase of the preceding lines from 19. After the lacuna the II/1 form of the verb 'harásu' appears, this is a rare word and occurs in only a few lexical texts. Labat notes, "Ou de _harásu_ "entailler"." The sign which Labat reads as 'aš' may as commonly be read 'az' or 'as'. The meaning of the verb 'harásu' as given in contexts is, "to cut down", "to cut off" and "incise deeply", but nowhere is it used of human flesh, only of plants in the preparation of drugs and dosage forms, and of the dissection and investigation of animals in extispicy, even in the famous set of laws governing physicians and their praxes the term does not appear. The verb 'harásu' does however fit the context as it means to "itch" or "scratch", and is equated in the lexical texts with Sumerian, 'SA.KU'.

158. AMT 70:3 and 5; KAR 157:35.
159. KAR 422:23; CT 41, 42:28 and YOS 10:33; II line 21.
160. CT 19:49 a IV line 4; CT 18 (AN-TA-GAL equals šaqû) d, line 4.
AHW both suggest a connection between 'harāsu' and 'harāšu'.

It is therefore probable that our text in A 3440 means "to itch", "to scratch". The signs read 'be-en-nu' are difficult to assign, Labat says, "Bennu est le nom d'une maladie (l'épilepsie?)

c.f. K. Sudhoff, AGM, IV/5, 353-369; E. Ebeling, RLA (s.c.);
Br. Meissner, Bu A II, 288; C. Thompson, JRAS 1924, 452; Bab. XIV, 147, n. I." This last reference cited by Labat is worthwhile quoting in full from R. Campbell Thompson's work. The note of Thompson is in reference to the following medical instruction,

'[Śumma NA] ana sinništī pi-ti-ti illak šum-ma ana šibuti-ši - - u-zu-uz-za-ta - - - ma be-en-nu išabat (?) - - - .

Thompson translated as follows, "[If a man] goes to a woman who is not a virgin, if it be of her own free will - - - standing - - - epilepsy (?) - - - ." Thompson says in his footnote on 'be-en-nu', "Bennu, see Ebeling, Realllexicon, S.V.: Meissner, Bab.-Ass., II, 288. Bennu equals šibutum equals ŠU.DINGIR.RA.(KU) (ḳat ḳili) (II R. 35, 41 ff. and von Soden, Lex. Taf., 2, 320, 321; a disease described in JRAS, 1924, 452 as "he blasphemes the gods, speaks wantonly, strikes everything he sees, and the remedies prescribed in CT. XIV, 23, K. 9283, 17 to 18 are

161. CAD vol. 8 "H" p. 94 and AHW vol. I, p. 323.


163. Extrait de Babyloniaca, Rome XIV, p. 147 note 1; and translation previous.
[UK]I(?) DINGIR UD - plant, to be anointed in oil (probably henbane), and [U]R.PI.PI, some strange smelling plant, to be put on the neck in wool. In addition to the value already known for this plant (U-zun lalâ), Matouš, Lex. Taf. No. 86, 7-8, 4, 5 gives aribanu, and ib. 88, 5.25, gim-ri-. c.f. also AMT. 96:3, 1, "when the hand of a ghost seizes a man; bennu -- -- "). Apart from this detailed note on the word evidence can now be obtained from many citations of the word as used in texts. The most famous example of the word is found in CH Law 278, 'šumma awīlum wardam išamma warâssu lā imlāma bi-en-ni elīšu imtaqūt ana nadinanišu utărma ša'amanūm kašap išqulu iliq'', "If a free-man purchased a male (or) female slave and before his month (of warranty) was full, epilepsy befell him, he shall return (that slave) to his seller and the buyer shall obtain the money which he expended". A most important lexical citation from the Assur tablet VAT 14274 states, 'AN-TA-ŠUB-BA equals be-en-[nu]' 164. A full discussion of 'Antašuba' as a name of a disease entity was given under line three of A 3440. It appears as a name in omen texts, possibly as a personification of the malady itself, and is difficult to precisely define. 165 It is of prime importance

164. 'IGI-DUH-A equals tâmartu, short version, Landsberger and Gurney; Af0 18, (1957-58), p. 83, line 69.
165. YOS 10, 41 line 53 ff. and Virolleaud, L'Astrologie Chaldéenne, Paris, 1908, "Sin".
that the deity usually associated with 'be-en-nu' is Sin.

Undoubtedly many types of "seizures", "strokes" and "spells" were categorized into the terms which we must simply translate "epilepsy". The word 'be-en-nu/i' is particularly interesting in that it so often appears with the 'ni' sign for the last syllable a nominative case ending. This usage tends to indicate that it is indeclinable and in fact a proper name of a deity. It does appear with the 'DINGI(R)' sign in the Old Babylonian omen published in YOS 10, 41 line 53 and in the later texts CT 24, 13 lines 47 and 51; VAB 2, 357 line 70 and the Amarna fragment of "Nergal and Ereškigal" published by Knudtzon EA, p. 972, where the name is written, 'dBi-e-e[n].' The problem of the 'DINGI(R)' sign preceding 'be-en-nu' must be explained by the personification principle. Line 23 must be understood as, "If - ditto, then, his hands and his feet [---] cause to scratch, (it is) the hand of Epilepsie, again the hand of Sin, he will die." The use of the 'BA' for the god Sin is common enough in all types of texts including medical prognostics. In the astronomical literature the moon as a planet and locus in the sidereal universe is represented by a number of titles, 'dSin, dA-KU, dEN.ZU, dGURUN and dNanna' so that it is evident that a number of deities were associated at various times with the lunar cult as well as the astronomical observatories. The standard phrase in the tables of ephemerides is, 'dSin u dSamaš' as seen in the Babylonian
procedural text BM 32651 (equals S 76-11-17, 2418) where the reading shows the three horizontal open wedges plus the 'u' sign, the copula, followed by the two horizontal wedges, 'EŠ u MÌN', to be read in this case, '[(d)BA u(d)UTU]', "the moon and the sun". Interestingly enough the 'DINGIR' in such cases is normally omitted except where the 'UD' sign, alternately read 'UTU' is utilized for the sun. There is some apparent similarity between the usage of the 'KIMIN' texts and the scribal tradition in orthography of the cuneiform astronomical literature. In line 23 for the first time the 'GAM' sign is clearly visible next to the still extant dextral edge of the tablet, it is on the basis of this reading in all lines from 23 through 54 that the normalized form 'imāt' is supplied at the end of every broken line without exception.

24. 'Š. KIMIN-ma ŠU-II-ŠŪ u[GIR-II-ŠŪ -- -- NA]G u KU-ŠU lā
DIB GAM -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
KIMIN-ma ŠU-II-ŠŪ u GIR-II-ŠŪ ù-lap-pa-tū ina GIG-ŠŪ GÍD-ma GAM.'

This is one of the most crowded lines in the text, there are two

166. Neugebauer, ACT vol. III, pl. 224, line 18. In cases where names of deities are written with simple numerical signs, many transliterations do not indicate actual signs used thus making reference to the tablet or printed copies of it the sina qua non of any commentary upon them.
prognostic statements crammed into one small space. Labat transliterates the second phrase as though there were a 'DIS' sign just prior to the 'KIMIN' thus reading 'šumma', the fact is that there is no such sign on the tablet, however in justification of Labat's judgment, it was undoubtedly to be supplied mentally by the reader. The latter portion of the first statement is identical to line 18 above which is in turn supplied as the reconstruction in line 20 of TDP I 90 (XI:20). The only unique feature is the supplied I/1 present of the verb 'šatū' which is difficult to translate in this context due to the lacuna preceding the 'NAG' sign, it is not even possible to determine if the sign was reduplicated and therefore the form of 'šatū' is pure hypothesis. The normalization of the line appears as, 'š. KIMIN-ma qātāšú u sēpā[šú -- -- iš]attī u ñemšú la šabît imāt', "If -- ditto, then, his hands and his feet -- -- anew and he loses his ability to act, he will die -- --". The second phrase is similar to line 17 above and the normalization should be understood as, ' - KIMIN-ma qātāšú u sēpāšú ulappatú ina murgīšú urrakma imāt'. The translation would then be, " - ditto, then, his hands and his feet he continually touches, he will linger in his affliction, he will die". The question then arises, why these two should be joined in the same line. The answer in consideration of the lacuna of the first phrase must be suppositional, however it seems that the second is a later development of the first.
The first deals with the resumption of a symptom, the second with the extent of the symptom, the first end in death because the second inevitably does.

25. 'š. KIMIN-ma U-MEŠ-šú ú[ - - - ]-te-ni-id-di ZI(G).ZIG -bi ŠUB AN-e TAG-su ŠU DINGI(R)-šú GAM.'

The signs to the left of the surface chip are rather large for this tablet, while those to the right decrease as if the scribe ran out of sufficient space. The normalization is difficult but appears to be, 'š. KIMIN-ma ubanatīšū ú-[ - - ]-teniddi ittenebbī miqit šamē lapissu qāt ilīšū imāt'. The logogram 'U' for 'ubānu' appears in two successive lines of the fragment K 14197, 'U ZAG', 'ubān imitti' and 'U KAB', 'ubān šumēli'. The word also is found in a medical context of K 191 plus 201 plus 2474 plus 3230 plus 3363, 'ina ubān šēpīka rabīti ša šumēli', "close-by (this) action, with your left large finger (you are to mix X seven times this potion, etc.)". The next sign after the subject plus suffix is the 'ú' apparently a preformative of a verb in the II stem, Labat supplies, 'za-qatā-ta-šú', which he translates, "le piquent (?)". This verb occurs in the 'SA.GIG' series in TDP I 4:31 (I:31), 'š. idī

167. Kraus, TBP Tf. 38, Nr. 33*; 1', 2'.
168. Kuchler, BKBM Tf. IV, line 59.
imittāsū iz-qut-su mar[šu- -], "If he has a stinging pain in his right side, it is (the) malady - -". The verb however does not appear at any point in the one extended 'SA.GIG' passage where the noun, 'ubānu' is the subject, TDP I 96-98:32-59 (XI:32-59), there is no evidence that any sign of this verb other than 'ú' is actually legible on the tablet in question. The faint remains of a sign are to be seen at the extreme right of the chip, but the reading of the sign, which consists of only the parallel horizontal indentations of the posterior of two wedges, is highly problematic. Labat supposes this sign to be 'ir' but on the evidence of the tablet it could as easily be 'ú' and thereby represent some II/3 form of a verb such as 'idû' something remotely like the III/3 form 'uš-te-ni-e-du-u' which does exist. 169

The form and reading suggested by Labat is difficult if not impossible. He derives a I/3 of 'tebû' from the reduplicated Sumerian root, 'ZIG' according to the accepted procedure. 170

Labat offers a partial translation of this broken passage, " - s'il] ne cesse de marcher vivement - - de se lever - - - -:"; apparently deriving 'ir-te-ni-iddi' from 'redû'. There is however another possibility, that is assuming the partial sign to be indeed 'ir'. It is necessary to dismiss the notion that this

169. VAB 4, 122: line 36.

170. c.f. line 3, note 18 above, (Poebel, GSG pgf. 443).
is one verbal form and read the signs as, 'ir-te-ni it-ti₄'. 'Irteni' is an inflected form of 'irtu/iratu' meaning chest, possibly a similar form to the little understood hapax legomenon, 'ir-ta-nu-ú' explained by von Soden as, 'irtu plus An plus i'. The sign 'ŠUB' as a verbal element appears in the phrase-term, 'AN-TA-ŠUB-BA' as discussed under line three above, and stated in the lexical texts to be equal to 'maqātu', both mean "fall/be fallen" as with a seizure. The sign 'AN' even in Sumerian is ambivalent meaning either the "sky/heaven" or the deity itself, when followed by a vaalic phonetic compliment "e", as here it must be read 'šamē'. The 'TAG₄/TAK₁' sign is used as a logogram for a number of words in Akkadian. The most frequent usage is for, 'ezēbu', 'labāšu', 'šarāmu' and 'lapātu'. The preference in this context is for 'lapātu' because of its frequency in the medical texts. The best translation in view of the difficulty is, "If - ditto, then, his fingers - - he continually flexes, (it is) the affliction of heaven, he (is)

171. CT 41, 29 line 21 (AHW vol. I, p. 386).
172. 'KA.TA.ŠUB.BA equals miqit pâ'. 2 R. 35, 47 ff.
173. MSL 3, 41 line 399.
174. CT 11, 31 line 33.
175. TC 6, 37 r. II, line 30. (Publications of the Louvre).
176. MSL 3, 103 line 78 and CT 11, 31, IV line 33.
stricken by the hand of his god, he will die."

26. 'š. KIMIN-ma U-MEŠ ŠU-II-šu in[ ] ūh ŠÀ-šú na-pi-ih u ū-rap-pad ina GÚ-šú BA-iš ŠU DINGI(R) BA.Ú GAM.'

The initial portion reads like the two lines preceding except for the construct chain of 'ubānāt-MEŠ qāṭišu'. Labat reconstructs the lacuna as 'pišu ū-man-zag nuppūh' on the basis of the nearly identical line 36 of TDP I 96:36 and KIMIN I:27, since the evidence is rather convincing this restoration will be supposed as correct. The word 'ŠÀ' is of major importance in Sumerian as well as Akkadian. As Prof. Doezeweerd has shown, there is in all socio-linguistic communities and systems a principle or point of I-ness, subjective, non-theoretical and supra-temporal in its own supposition.177 This entity takes its place in the language as the radix and center of life and temporal-spacial date accommodation. In Sumerian this is the 'ŠÀ', in Akkadian the 'libbu', the equivalence between the two is shown clearly in a large series of lexical citations and their respective use in Sumero-Akkadian bilinguals, for example the equation found in 'Ur-e-a equals nâqu', 'ša-a equals ŠÀ equals li-ib-bu-um',178

178. MSL 2, p. 149 line 23, (Dossin, RA 21, 178 and RA 30, 90).
which Prof. Landsberger wisely translates "herz", also $S^B$
which states, 'šā-a equals lib-bu'. The same equation is
found in the Hittite lexical school texts, 'ŠA equals li-ib-bu',
and in a newer tablet of the series, 'e a-nâqu', '[ša-a] [ŠA]
li-ib-bu'. This word written with almost every conceivable
combination of the cuneiform syllables (lib/lib/lib/li-ib-bu/-
b/i/b/a) is attested in every period and from every location of
the Akkadian cultural sphere. It is not valid to select a hard
and fast translation for such a word as its meanings are a
thesaurus of emotions, reactions and semantic combinations. It
represents in Akkadian what ֶּ which represents in Hebrew and
"heart" in English. It is used with a long list of verbs a few
of which are: 'erru', 'hanāqu', 'maṣû', 'nadānu', 'palāšu' and
many more. A variety of uses of 'libbu' in idioms is seen in
several references in M. Held's commentary on An Old Babylonian
Dialogue (JCS vol. 15, pp. 1-26) where such phrases as, 'mala
libbašu šabtu' (KAR, 72, r. 2; 4R, 55. No. 2:20; AMT 40, 2:2)
and 'Nana libbašu ḫadâ ublamma' (ZA 49, p. 162:44; KAR, 158:
p. 268) and also 'assurri šeum l qa ihelliqma libbaka imarraš'

180. KBo 1, 49 line 14.
181. Landsberger, The Seventh Tablet of the Series e a-nâqu,
JCS 13, 1959, p. 129 line 12' (205).
(TCL, 17, 9:15-17) are discussed in detail. All of these passages are indicative of psychological states, volition, anxiety and imprecation. It has been stated that the physio-psychic understanding of the Akkadian mentality held the liver or the kidney to be the seat of life because of their use of such a term in the language. Such a conjecture is patently ridiculous, the philosophical justification for a language's lexicography grows up long after the language is in vogue and is based to a fascinating degree on folk etymologies. The Akkadian scribe who wrote of Ḫunuššuma 'gummurka libbi ana epēš tuqunti' by no means meant that the patriarch had "given over his liver/heart to fighting". In the same fashion, Shakespeare was not admonishing cardiac asepsis when his character said in despair, "What stronger breastplate than a heart untainted". No serious reader would misunderstand Henry VI in such a matter but more than one serious scholar has ignored the idiomatic usage in Gilgameš. Unfortunately the factor which complicates matters in regard to such semantic usages is the common and simultaneous technical use of one and the same term for the designation of some specific anatomical feature. These terms are used properly on two levels of communication, the colloquial, popular speech usually neither defined nor systematized and the theoretical or technical speech carefully preserving consistency and shunning ambivalence. In this latter
sense 'šA' represents Akkadian 'libbu' in line 26 of A 3440. Throughout the Mesopotamian medical corpus the unmodified, unaccompanied substantive 'libbu' means the massed internal organs in situ; that is, the viscera, the abdomen, as demonstrated by numerous texts. The restored portion must be considered as next in order. It is necessary to examine the text of TDP I 96:36 (XI:36)\(^1\)\(^\text{82}\) the text from which the restoration is advanced. The form 'ú-man-zaq' is not difficult to ascertain from the context, 'ubānāt qātīšū ina pīšū', it can only mean one of three things, "to bite", "to suck", "to gnaw". The difficulty is found in attempting to isolate the root and describe its morphology. Superficially it appears to be a II/1 from some form such as *'mazaau', the 'n' could then be explained as a type of nasalization on the pattern of, 'mitdūdā > middūdā > mindūdā'.\(^1\)\(^\text{83}\) However Labat translates the form as "il suce" and so supposes the signs to have some other value than that which is primary in the text. The actual signs may also be read, 'ú-nis-zak' but this dies not relieve the problem. If the root is 'nazaqu' then the "s" is inexplicable and we must assume the patient as in an attitude of attack on his own digits. On the

\(^{1}\)\(^\text{82}\). BM 65698; TDP II pl. XXVII:36.

\(^{1}\)\(^\text{83}\). a classic example from Gilgameš XI:29.
other hand it is possible that the 'zaq/k/g' sign here reflects the inaccurate orthography of Sumerian in regard to the sibilants "Z", "Ś", "Ṣ" and "S" which interchange frequently in various periods of the language, if so then the root is 'naṣāku', "to bite" and indeed it seems to that is the way in which Labat understood it. 184 The following verb is a simple II/1 stative of 'napāhu', "to be afire", "ignited". The substantive 'kisadīšu' is written logographically as 'GU', it is the regular term for "neck", "upper back (the shoulder blades)". 185 The equation 'GU equals ki-ša-di' is found in numerous lexical lists and is nearly unique as an equation. 186 The normalization is, 'š. KIMIN-

184. irrespective of the absence of such a root from the "Lexique" of MèdÈA.


186. MSL 3, 151 line 365.
'd₃Ba-ú-ta-a'-a-ra-at'/ 'd₃Ba-ba₆-ta-a'-a-ra-at'\(^{187}\) and the particularly interesting name 'd₃Bau-a-sa-at'/ 'd₃Ba-ba₆-a-sa-at', which Stamm translates as "Bäu ist Ärztin"\(^{188}\) demonstrating the positive association of the practice of the 'Azu' with the goddess Ba-ba. In the older texts which included this deity the usual transliteration was to utilize the normal "ú" reading and this has very seriously confused the issue.\(^{189}\) The two primary sources for our knowledge of the goddess Ba-ba are the Sumerian King List and the Cylinder Inscriptions of Gudea. According to the latter, she was the consort of Ningirsu the lord of Lagaš. Gudea tells of cleansing, refurbishing and provisioning the temple of Ningirsu and Ba-ba, called the Eninnu of Lagaš. After the preparations there was a festival procession and the celebration of the reconsumation of the 'hieros gamas', and a seven day feast, the text closes with a hymn in honor of the two deities. Ba-ba is often mentioned in Sumerian myths, laments and love songs and in Old Akkadian times was apparently a patroness of a sisterhood of priestesses at Ur.

\(^{187}\) Vas 13, 56 line 3 and 7; 56a line 5 and 14.

\(^{188}\) CPN 159a (Stamm, Die Akkadische Namengebung, p. 223).

\(^{189}\) Deimel, Pantheon Babylonicum (ŠL, T. IV, Bd. I) p. 2, No. 5:15 ff.
She appears as a 'mother-goddess' and her cultic activities have been attached by a number of authors to the 'ZAG-MU-AK' festival and the sacred nuptials which were a part of it. The second primary source is limited to a few lines of text but they are quite revealing.

\[
[KIŠI ki Kû-\] BA-BA₆
[\text{mu}_10 LÚ-KURUN-NA
[SUḪŠ KIŠI] ki MU-UN-GI-NA
[LUGAL]-ÂM MU 100 Ï-A₅',
\]

which Jacobsen translates, "In Kidu(g)-Baba, a barmaid, the one who consolidated the foundation of Kiš, became 'King' and reigned 100 years." In his pioneering study, *Hellenosemitica*, Astour has commented on this goddess and her connection to the Grecian, 'Kuβαζαος'. "Albright and Nongayral are certainly right in connecting Kubaba with 'Ku-ba-ù' or 'Ku-ba-ba₆', the mythical Sumerian ale-wife who became a queen of the legendary Kiš dynasty and reigned one hundred years. 'Ku-ba-ba₆' is actually the well-known Sumerian goddess 'Ba-ba₆' with the prefix 'ku',

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193. literally: "laid the foundations for the political and economical strength of the city", Poebel, PBS IV 1, 1914, p. 129.
"holy". The legendary dynasties of Kiš and Uruk included other gods and demigods, as Etana, Dumuzi, Lugalbonda, Gilgameš. For the Hittites, Kubaba was a Hurrian goddess. She was early adopted in Cilicia: on the stele of Ordek-Burun (Xth–IXth century) she is mentioned twice, together with the specific deity of the neighboring Šam'āl, the god Rekub-el. On the recently found Aramaic stele from Bahadurli, near Karatepe (Achaemenid time), Kubaba is the lady of several cities in Cilicia and in the taurus." Exception should be taken to the assignment of dynasties of Kiš and Uruk to a "legendary" category, in view of the 'Tummal' text restored by Kramer and the distinct possibility that a doorpost socket may yet appear inscribed with the name 'Gilgameš'. The goddess Kubaba is then equated by Astour with the classical Greek 'Κυβέρνητης', 'Kyβέρνης'. However it is quite possible that the mix up in sign equivalents caused by the ambivalence of 'BA₆/Ů' may have little or nothing to do with the actual names of the deities in the classical and hellenistic eras. From the Homeric Hymns the one dedicated, "ΕΙΣ ΜΑΤΕΡΑ ΘΕΩΝ",

194. Astour, Hellenosemitica, p. 64, footnote 3.
196. Hippon; 120 and Herod; V 102 ff.
197. Cratin; 82 ff.
which gives the impression of being of such a general character that it could be dedicated to almost any maternal deity irrespective of origin or attribution, is nevertheless dedicated to "Кубърох". The problem of equating the name in the Sumerian King List as has been done by Astour is that although 'КУ(Г)' sign does mean "pure", "holy" in a ceremonical sense yet it could not be prefixed to the name in any sense of "Holy Baba" or "Baba

198. "Μητέρα μοι πάντων το θεόν πάντων τ’ανθρώπων ήμελι, Μοῦσα λγεια, Διος θυγάτηρ μεγάλοιο, η κροτάλων τυπάνων τ’’ιακη ούν το βρόμος αυλαν εύβαεν ήδε λύκων κλαγη χαροτιν το λεύνων σοφεα τ’’ιχήνητα και θλήνεσ ένανλοι. Και ου μεν ουτω χατρέ θεαλ θ’’άμα πασαι άοιδη."  

"Of the mother of all gods and all men, would you sing Oh Muse clear-voiced daughter of Zeus the mighty. She is well delighted with the sound of tamborines and timbrels, With the voice of flutes and the cries of wolves and lions bright eyed, With echoing hills and forested dales, And to you greetings in my song and to all goddesses as well!"

Homerian Hymns, Allen and Sikes XIV.
is Holy" as both would be in Sumerian a genetival relationship and would needs cause the 'KU(G)'
 sign to be written after not before the name of the deity, therefore the King List title is to be understood not as a name at all but an epithet, 'KU(G)-
 dBA-BA₆(AK)', "the holy one of Baba", not to be taken as an adjectival or nominal construction but genetivally. Militating still further against such a construction is the difficulty of equation in the origin of the last syllable of the common Greek form of 'Kuβήβην', which is 'Kuβέλη', and the possible confusion of a reading 'Bau' with the demigod 'Baau' mentioned in Eusebius' quotation of Sanchuniathon as preserved by Philo, which may represent a Phoenician form י"ל, which may in turn represent some knowledge of the Biblical Cosmogeny (Gen. 1:2). One other line of evidence must be mentioned and that is the mention of the name in a Babylonian text where the Sumerian logogram or pro-

199. "Ειτά φησι γεγενήσατι ἐκ τοῦ Κολπία ἀνέμου καὶ γυναικός ἀυτοῦ Baau, τούτο δὲ νύκτα ἔρημνεδει, Αἴδηνα καὶ Πρωτόγονον ἄνητους ἄνδρας οὕτω καλουμένους ...", "then he says that from the wind Kopias and his wife Baau, which he translates 'Night' were born Aeon and Protagonous, mortal men, so called ..." (Gifford, Eusebii Praeparatio Evangelica, Libri I, 34b, line 7-10).
nunciation is glossed by Akkadian, "Ba-ba `el-lit", "Baba is shining". In view of the medical association of the name, the relation of 'ellit' with the name and the equation of 'BA_6' with 'KUŠ' and 'ammatu' and words for "day", it is not surprising that a disease entity the etiology of which is connected with this goddess, should be described as 'nuppuh'. However it must be noted that whatever the origin and derivation of the term, the goddess BA-BA_6 of Sumer and later Babylon was a patroness of physicians and the healing arts.

27. 'š. KIMIN-ma U-MES-šú ina KAŠU GAR-na-ma t[a-ta]b-bal-ma ana KA-šú ú-tar ŠE-ma ina É-šú AŠMAL Šú BE GAM.'

This is the first complete line on the tablet although there is a partial destruction of the upper registers of the signs marked above. The line up to 'ŠE-ma' is duplicated in the prognostic statement of TDP I 98:50 (XI:50). The verbal form 'tatabbal-ma' is a I/3 preterite second person masculine singular and is addressed to the physician who would have written or read the tablet. The I/3 of this verb is used in a number of contexts and with a variety of meanings. It appears in the Codex Hammurabi in the Epilogue, which states, "I governed them in security, in my wisdom I provided them with

protection so that the strong should not oppress the weak". 201

It is also used with the frequentative connotation in the phrase, 'ana dabābimma tattabbalamni', "you continually induced me to complain". 202 The verb as it appears in this text however is defectively written. Otherwise it must be viewed as a I/I of the biform 'tabālu'. This verb is also found in the Codex Hammurabi, it appears twice in the famous Second Law regarding sorcery and the river ordeal, 'šumma dārum iktašasu mubbīru bissu i-tab-ba-al -- ša dānarum išli'am bit mubbirišu i-tab-ba-al', "If the river overwhelms him, his accuser shall take and possess his house -- (If the river shows that man is innocent and he has then come up safe, that one who brought the charge of sorcery against him shall be slain), that one who threw himself into the river shall possess his house (the accuser's)". The connotations of 'tabālu' are, "to take", "to snatch away", "to maintain", "sustain". The final decision as to the verb involved must depend on the context, the form 'utar' is the II/I of 'tāru' and means "to return", "to turn back", "to throw back". The exact rendering of the last five signs is difficult. Labat reads them as, 'mītu (?) imāt', and translates them, "quelqu'un mourra". This at the present is quite possibly the best reading available.

201. CH XL:56 ff.

The line should then be normalized, 'š. KIMIN-ma ubänätišu ina pišu šaknāma tatabbalma ana pišu utār imātma arkišu ina bissu mītu imāt', "If ditto, then, he places his fingers in his mouth, when you raise him thereupon he returns (them) to his mouth, then some one in his house is dead, he will die". This is the first of the series to give or suppose direct command to the reader. Up to this point the reader's part has been assumed as passive; this one statement however indicates that the text was written for practitioners.

28. 'š. KIMIN-ma GABA.MEŠ šá ŠU-II-ŠÚ KU10.MEŠ ŠU DINGI(R) URU-ŠÚ GAM.'

The Sumerian logogram 'GABA' equals Akkadian 'irtu' meaning "chest" or "breast", this word is not used for the female mammae for which the term 'tulū' is used as in a description of gods and mythological monsters, 'GABA-sa petāt ina šumēliša šerra našātma tulēša ikkal', "her (Nintu's statue) chest is bare, she holds an infant on her left and it sucks her breast". This medical term is used in several classical Akkadian liter-

203. 5b (MSL 3 p. 150, line 342) "ga-ba equals GABA equals ir-tū".

204. CT 17, 42 line 6 (CAD I/J vol. 7, p. 184) and MIO 1.70, III line 42".

205. Holma, Körperteile, p. 44; p. 144 note 1.
ary passages as, 'reibu bābu uširibsimma umtaši ittabal dudinati ša irtiša', "When the fourth gate he made her enter, he snatched off and took away the medallions which were on her breast", from The Descent of Ištar. 206 It occurs in AMT and the 'SA GIG' series in a great number of citations. This line should be normalized, 'š. KIMIN-ma irāti ša qatisu tarkā (itrük) qāt il ališu imāt', "If - ditto, then his chest, which (he) beats (with) his hands, (it is) the hand of the god of his city, he will die". Labat has left out the transliteration of 'imāt' although the logograph appears clearly on the tablet, it may be a typographic error. His translation is literal but not to the point of the text, "Si, ditto, la poitrine de ses mains est mâchurée: 'main' du dieu de sa ville". The phrase 'qāt il ališu' occurs above in line 25 and may include some connotation of disrespect, blasphemy or disloyalty to one's deity. There are many citations in the Akkadian medical texts of diseases of the lungs. An important and often repeated phrase states, 'šumma amēlu irassu rēš libbišu naglabšu ikkalušu HAR.MEŠ.(hašš)GIG', "If a man's chest, epigastrium and sinews hurt, he is afflicted in his lungs". 207 Although treatment is usually contraindicated in such medical situations by the Akkadian authors, yet a fair amount of the simple

206. CT 15, 45 line 51.

207. AMT 49, 4 line 1 and 50, 3 line 11 ff.
mechanical principle of mammalian respiration was apparently understood. Maladies of the lungs were described in various terms but the most common and inclusive terms was, 'dikiš irti' as in the phrase, '[šumma anēlu ṭēš] libbišu umma irtanašši dikiš irti maris', "If a man's epigastrium is flushed all the time (continually) he suffers from 'stinging of the chest' ". This term was apparently used for a number of conditions such as emphysema and atelectasis as well as pleurisy. The relief of such "clogged" conditions was called "opening", as in the statement, 'šumma anēlu irassu paṭratma usā'al', or the similar phrase from the 'SA GIG' series, 'šumma irassu puṭṭurat - -."

29. 'š. KIMIN-ma kar-ši U.MEŠ ŠU-Ĳ-šu KU₁₀.ΜEŠ U i-da-mi ŠU GIDĪM. MA GAM.'

The noun 'karšu' is used for a variety of organs in human anatomy, however it may also mean simply "inside", "interior". It appears in two statements in KIMIN I, line 29 and 66. When it appears in the phrase, 'karṣi ubānātīšu' it means "beneath his finger-

208. AMT 51, 2 line 2.
209. AMT 51, 1 line 11.
211. Holma, Korperteile, p. 74 ff.
nails". The word 'idemmê' is the I/1 of 'da'amû' but defectively written. The same verb appears in line 60 below. The next to the last sign must be restored as 'MA' after the phrase, 'ŠU GIDIM.MA' which occurs in the Nimrud tablet ND 4358, where it means, "hand of a ghost" and is to be understood as equivalent to 'qât eṭemmi', a full discussion of the phrase was given under line three above. The correct normalization is, 'š. KIMIN-ma karši ubānātīšu qātašu tarakā u idâmi qât eṭemmi imât', "If ditto, then, the underneath (cuticle) of his finger nail is torn and dark, (it is) the hand of a ghost, he will die".

30. 'š. KIMIN-ma šâ-hat-su/šâ-haš-šú šá XV KÚ-su u ú-rap-pad GABA.RI SĪG-is GAM.'

The noun 'šahātu' is understood as the "axilla" or "armpit" as discussed by Holma et al. 212 It appears in the phrase with 'zu'tu', '[š].šimmatum kîma šizbi ina tûlê kîma zu-'-ti ina šahāti', "draw out, poison, as milk from the breast, as sweat from the armpit". 213 The two wedge forms which follow is the sign of repetition or dittography to mark what appears to be a phonetic gloss of the first form. It is possible that this was

212. ibid., p. 8 note 5 and p. 116.
213. BE 31, 56 r. line 12.
done to separate the word from any possible ambivalent homophone of which there are a number. After this doubled form occurs the numerical sign 15 used as in line nine above, where it was considered in detail, for the demonstrative adjective 'imitti'. The Sumerian logogram 'KÚ' is equivalent to Akkadian 'akālu' as shown by its recurrent use as a logogram and in the lexical lists. Although Labat normalizes this as a I/1 present, it is linked by the copula 'ú' to a II form, 'ú-rappad' and such a similar form would be expected. The logogram 'KÚ' occurs in other contexts in the 'SA GIG' series, as in TDP I 88:16-17 (X: 16-17), 'šumma ammātišu kinšīšu u šēpāšu ikkalūšu qāt Šamaš šumma ammātišu qabalū šu šēpāšu ištišū ikkalūšu qāt Ištar', "If his forearms, shins, and feet ache (it is) the hand of Šamaš, if his forearms, stomach, and feet ache at the same time, (it is) the hand of Ištar". The Sumerian phrase 'GABA.RI' as spelled out logographically in the text represents the Akkadian 'mehru' derived from the verb 'maharu' as discussed in footnote 102 above, with the exception that here the word is written out logographically as 'GABA.RI' it may be translated by either "forepart" or "stricture" depending on the etymology.

214. SbA (MSL 3, 118 line 256) 'gu-ú equals KÚ equals a-ka-lu'. Old Babylonian Grammatical Text, CBS 14100 (MSL 4, 118 line 12) 'kú-a equals a-ka-lum'.

215. AU 6679 and K. 3687 plus 6389 plus Sm 951 (AMT 106, 2:107 line 2 ff.).
of the term. In a lexical fragment in LTBA 2, I VI:50 and Hh. I line 324 (variant) the equation 'GABA-RI equals mi-ih-ru' is found. 'Gaborû' as a loan word in Akkadian is commonly used for "copy", "duplicate" and even "answer" and appears in primary reference to cuneiform tablets, as in numerous colophons, 'ina pūt tuppi ša GABA.X.RI Bābili šaṭru', "written according to a tablet, which is a duplicate (original) from Babylon" (KAR 144 r. 17). This term in medical texts apparently means diarrhea in a number of contexts as in BM 92690 and LKTU 101 and 87 both of which are similar to SM 232 (TDP I 100:4), 'š. ina irtšu mahisma BADD ubaka urapped qāt Nergal gab-ri < meh-ri > mahis GAM', "If in his chest he is afflicted and (his speech) X rambles, it is the hand of Nergal (with) diarrhea he is afflicted, he will die". Similar expressions are found in TDP I 108:19 (XII col. IV:19) and other portions of the 'SA GIG' series. On the other hand the phonetic spelling of 'mi-ih-ra' does appear in TDP I 14:66 (I:66) in a context which seems to indicate "duplicate" or "alternate". In K.207 col. IV lines 9 and 10 the equation appears, '[x]-ta-ru equals ma-ha-ar', '[x-t]a-ru-ru equals i-ma-har'. Although the Sumerian column is effaced it is safe to assume that it read 'šu' as in the IZBU Commentary 282. The problem is extremely difficult because in antiquity a group of words derived from or related to 'mahru' were assigned various technical equivalents, which were confused with the equivalent of 'GABA.RI' and so any meaning is suppositionally
adopted. The phrase should then be normalized as, 'š. KIMIN-ma šahāssu/šaḥaššu šá imitti ikkālšu u urappad mehra mahiš imāt', "If - ditto, then, his right armpit aches and (his speech) rambles, his 'forepart' is afflicted, he will die". This dire prediction if based on long observation may represent a number of diseases which infect the lymphatics and cause pain in the axilla and particularly the nodi lymphatici axilares. Aside from pain or swelling there seems little in the way of overt pathologic signs which should attract the attention of the 'pre-theoretical' physician to the area of the axilla. The actual application of the term 'meḥru' is difficult and as yet not certain. The basic difficulty is the simple fact that we do not know what point of the body was taken as the reference point for all further orientations.

31. 'š. KIMIN-ma šá-hat-su/šaḥaššu šá CL KÚ-šú u KÚM NU TUK ár-da-na-an ÚŠ DIB ŠU DIŠ GAM.'

The initial section of this line is identical to the first portion of line 30 above, however the alteration is now to the left side. The substantive 'ummu' is written 'KÚM' logographically and means "febrile heat" or "fever". It is used for "fever" as an entity

216. 4 R. 55 line 26.
in disease and also for "hot gasses" as produced in a fire, thus its use in an incantation as "hot wind"\textsuperscript{217} where it is written out syllabically, 'um-mi'. The verb 'išû' written logographically with the 'TUK' sign,\textsuperscript{218} this irregular verb is actually the verb of ownership or possession in Akkadian and must be distinguished semantically from its cognates as Ugaritic 'šā' and Hebrew 'šā' which have the actual meaning of Akkadian 'bašû' meaning "to exist", "it is". 'Bašû' should not be confused with the standard Indo-european verb "to be" as 'bašû' is in effect a stative aspect.\textsuperscript{219}

The use of 'šû' with the negative is frequent, however in the medical texts it often is used to indicate the presence of a particular malady as the phrase, 'šumma amēlu mišitti pani išû', "If a man suffers a stroke and his face is paralyzed".\textsuperscript{220} The substantive 'ardanānu' is found frequently in the 'SA GIG' series, often in construct with 'mītu', TDP I 88:6 (X:6) where a phrase similar to line 31 appears; 108:20 (XII:20) where a longer phrase

\textsuperscript{217} Kucher, BKBM, tf1. IV line 62 (K 191 plus 201 plus 2474 plus 3230 plus 3363).

\textsuperscript{218} 5\textsuperscript{a} (MSL 3, 87 line 7') 'tu-uk equals TUK equals [i]-šu equals e-eš-zi'. n.b. the last column is Hittite, the word equated means literally "he is", the reason for this is that, as pointed out above, the Akkadian verb 'išû' is not actually a verb "to be".

\textsuperscript{219} c.f. use in Gilgameš XI lines 81-84.

\textsuperscript{220} AMT 76, 5 line 11.
identical to line 31 above appears; 124:26 (XIII:26) and 158:17 (XVII:17). The prognostic statement from 108:20 is of extreme importance as it offers clear, legible readings of the last two signs of the phrase, although there is a small gap in the middle of the line. This correspondence is not noted by Labat although it may well have been the basis of his reading of the signs in line 31. Careful examination of the actual tablet of A 3440 in the museum of the Oriental Institute revealed a trace of a final 'GAM' sign on the dextral edge of the tablet. This sign would not have been visible in a flat field 90° photograph such as Labat used in preparing his text. The signs preceding may then be restored from TDP I 108:20 (A 3442) which is quite clear at this point. Line 31 should therefore be restored and normalized as, '- - ŪŠ DIB ŠU DIŠ - -', 'mītu išabat qāt An[u][imāt]'. Note that the 'DIS' sign is just barely visible on A 3440 and only a little more so on A 3442 due to its proximity to the 'ŠU' sign, Labat read this as 'su' in A 3442 and then apparently restored that reading in A 3440. However the loss of both the 'ŠU' and 'GAM' in KIMIN I can be explained by the lacuna on the edge of the tablet. The whole of line 31 should be understood as, 'š. KIMIN- ma šahassu/šaḥaṣšu ša šumēli ikkalšu u umma lēišu aradnān mīti išabat qāt An[u][imāt]', "If - ditto, then, his left armpit aches and he has no fever, (it is) the ghost of one dead, (that has) stricken him, the hand of Anu, he will die".
32. 'š. KIMIN-ma ina GABA-šú SÌG-ma ÚŠ ú-tab-ba-ka u ú-rap-pad ŠU SINGI(R) U-GUR GABA.RI SÌG-iš GAM.'

The verb 'tabāka', "to flow out", "to pour" is found frequently with 'ÚŠ' and its equivalent 'dāmu' as, 'šumma amēlu ina ušširīšu ÚŠ utabbakam', "If a man pours out blood from his penis" (then follows a prescription, the form of the verb herein is a II/1. This line is identical to line four, Column I of TDP I 100:4 (XI:4). Line 32 should be normalized and translated, 'š. KIMIN-ma ina irtīšu mahīšma dāma utabbāka u urappad qāt d'Nergal mehra mahīš imāt', "If ditto, then, he (is) afflicted in his chest and he pours out blood and (his speech) rambles, the hand of Nergal has stricken his 'forepart', he will die".

33. 'š. KIMIN-ma SAG ŠÀ-šú KU₁₀-ma EME-šú he-em-ret ana ši-rīt GIG GAM.'

The word 'lišāssu' was discussed above under line nine, where it also appears written with the logogram 'EME'. The expression 'lišāssu hemēret' is also found in TDP I 110:2' (XII:12') which Labat translates, "et si sa langue est d'un rouge ardent (?)". The verb 'hamāru' means to be, "to dry up", "to parch", "to
This verb occurs in a number of medical texts but one of its most important uses is with 'eqlu', "a field" as in the phrase 'eqlum hamār' which prohibits any primary meaning such as, "to pucker". The unusual and difficult word 'šī-rit' is discussed above under line 19. The proper normalization is, 'š. KIMIN-ma rēš libbišu tarikma lišāṣu hemrēt ana šīrit murgi imāt', "If - ditto, then, his epigastrium is stricken and his tongue is parched, he is afflicted on X and he will die".

This line is nearly identical to TDP I 112:22' (XIII col. I:22') except for the interesting fact that 'na-ši-ma' is written out syllabically and not with the logogram 'ÍL'. The verb 'nešū' is used in the medical texts in the sense of "to be disturbed", "to be upset" as well as "to raise". This is the first text in the KIMIN I series to deal with the eyes and their natural secretion

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222. CAD proposes a root 'hemēru' and connect to 'emērub' which they translate "contract" (vol. 4 "E", p. 148); this variant is found in TDP I 74:32 (IX:32) and line 35, in both passages is used with 'panūšu'.

223. AMT 41, IV line 37, CT 17, 19 line 24; c.f. note GCCI 2, 406, line 1.

224. UET 5, 10 line 25.
tears. The equation of Sumerian 'IGI' with Akkadian 'Inu' is standard and consistent in many lexical references. The section of the 'SA.GIG' series, TABLETTE No. V, 'š. marșu In imittīšu īkkalšu qāt dX', there are over fifty prognoses dealing with the eyes, this series contains the tablet K. 6629 (AMT 75.2). Also the tablet series published as AMT 8, 1; 12, 8; 20, 2 are all dosage-form texts dealing with embrocations and salves for maladies of the eye and orbit, also in KAR 183 another dosage-form list. The term 'dimtu' as written with the sign 'ÉR' is common in connection with symptoms as in innumerable passages of the medical corpus. It may well mean other types of

225. Hh. Tablet I (MSL 5, 18 lines 134-137),

'IGI equals i-nu : eye.
IGI equals pa-nu : face.
IGI equals mah-ru : in front of, opposite.
IGI equals ši-e-bu : witness'.

226. K. 2570 plus 3425 plus 5000 plus 7105 plus 11683 plus 13389 plus 5,821 plus D.T.172 plus 371 plus RM II, 381 plus 79-7-8 plus 192 plus 82 plus 3-23, 41.

227. SbA (MSL 3, 96) line 4, 'IR/ÉR equals ÉR equals d[i-i]m-tum'. Also, IGI-duh-a equals tāmartu; short version, 'dimtu'. Landsberger and Gurney; (AfO 18, 22 line 70).
drainage from the orbit and meibomian glands. The whole phrase with 'illak' appears in TDP I 224:61 (XL:61), 'dimtu ina Inišu illak', "tears flow from his eyes". The normalization and translation are, 'š. KIMIN-ma reš libbišu našīma pānūšu nupplyu ina Inišu dimtu illak urrakma imat', "If - ditto, then, his epigastrium is upset, his face is burning (flushed), tears flow from his eyes, (it will) linger, he will die". Such a syndrome, if indeed one can be identified from such general information, indicates some type of general systemic infection. The above Mesopotamian prognosis is reminiscent of the Hippocratic statement, "Redness of the eyes which occurs during the course of a fever indicates lingering stomach trouble."228

35. 'š. KIMIN-ma ina ŠA-šu SIG-iaša-emir u e-sil GAM.'

This text is identical in its last few words to TDP I 118:19 (XIII col. II:19) where the word 'emir' is explained by a footnote229 and translated by, "plein". CAD proposes an '*emēru B',

228. Coan Prognosis, the authenticity of authorship cannot occupy us herein, the quotation is paragraph 215 from text of Littré Vol. V, p. 81.

229. "De amaru 'être plein'; cf. em-ru, AMT 95, 3, I, 17; Kuch. VIII, 20; etc.; em-ret, KAR 195, rev. 25, in-nim-me-er, AMT 48, 3, 8; in-nim-me-ru, AMT 48, I, 7, 10, 12, etc.; it-te-nim(!)-mi-ru, AMT 76, I, 4 (traduit à tort 'burns', par
and translates, "to have intestinal trouble", "colic", as in, '
šumma amēlu akala ikkalma šikara isattīma šA-šū innimmeru inni[mbiţu (?)], "If a man’s epigastium is afflicted with 'trouble', after he eats bread and beer — "230 and, 'šumma amēlu [itten]inme’ir itenik[kik š]āru ina šuburrišu ukal', "If a man suffers from intestinal 'trouble', scratches himself continually, and his bowel is full of flatus".231 CAD adds a note of etymology for 'emēru' but it does not seem necessary as the Syriac, "šē mārē", is used with a considerably wider connotation than the Akkadian 'emēru'.232 The actual meaning in Akkadian appears to be "extend",

229. (cont.) Thompson (RA, 26, 79 n. I, où *ni-me-rum, sur lequel il fonde sa démonstration, doit être lu dik-me-nu)."

230. AMT 44, 66, ii line 1.

231. AMT 58, 1 plus 56, 5 line 1.

232. Budge, The Syriac Book of Medicines, pp. 408, 501, 640, 680, Vol. I and II. The note in CAD states, "'Emēru' is etymologically connected with 'šemēru' (c.f. šimrat and emret in similar context in KAR 195 r. 25 and 27, c.f. also šimertu, which shares its Sumerian correspondence 'ŠA.TA.HA.AR.GIG' with 'emēru'). Both verbs are connected with Syr. šē mārē, 'stronguria' (Brockelmann Lex. Syr. 2 632b), and Talmudic Aram. šē mērtā (Jastrow Dict. 1288)." Vol. 4 "E", p. 148.
"swell", "distend" as with flatulence, this is most likely the reason that it is connected with the immediate consumption of food and drink; however it is also possible that a condition such as colitis or colonalgia is in view. The often accompanying verb 'esir' is derived from the standard form 'esēru', "to assess", "to press", "to constrict", "to be constricted", this becomes a technical term in the medical literature, "to be constipated". This meaning is not recognized by the lexica however it is clear from the tablets that this is what is meant, von Soden in citing a quotation from a medical text, 'muru ana e-se-ri' which he translates, "abriegeln", 233 this may be a development or variant of the more common verb for "constriction" or "constipation", 'esēlu' as used in a very similar circumstance. Let us take for example, 'šumma ina râš libbašu di[k š]u [u hatitu šaknu] šumma esil imāt', "If there is a stabbing or burning pain in his epigastrium (and) if he is constipated, he will die". 234 It appears also in the IV or "N" stem, 'šumma amēlu šuburra marṣa marīnma libbašu ṣabissu ittenensil', "If a man is suffering from a disease of the anus, his stomach pains him and he is continually constipated". 235 The normalization and translation of line 35 is,

234. TDP I 114:44’(XIII col. I, 44’).
235. AMT 43, 5 line 11 and 57, 5 line 10.
"š. KIMIN-ma ina libbīšu mahīṣma emir u esil imāt', "If – ditto, then, he is afflicted in his epigastrium he is flatulent and constipated, he will die".

36. "š. KIMIN-ma ina ša-šú SIG-is-ma u ZI-aš(?)-MEŠ ŠU DINGI(R) MAŠ.TAB.BA GAM.'

This is identical to the "b" section of TDP I 118:19 (XIII col. II 19b), while line 35 is identical to the "a" section. The I/3 of 'našu' like the I/1 is common in the medical texts. The signs 'dMAŠ TAB' is to be understood as the divine name of the causative agent, 'Maštablīya', as known in various texts as "the twins" used interchangeably in the astronomical texts with 'MAŠ.MAŠ' meaning the constellation "Gemini".236 The proper normalization and translation is, "š. KIMIN-ma ina libbīšu mahīṣma u itanašaš qāt dMaštablīya imāt', "If – ditto, then, he is afflicted in his epigastrium and he is continually stirred up, (it is) the hand of Maštablīya, he will die".

37. "š. KIMIN-ma ša.MES-šú MI.MEŠ-ma SA ša-šú šu-ud-du-du ina KA-šú IM ú-ga-ša-ša ana UD.III.KAM GAM.'

236. Deimel, Patheon Babylonicum, 118 No. 13-15 (ŠL T. IV Bd. 1), and the Babylonian ephemeride tablet, Neugebauer, ACT, numerous examples, 812 abv. II:24, rev I:26, etc.
The word 'šer'ānu' written syllabically as 'SA' is well known and has been studied in several connections, it apparently may represent the basic idea of "tissue"\textsuperscript{237} or of "sinew"\textsuperscript{238} in non-medical and Old Babylonian texts. However as Oppenheim has demonstrated it may be translated as "vein",\textsuperscript{239} even though he himself states, "It will always remain difficult to separate the passages in which 'šer'ānu' refers to ligaments and sinews, and those in which blood vessels are meant, since Mesopotamian medicine uses the same term for both. Even the sciatic nerve was termed 'SA.GAL' as shown by the following passages 'šumma SA.MEŠ šūnīšu ištēniš Ṭakkalušu[GUB]-za u GIN.MEŠ-ka la ile'i SA.GALMU 2', "If the šer'ānu of both his hips hurt him and he can neither stand nor walk, (this is) the SA.GAL-disease, (it

\textsuperscript{237} M. Held, JCS 15, 14, KAR, 152 r. 11-12, 'šumma kalītu imna šer'ānī nēstat', "If the kidney is surrounded by tissue at the right side".

\textsuperscript{238} Holma, Korperteile, p. 4 ff. also the citation of such texts as KAR 185, ii, line 16, AMT 70, 5 line 4, RA 14, 88 i line 4 where the logogram 'SA.MUD' is interpreted as 'šer'ānu of the heel'; also Izbu Comm. 278, 'ši-ši-tu equals šēr-a-nu'.

\textsuperscript{239} A. L. Oppenheim, On the Observation of the Pulse in Mesopotamian Medicine, Orientalia n.s. 31, pp. 27-33.
lasts) two years" CT 231:1, also AMT 42, 6:2; but note 'šumma TA ÚR.KUN-šú adi ėpēšu SA.MES-šú Itakkalušu SA.GIG', "If his šerʾānu hurt him from his coccyx to his feet: SA.GIG-disease" Labat TDP 108:18."240 Actually it is rather doubtful that the Mesopotamian physician would have properly identified the pulsing action of the major veins as due to the filling and emptying of passages within them. The major problem of deducing a single meaning for 'SA GIG', Akkadian loan word 'sakikkû' is also very much involved. It seems more plausible that the original meaning of 'SA' was simply "string" or "cord" of animal origin, in other words "sinew". This was later expanded, through long empirical knowledge of dissected animals in divination rites, to neural cords and circulatory vessels. It may be that a more complex concept such as the Egyptian etiological agent 'whdw' was thought to be connected to the entity known as 'ŠA', and this condition is designated as 'GIG'. This is not to say that the Egyptian and Mesopotamian practices or notions are similar or connected but rather they may suffer from the same degree of abstraction from an observed phenomenon. The verb 'šadādu' usually means to "pull", "drag" or "draw" as in Gilgames XI:273, 'ildudušuma ana apa[ī-]ma imur šamma --', "They pulled him down

240. ibid p. 32 n. 2.
into the deep and he saw the plant". The use of the verb is quite old; it is found in omens in YOS X, 5; 6 line 2 and TEL I, 142 line 7, in the phrase much like others, 'Aššu išadadme'. The verb is used in TDP I in a number of references, 120:46 (XIII, col. II:46); 190:20 (XXVI:20) where it is written, 'iš-du-ud-ma'; AFO 12 plate 1, line 3 ff. (Comm. on the text of Šurpu). The text of line 37 is similar in a number of respects to lines 38 to 39, TDP I, 120 (XIII:120) A 3506, both in Labat's publication and an examination of the tablet itself an important variant appears. It is the verb 'i-giš-šú' in XIII and 'ú-ga-giš-šé' in 'KIMIN I'. The last phrase in the line simply determines the duration of the illness in a standard and well known Sumerian calendrical form. The noun 'IM', Akkadian 'titu' means simply "clay" or "earth", Labat translates the phrase, 'ina pīšu tiṭta igiššō', "si, de sa bonche, il crache de la saburre". The verb 'gâšu' is used exclusively of two actions, "to go", "to come" and "to vomit". The latter meaning is the one in view in line 37, but the etymology of the term is difficult. CAD does not propose any such meaning to this root but does deal at length with a root 'gâ'u', "to spew", "to vomit". 241 Undoubt-

241. "gâ'u v.; to spew, to vomit; lex.*; KA.al equals ga-'-u (in group with KA.ZA.RA.AN equals ga-ša-šu) Erimḫuš IV 62; gu.a ha.an equals ga-'-ú (in group with gu[var.gú] equals qu-ú, a ha.an equals nu-šu-ú) Erimḫuš IV 58. The proposed
edly 'gâšu' is a development of this root unfortunately however the root with the glottal does not occur outside of lexical texts such as Erimhuš, and the fifteenth tablet of Hh. (Nabnītu).

In the medical text from Sultantepe vol. I No. 96, it occurs as 'ú-ga-áš' and in No. 92 II, 'ú-ga-'a-šá-ma' is found. Line 37 should then be transliterated and normalized as, 'š. KIMIN-ma libbušu ṣalmu šer'āu libbišu šuddūdu ina pišu tiṭta ugāšša ana UD-3KÁM imāt', "If - ditto, then, the veins of his abdomen are black, his torso is contracted (and) from his mouth he spews "clay", (he will linger) on the third day he will die".

'Suddudu' apparently refers to spasms such as in convulsions, while the exact rendering or meaning of "clay" must be surmised. However in the Hippocratic Corpus the expectoration of clots is mentioned, "In all cases irritation causes the passage of dark stools and the vomiting of clots."

241. (cont.) meaning has been derived from gi.ḥa. an 'rotten reed' (see gihinnu) and the passage ṣ.nu.ḍu₄.₉.ga a.ḥa.an, 'ill-smelling oil, stinking water', PBS 10/2 21 ii 13, as well as from the equation 'a.ḥa.an.ḍu₄.₉.ḍu₄ equals nešû, to vomit' (q.v. see also kû s., 'vomit'), while qû (c.f. Erimhuš IV 58, in lex. section) corresponds directly to Heb. qê, 'vomit', and Arabic 'qā'a'. Vol. 5 "G" p. 59.

242. Loan Prognosis; paragraph 626, after Littre text.
This line is much like TDP I 124:23 (XIII:23) although in that case the verbal logogram 'Dé' is written only once. The form 'ubanqam' is a defective writing of 'ubaqqam' a II/1 of the verbal root 'baqamu' meaning, "to tear out", "to rip out", used especially as in this text of the heal. In TDP I 214:22 (XXXVI:22) the verb appears properly written as 'ú-baq-qam' but the reference is problematic due to the destruction of the previous signs. It may be that the scribe was influenced by the occurrence of the 'ban' sign after the preposition which is written with the 'Aš' sign. The substantive 'bāmtum' is written in a variety of ways in medical contexts, 'ba-ma-as-su', 243 'pa-an-di', 244 'bantīšu', 245 'pa-an-di-šu', 246 'pa-an-te-e', 247 and even the proper name 'Pandānu'. 248 The text should be normalized as, 'š. KIMIN-ma libbi libbi iltanāsi u šāratu ubanqam ina bantišu mahis imāt',

243. AMT 86, 1, II line 5.
244. CT 17, 10 line 48.
245. JRAS 1927, 538 line 10.
246. TDP 158:19 (XVII:19).
247. VAB 2, 232 line 10.
248. Stamm, Die Akkadische Namengebung, p. 266 (CPN 116a 1x); BE 15; 157, 9.
"If — ditto, then, he continually cries, my abdomen, my abdomen and tears out the hair from his back, he is afflicted, he will die". The word 'bāmtu' has cognates in Ugaritic and Hebrew which have generally been missconstructed as in Brown Driver Briggs, page 105 ff. under 'וֶאֶצ'.

This line marks the end of the obverse.
This is the identical line in the cuneiform tablet, and follows logically the pattern deduced so far in "KININ-1". The term "BIR" is equivalent to Akkadian "Malšu" as known from a series of lexical texts, "al-lan/aq malšu BIR malaštu ka-lu-te", 249 and elsewhere. It is usually translated "kidney" and must be read as here. The Semitician phrase "MAB.TAB.EA" is used for "double or "double dozen", it is also used here for a divine name, transcribed as Semitic "Ts-am-\eta". The line is to be normalized and translated as, "A, KININ-NA UN malštu Be lusri namgalu Shala ID gabir Ana..." and so on.

The phrase "line 1B 'ine wrapped' is discussed under Lines 1A and 1B above and may refer to the patient's speech only. It is uncertain just how restricted a locus "BIR" designated, it is more in accord with the usual Mesopotamian medical practice to view it as the "kidney region", of "the lower back". There is also the possibility that..."
39. 'š. KIMIN-ma ina BIR-šú šá XV GIG-iš KU-šú lāDIB ina lā ZU ú-rap-pad ŠU DINGI(R) MAŠ.TAB.BA GAM.'

This is the identical line as found in TDP I 104:21 (XII col. III line 21) and follows logically the pattern deduced so far in 'KIMIN I'. The term 'BIR' is equivalent to Akkadian 'kalītu' as known from a series of lexical texts, 'el-īan/lag equals BIR equals ka-li-tu', and elsewhere. It is usually translated "kidney" and appears to mean so here. The Sumerian phrase 'MAŠ.TAB.BA' is used for "double" as "double doors", it is also used as here for a divine name, transcribed as Akkadian 'Tu'amē'.

The line is to be normalized and translated as, 'š. KIMIN-ma ina kalītušu ša imitti mahīša ūmū šašīt ina lā idū urappad qāt dMaštabba imāt', "If - ditto, then, his kidney on the right side is stricken, he is incapable of action, he wanders around in a daze, (it is) the hand of Maštabba, he will die". The phrase 'ina lā idu urappad' is discussed under lines 13 and 24 above and may refer to the patient's speech only. It is not clear just how restricted a locus 'BIR' designated, it is more in accord with the usual Mesopotamian medical practice to view it as "the kidney region", or "the lower back". There is also the prospect that

249. SbA (MSL 3) 98 line 34, and CT 12; 24, II line 23.
250. CT XXVII plates 2 and 3 line 12; RA 12; 191-2 line 14; IV R 21, a and duplicated VAT 13666 (8) c.f. also LKTU 101; 23 line 87 ff.
'GIG' is to be understood as a wound or blow upon the region of the right kidney.

40. 'š. KIMIN-ma ina BIR-šú šá CL GIG-iš KU-šú lā DIB u ÚŠ BURU₈ ŠU DINGI(R) IMIN-bi GAM.'

This statement is similar to TDP I 104:22 (XII col. III line 22) but differs from the preceding not only in orientation but also in the phrase 'ÚŠ BURU₈' which is found frequently in other medical texts. The correct normalization and translation of the passage is, 'š. KIMIN-ma ina kalītīšu ša šumēlu maḫiš ūrāšu lā šabit u dama i'arru qēt dSibitti imāt', "If - ditto, then, his left kidney is afflicted, he is incapable of action and vomits blood, (it is) the hand of Sibitti (the September god) he will die".

41. 'š. KIMIN-ma ina KUN-šú GIG-iš-ina GÚR-šú ŠU DINGI(R) BÀ GĪD-ma GAM.'

This line has no extant parallel in any other portion of the 'SA GIG' series. The substantive 'KUN' is equated with Akkadian 'rapaltū' meaning "shoulder", "scapula", while the logogram 'GÚR' is equivalent to Akkadian 'kim/n/š-su' meaning "lower leg", as in AMT 22, 2 line 5 and 70, 7 line 2. The line is normalized
as, 'ē. KIMIN-ma ina rapaltīšu mahī̂ - ina kimī̂šu qat āSa ina urrakma imāt', "If - ditto, then, he is afflicted in his shoulder - in his lower leg, (it is) the hand of Sa, he will linger, (and) he will die". For the orthography of 'BA' in the prognostic texts see line 23 (obverse) above. The actual type and cause of the affliction is not mentioned here, and it is not necessarily true that the malady located in the two areas define a syndrome. Again there is the distinct possibility that 'GIG' represents a trauma or wound, but the text here and most similar texts do not expressly state this fact.

42. 'ē. KIMIN-ma TI-su ša XV MI KA-su Eš MEŠ u it-ta-naq-ra-ār ŠU DINGI(R) DA.MU ina BIR GIG-īš GAM.'

This prognostic statement like the preceding has no parallel in the 'SA GIG' series, however its form and data are represented in a number of statements in TABLETTE XII. The logogram 'TI' is the familiar Sumerian word for "rib" and is equivalent to Akkadian 'šēlu' as indicated by a series of lexical texts. 251 It is also

251. The important and as yet unpublished Tablet XV of Hh. gives the equation (line 80) 'UZU.KAK.TI equals sik-kāt šī-li', and Sb II reads, 'ti-i equals TI equals šī-lu' (MSL 3, 138 line 104).
used for "side" but particularly of the "rib cage" and any other convex lateral surface as the side of a pat, and particularly for cuts of meat in sacrifice and offering lists. The verb 'abālu' written logographically as 'E₈'/'UD' is used with 'KA' in several medical citations as TDP I 64:55 (VII:55'), 'š. liq pāšu i-ta-nab-bal', "If his palate continually dries out - -", and similar context in AMT 76:1 line 4 ff. The form 'ittanqar' is the IV/3 of the verb 'qarūru' meaning to be "dried out", "descicated". The god 'Damu' is not attested as a deity nor do the signs compose in any other reading the name of a deity. It is probable that the form 'ŠU PN GAM' which is almost constant in the fatal prognoses of the 'SA GIG' series, is being followed here although no such deity is actually in view. In the disease lists an equation of the simple, uninflected unmodified roots 'BAD/UŚ' equals 'damu' appears and it is doubtless such a disease that is involved in the prognosis of line 42. The normalization and translation of the line would then follow, 'š. KIMIN-ma šelāšu ša imitti tarik pāšu itanabbal u ittanaqar qat ḏDamu ina kalītīšu maḥiš imāt', "If - ditto, then,

252. OECT I, Pl. 20 w.b. 10:2; and the O.B. list A 3207 r. 1. (unpublished).

253. II CBS, 13267 col. II, line 11.
his right side (rib) is injured, his mouth is continually dry and parched, (it is) the Blood (disease), he is stricken in his kidney, he will die".

43. 'š. KIMIN-ma TI-šú šá CLMI ŪŠ BURU₇ u ZIG.MEŠ ina UD BI GIG-iš GAM.'

This line is a variant of the preceding and also has no parallel in the extant fragments and tablets of the 'SA.GIG' series. All the terms are found in other parts of 'KIMIN I' except for the temporal qualification 'ina Ōmi šuāti', "on the same day". The text should be normalized as, 'š. KIMIN-ma šalšu ša šumāli tarik dama i'arrū u itanāšaš ina Ōmi šuāti mahiš imāt', "If-ditto, then, his left side (rib) is injured, he throws up blood, and tosses continually on that day he was stricken, he will die". It is possible that the location of the wound or contusion near the heart in this case may account for the additional and altered sequence.

44. 'š. KIMIN-ma ina šá-šal-li-šú šá XV GIG-iš u ū-rap-pad ŠU DINGI(R) URU-šú ina šat ur-ra GIG-iš GAM.'

The substantive 'šašallu' means "back" the dorsal surface, it is
found in many usages both in medicine and general literature.  

One of the fundamental problems in interpreting Akkadian medicine is the lack of definition of so many of the terms used. This line is apparently taken from TDP I 104: 23 (XII col. III:23) concerning which labat has a footnote directing attention to the 'KIMIN I' citation,  

however the citation in XII reads, 'maṣṣarti namaratī', which Labat translates, "à la veille de l'auhe" where 'KIMIN I' has the signs, 'KUR UR RA' which are difficult to normalize, for this phrase Labat offers no translation. The signs are not clear on the tablet and only a tentative solution can be given, perhaps, "it endured for a year". In so far as it is possible the text states, 'š. KIMIN-ma ina šašalīšu ša imitti mahīš u urappad qāt ṣalīšu ina X X mahīš imāt', "If - ditto, then, his back on the right is afflicted and he roams around, (it is) the hand of the god of his city X X he is stricken, he will die".

45. 'š. KIMIN-ma ina šašal-li-šū ša CLGIG-šū u ū-raph-pad ŠU DINGI(R)-šū ina MŪR-ti GIG-šū GAM.'

Again this statement is ordered as the contrapositive of the

254. Holma, Korperteile, p. 52. CT 17, 42 line 33; CT 23, 11 line 38.

255. TDP I p. 104-5 note 188, "Sur ces deux lignes, c.f."
previous, in this prognosis the left is in view. The logogram 'MÚR' can be read as 'qablô' or 'qablu' which in this text should be understood as "middle", "median", the "midpoint". This sentence is nearly identical to TDP I 104:24 (XII: col. III:24) with the singular exception that that text has the added word 'naparu' between the preposition and 'MÚR'. The normalization and translation is, 'š. KIMIN-ma ina šašallîšu ša šumêli mahîq u urapped qat ilîšu qabbiţî mahîq imât', "If - ditto, then, his back on the left is afflicted and he roams around, (it is) the hand of his god, he is afflicted in the center, he will die".

46. 'š. KIMIN-ma ina GÚ.SIG₄-šú GIG-î šá GUB-su NU Ė-a ŠU GUD šâ-ga-ši GAM.'

Except for the first few words this line is identical to TDP I 106:35 (XII col. III:35). The logogram 'GÚ.SIG₄' is found in a number of lexical texts and is equated with Akkadian 'eçenêårû' which is usually translated, "back bone", "spinal column".256

255. (cont.) KIMIN 44 et 45; šašallu est plus spécialement le 'haut du dos'; c.f. J. Nougayrol, RA XLIV, 4, n. 5."

256. In the important lexical list of names of parts of the body Hh. 15:56 ff., 'UZU.GÚ.SIG₄ equals e-še-en-še-ru'. c.f. also Holma, Körperteile, p. 49 and 50.
Such a logographic writing is found in the parallel text TDP I 106:35 and 33. The verbal form written logographically appears 'TIL' which is equivalent to Akkadian 'labāru', which appears in the I in TDP I 196:66, 67 (XXVI:66, 67). The logogram 'GUB' is equal to the verb 'nazāzu' and as used here with the pronominal suffix it is to be read as a maqtal form 'manzazu' as in Gilgameš XI line 148, 'manzazu ul īpāššumma issahra', "a place did not appear for it, so it came back to me", also many passages in the annals as Asb. Abelisk II line 42. The sign after the negative is partly defaced by a small chip but examination of the tablet shows an initial vertical wedge and two horizontal open wedges followed by the upper horizontal stroke and faintly legible vertical stroke of a sign approximating the 'E' following this is what appears to be the phonetic complement 'a'. Labat reads this as a simple II/1 of 'wasû' and this appears to be correct, the form would be 'uṣṣa'. The 'GUD' sign is combined with a number of other words to determine the sort of spirit involved, as in TDP I 114:34' (XIII: col. I:34'), 'GUD ahi u ahati iṣhassu', "the ghost of a brother or sister has seized him --". The word 'ṣaggašu' derived from 'ṣagašu' refers to murder or the victim of such a

257. Fragment N of Sā (MSL 3:66 line 23'), 'T[IL] equals la-ba-a-ru'.

crime. The line should be normalized and translated as,

's. KIMIN-ma ina eşerişiçirišu mahiş ilabbirmal manzassu læ uşşa qat eţemmi šaggaši imāt', "If - ditto, then, he is afflicted in his spinal column, he is growing old, he is not able to move from his place, (it is) the hand of the ghost of a murdered man, he will die".

47. 'š. KIMIN-ma GÚ. SIG₄-šú GAM-ma LAL NU DA-e GÚD-ma GAM.'

This line is very similar to TDP I 106:33 (XII col. III:33) and should be normalized as, 'š. KIMIN-ma eşenşerišu qaninma tarāša la ile"e urrakma imāt'. The logograms of the phrase 'LAL NU/lā DA-e' were discussed in line 18 above, the substantive 'qanin' which appears in the text as the 'GAM' sign is difficult, the word is written out syllabically in TDP 104:32 (XII col. III:32) which states, 'šumma eşenşerišu qa-nin nahiţ', "If his spinal column is twisted, he (is) apprehensive". Line 47 contains a clear and fairly large 'šú' sign after 'SIG₄' this sign is not transliterated or noted by Labat. The line then reads, 'š. KIMIN-ma eşenşerišu qaninma' as above, and should be translated, "If - ditto, then, his spinal column is twisted and he is not able to straighten up, (it will) linger (and) he will die".
48. 'š. KIMIN-ma MÚRUB.MEŠ-šú ÍL.MEŠ-šú kima i-te-né-ep-pu-šu NU ZU GAM.'

The logogram 'MÚRUB.MEŠ' also known as 'MURUB4.MEŠ' is equivalent to Akkadian 'qablu' meaning as in line 45, "middle", however it can also be used for "hip" and is used as equivalent to 'šûnu'. Labat translates this term as, "hypocondres" in TDP I 106:41 (XII col. III:41), a similar text which he then restores after KIMIN I:48. The logogram 'ÍL' is understood as 'našû' as discussed in line 15 above. The verbal form 'iteneppusu' is a 1/3 of 'epēṣu' a form which also appears in AMT 26, 3 line 7 as 'tēteneppuš'. The logographic phrase 'NU ZU', Akkadian 'lā idu' should be understood and translated as "unknown causes". The normalization and translation is, 'š. KIMIN-ma qablu našû kīma iteneppusu lā idu imēt', "If - ditto, then, his hip he raises, (but) he does not know his own actions, he will die".

49. 'š. KIMIN-ma ina kur-ri-šu ša XV GIG-ig-ma Nī-šú ma-ši ŠU DINGI(R) ŠUL-PA-È-A GAM.'

This line is closely similar to TDP I 108:23 (XII col. IV:23) which Labat partially restores on this basis. The word 'kurrišu'

is extremely difficult, Labat in his discussion of TDP I 108:19 (XII col. IV:20-25) where the term 'kur-ra-šu' appears, does not venture a translation except for the problematic, "lui-même". AHW places the word by citation under a root 'Kurru II' for which von Soden lists only this text and suggests very cautiously the translation, "Becken". CAD on the other hand states under 'gurruru' A adj.; that it is "describing a characteristic bodily trait, asc. only as a personal name", just precisely what the trait is he neither states nor pretends. Without either lexical citation or more frequent use any translation must remain hypothetical and any etymology is tenuous. Since 'Kurru I' is a Sumerian loan-word which is a measure of volume or capacity, it is possible and in fact probable that the term in medicine means

259. "Taut le paragraphe est consacré à une partie du corps, dont l'idéogramme, composé, est en partie mutilé ([-- s]u(?)-GAM). Je n'ai pas pu l'identifier. Toutefois, comme les deux dernières lignes correspondent exactement à KIMIN 49 et 50, il est probable que nous avons la lecture akkadienne de l'idéogramme dans 'ina kur-ri-šú'. Mais 'kurru' lui-même ne me paraît pas avoir été identifié. Il faut raisemblablement le rechercher dans la région du bassin, entre les hypocondres et les fesses (c.f. KIMIN)". p. 109, note 194.

260. Vol. 5 "G", p. 141, c.f. VAS 9, 32 line 8, etc.
"an organ of container shape", since the only information obtainable that aids the inquiry is from KIMIN I it is necessary to note that it is a paired organ of bilateral symmetry, we shall simply translate "organ". The term 'ramān' is a personal reflexive pronoun in Akkadian and in this case the object of the verb 'mašū'. The transliteration and translation is, 'ē. KIMIN-ma ina kurrišu šá imitti mahišma ramānšu maši qat ṣulpa' 'a', "If ditto, then, he is afflicted in his right organ, (so that) he forgets his own self, (it is) the hand of Šulpaea, he will die". The god Šulpaea is known from a number of omina, incantations, and even some medical texts as AMT 84, 8 line 3 and 84, 9 line 2 (K. 1347). Šulpaea is the consort of Ninhursağ, usually referred to with the epithet, "lord of the table" as in line 19 of Section Baf The Death of Gilgamesh. Nowhere in either Sumerian or Akkadian literature as presently preserved is there any detailed information or extended mythology about this deity. The line is obscure and the mention of this deity does not help

261. YOS 10, 7 line r. 21; KAR 178 lines 24-33; 176, line 16.
to elucidate the difficulties.

50. 'š. ina kur-ri-šú ša CL GIG-ĭṣ-ma šeep-šú NU ZIG-ah ina DINGI(R) UTU.È ŠU DINGI(R) XV.'

This line is the correlative of 49, it deals with the left of these paired and as yet unidentified organs, this line is apparently adopted from TDP I 108:24-25 (XII col. IV:24-25) as KIMIN I 49 and 50 are in the same relationship to each other. The single exception between the XII tablet citation and this line is the omissions of a 'GIG' sign after 'È' in KIMIN I. 263

The text should be normalized as, 'š. KIMIN-ma ina kurrīšu ša šumēli mahiṣ-ma šeepšu lā inassah ina šīt ṣamṣi qāt dIštar imāt'.

The logogram 'DINGI(R) UTU.È' is equivalent to the Akkadian expression of the locus of the sunrise as a point of time as in a medical ritual in AMT 59, 1 line 28, 'ina šērti lām dUTU.È lām šēpa ana erṣeti GAR-nu ištatti', "he imbibes at dawn before sunrise, before he puts his feet on the ground" (while he is still in bed). An expressions similar to the tablet XII and KIMIN I citations appears in AMT 14, 5 line 11 and CT 23, 44 line 7, '[šumma amēlu SAG].KI-II-šū kilallān ištut dUTU.ÈEN dUTU.ŠŪ.A

263. "Omet ici 'mahis' qui se trouve dans le texte parallèle." TDP I, p. 237, note 405.
ikkalāšu', "If both a man's frontals ache from sunrise to sunset". There are various lexical references which equate the Sumerian with Akkadian 'šīt' and 'šīt šamšī'. Therefore a translation would appear correctly, "If - ditto, then, he is afflicted in his left organ, (before) he has pulled out his feet, at sunrise, (it is) the hand of Ištar, he will die". Labat adds in TDP I 108:24-25 the words "du sol" in his translation after, "arracher son pied" it is more likely that "du lit" would have been closer to the actual meaning. The time of the attack in this case must have some bearing on the position of the patient. Labat has followed too closely the rendering of AMT 14, 5 line 11.

51. 'š. KIMIN-ma GU.DU.MEŠ-šú KU₁₀.MEŠ GUB-su NU ě-a u mē NU ū-še-rid EGIR-tú GIG-ī š GAM.'

This line is similar to TDP I 132:60 (XIV col. I:60), however line 51 is written with more logographs as is the case with most of the text of KIMIN I. The term 'GU.DU.MEŠ' is equivalent to

264. ¹dUTU.E equals ši-it ¹Utu-ši', Igituh (short version) line 121, and, ¹dUTU.E equals ši-it ¹Utu-ši', Antağal D 226 and Nabnitu IV, numerous appearances in the astronomical texts and astrological reports, where however the 'UTU' is usually written simply as 'U₄'.
Akkadian 'qinnātu' meaning "buttock", in this respect it is difficult to distinguish from the term 'arkatu' which also occurs in line 51 written logographically as 'EGIR'. The term 'arkatu' is probably connected with the whole pelvis including the hip as it occurs with 'zibbatu', while 'qinnātu' often appears with the orienting adjectives 'imitti' and 'šumēli'.

The phrase 'manzaz-su lā ušša' is found in and discussed above in line 46. The verb 'ušerid' is a III/1 from 'redu' and means in this context to "emit", to "discharge" in such a connotation the word often appears with 'bīrku'. The text should be normalized as, 'š. KIMIN-ma qinnatīšu tarkāma manzassu lā ušša u mē lā ušerid arkata mahis imat'. The translation is difficult but appears to be, "If - ditto, then, his buttocks are stricken, he is not able to move from his place nor to emit fluid, his pelvis is afflicted, he will die". It is not quite clear what 'mû' means in this context, it does not commonly mean "urine" unless in an expression such as 'mē purīdi', however since no other meaning seems reasonable it is probable that "urine" is meant. It may well be that incipient uremic poisoning is involved. Unfortunately a good study of Semitic terms for physiologic processes, which are often described in colloquialisms. In such

265. Holma, Körperteile, pp. 64-66 lists a large number of passages.
a study it would be absolutely necessary to restrict discussion to the five points set forth in the unpublished dissertation of M. Held. 266

52. 'š. KIMIN-ma ri-bit-su šá XV nap-hat-ma KU₁₀-át NU₂.ZU ú-rap-pad ŠU DINGI(R) ISKUR ina AN.IZI GIG-is GAM.'

This line is adopted from TDP I 140:44'-45'(XIV col. III:44'-45'). The word 'ri-bit-su' has no ascertainable etymology and no identifiable meaning. Labat merely rewrites the syllabic signs and attempts no translation whatever. On the face of lines 52 and 53, the term must be similar to 'kur-ri-šú' of line 49 in that both represent paired organs. The problem is, as stated in section 6a above, one of the identification, ordering and nomenclature of the superficial anatomy of the body. The assignment of designations for this or that anatomical feature is often based on criteria somewhat different than Grecian, Medieval and Modern medical taxonomy. The normalization and translation is

266. John Hopkins, 1957 p. i-iii, These points stress the semantic contextual relationship or affinity of words rather than their simple consonantal parallelism. Nowhere is such a regulation more important than in deducing chronologic and etymologic histories of technical terms.
as follows, 'Š. KIMIN-ma ribissu ? ša imitti naphatma tarkat lā idû urappad qāt d'Adad ina qarūri mahīṣ imāt', "If - ditto, then, his right ? is inflamed, (it is) stricken, he does not comprehend (where) he wanders, (it is) the hand of Adad, he is stricken with insolation, he will die". Sun stroke or insolation would normally strike in the middle of the day or early afternoon so that the statement is more than a diagnostic phrase it also describes a temporal aspect. This will match the phrase cited after the divine name in line 53.

53. 'Š. KIMIN-ma ri-bit-su šá CL nap-hat-ma KU10-ét NU ZU ú-rap-pad ŠU DINGI(R) DIL.BAT ina KUR ur-ui GIG-īṣ GAM.'

This line is the correlative of the above and is adapted from TDP I 140:46'-47'(XIV col. III:46'-47'). The phrase 'ina KUR ur-ri', denotes the time of the seizure or onset of the illness as 'ina AN.IZI' does in the preceding line. This logographic phrase is normalized as 'ina šāt urri' which is translated as "at first light", "dawn". This is grammatically similar to the common phrase 'ina šāt muši'. The normalization and translation of the line should be, 'Š. KIMIN-ma ribissu ša šumēli naphatma tarkat lā idû urappad qāt d'Dilbat ina šāt urri mahīṣ imāt', "If - ditto, then, his left ? is inflamed, (it is) stricken, he
does not comprehend (where) he wanders, (it is) the hand of Dilbat at first light, he is afflicted, he will die". Dilbat was, of course, the ancient name of tell Daillam which was excavated and described by Rassam in the late 80's of the nineteenth century, the Assyriologist Ungnad edited the texts in a special edition in 1909. However its use as the name of a city and possibly also as a city divinity is widespread as in the Codex Hammurabi, 'ilu šarrī mudi igigalim mušaddīl merīštīm ša Dilbat Ki', " -- the divine king of the town, wise and knowing, who extended the city of Dilbat". The city was the cult center of Uraš and its proximity to Borsippa often linked it with that city in inscriptions. Its use as a divine and personal name is quite limited to a few citations as the name, 'DIL.BAT Ki-abi'. Since this is the situation it brings to attention the question of whether the phrase 'ŠU DINGI(R) D.N.GIG-iš' actually means to explain the symptoms and name the etiological agent, or whether it is at most a formula of naming the malady. If this latter is true it should be translated, "afflicted by the 'hand of D.N.' disease", a practice followed in part by some of the

269. CH III lines 16 and 17.
270. Stamm, Akkadische Namengebung, p. 85 (Gautier, Dilbat, 14 rs. 13).
lexicographers and editors of the CAD, but not consistently throughout. If this is an accurate semantic solution that this disease entity may be one frequent in or connected with Dilbat the city and not necessarily to be attributed to any deity of that name. As discussed in 6a above, it is beyond our present knowledge to deduce such semantic relationships for names or proper nouns much less technical terms.

54. 'k. KIMIN-il ina ÚR-ŠÁ ŠÁ XV GIG-iš u e-ešil GA[M].'

This is the last full line on the reverse of the tablet, the large crack which removed the almost one-third of the tablet which is lost cuts through the lower vertical wedge of the 'GAM' sign and finally reaches the sinistral edge just after the initial two signs of line 73 below. Line 54 is adapted from TDP I 140:40' (XIV col. III:40') which Labat restores after this citation. \(^{271}\) The Sumerian logogram 'ÚR' may be equated with Akkadian 'šunû' and means "leg", "thigh". \(^{272}\) The line should

\(^{271}\) There is a misprint in the notation in TDP I, p. 237, where the citation states, "Si, ditto (c.f. XIV, col. II, 40')," it should read, "col. III".

\(^{272}\) Hh; XV:line 287 ff.
be normalized, 'š. KIMIN-ma ina šùnīšu ša imittī mahīš u esil
imāt', "If – ditto, then, his right thigh is afflicted and he is
constipated, he will die". The form 'esil' is discussed above
in line 35.

55. 'š. KIMIN-ma ina UR-šú šá CL GIG-īš ŠÀ.MEš-šú eb-ṭú
SAG.KI-šú he-sa-āt [GAM]."

This line has lost the 'GAM' sign at the end, there is a fairly
large space between the 'āt' sign and the break in which no signs
are discernible. This is the last line that may be unequivocally
restored. The logogram 'ÚR' here is oriented to the left by the
phrase 'ša šumēli' and an extra series of signs are added after
the logogram 'GIG'. An interesting phenomenon is noted on the
tablet at this point, from line 51 on the last vertical stroke
of the 'su' sign of the logographic writing 'GUB-su' is directly
in line with the last vertical wedge of the 'īš' sign in all
subsequent lines from 52 through 62. These wedges are drawn so
closely to each other and in such precise fashion that they
separate each line so that in 54 there is a wide space of
approximately 5 mm between the sign preceding the 'GIG' and the
two initial horizontal strokes of the sign, while after the 'īš'
sign a space of almost 15 mm is placed before the next sign. In
lines 55 and 56 the signs to the left are proximate in spacing
to 55 above and 57 below but the signs to the left are somewhat
smaller and badly foreshortened to get them all into the space.
From line 57 to 62 there is a large square area empty of signs
except for a group which intrude in line 60. The signs to the
right of the space are again all lined up to be vertically
aligned and symmetrical in order, thus it appears that the center
column 273 may have actually been a memonic device much as a child
learning to count from 120 to 129 will write in a vertical pattern
12- ten times and then fill in the unitary digit. If such is
ture then this copy represents a series of tablets with a long
history in the scribal schools and it is sheer accident that
more copies of the text are not known. Memonic devices in the
visual display of texts usually develop over many repetitious
usages. A text with similar devices is to be found in almost all
extant fragments of the physiognomical tablet K. 3815 plus 4047
plus 4090 plus 9546 plus 12768, 274 where repetitious signs in

273. This is the semantic center as each phrase of the clause
beginning with 'Šumma KI.MIN-ma' is verbalized by the 'GIG-iš'
in its statival construction at the end, geometrically the ver-
tical line of 'GIG' signs is approximately 6 per cent to the
left of a center line from top to bottom.

adjacent lines are lined up in vertical patterns. A similar phenomenon is the concave circular indentures which are found equidistant the last wedge of one phrase and the initial wedge of the next in a rather sizable blank space. The physiognomical tablets frequently have these signatures, they again appear to have been indexes for checking the spacing or positioning of the lines. There are none of these indentures on the face of the tablet, but two on the reverse, one in the upper register of line 58 and one in the center of the tablet, the upper one 1 mm to the right, the lower one 4 mm in the same direction. However they are both in nearly exact equidistance between wedges in the lines where they were placed. Another orthographic peculiarity is a long straight, even line of indentation found in line 61 and starting at the right extremity of the lower horizontal wedge of 'is' and ending abruptly above the left hand tip of the lower horizontal wedge of 'šu' across an 11 mm space. This line was purposely drawn with care and precision in antiquity and is roughly perpendicular to the line of centers of the two circular indentures in lines 58 and 65. These additional marks are distributed by line count 58-(2)-61-(2)65, where the factor 2 represents the number of intermediate lines. Interestingly enough if this unexplained line does in fact represent the midpoint of the tablet, the resulting restoration of its original
size and area accords with the estimate made above on the basis of the formula for area that of an oblate sphere, and by line count about nine lines are missing on each surface giving the total of eighteen as estimated above. To return to the discussing of line 55, the word 'ebtu' is the adjective derived from the verb 'ebētu' which is found frequently in the 'SA GIG' series and means "to be cramped", "to be in contractive spasm", or possibly "to be in mixed spasm". It also is used in most other medical texts as AMT, TBP, PBS 10 and KAR 121, it also appears in omena such as YOS 10 as indicative of slaughtered animals dissected for inspection of omens. The following word, 'nakkaptu' is to be translated as "forehead" or following Labat, "temple". The verb following is the I/1 stative of 'hesē' and appears to be translatable as "swollen", "edematous", this may not be however the absolute meaning of the word. The line should be normalized as, 'š. KIMIN-ma ina sūnīšu ša šumēli maḫiš

275. TDP I; 112:16'(XIII col. I:16'); 126:17'(XIII col. IV:17'); 206:66 (XXXV:66); 220:29 (XL:29); 226:79 (XL:79) it is used in the IV stem in, 32:3 (IV:3); 64:56'(VII:56'); 182:36 (XXIII:36). The classic use of the IV stem is found in 'Ludlul III, (BWL 52:28) 'lišānu ša innibta'.

276. von Soden neither recognizes such a root nor lists the citation under another root.
libbūšu/ qerbūšu ebtu nakkaptāšu hesāt [imāt], "If - ditto, then, he is stricken in his left thigh and his colon is contracted in spasm (and) his forehead is swollen [he will die]."

Interestingly, this is one of the very few prognostic statements in KIMIN I without the formula 'ŠU DN GAM' in that order, as similar to TDP I 140:41'(XIV col. III:41')


This is the longest and most compacted line on the reverse of the tablet. It fills only one line on KIMIN I but fills two lines of TDP I 140:35'-36'(XIV col. III:35'-36') from which it is apparently taken even though both lines must be largely reconstructed on the basis of line 56 of KIMIN I. All the terms used in this statement have been discussed elsewhere in this study with the exception of the Sumerian loan word 'GU-TAL' written out syllabically as 'kutallu' and translated as "back of the head", "back". The line should be normalized as, 'š.


278. The obvious equation of these two terms from Sumerian to Akkadian is shown in PBS 5, 137 line 4; KBo 1, 42, II line 24 equivalent to Hittite 'iškiša'. 
KIMIN-ma sunasu uma.b.b_a~ qatesu idesu ana kutallii~ tahut qat "Mašt[abba imāt]", "If - ditto, then, his thighs are stricken, he wrings his hands, he turns his arms to his back, (it is) the hand of Mašt[abba he will die]".

57. 'Š. KIMIN-ma ina HĀŠ-šú šá XV GIG-is KU-šú la DIB [X--GAM].'

There is no clear parallel or similar line in the existing 'SA GIG' series to any of the lines from 57 to 62. The fracture in the right hand side of the tablet here juts in some 15 mm and so cuts off an area which would correspond to about four signs. The logogram 'HĀŠ' is difficult without proper lexical citations Labat suggests the reading 'ZIG' as equivalent to 'imšu' both in his text and notes, this he translates as "bas-ventre" on the basis of Sumerian 'ZIG.TIBÍR.RA'. However a clear citation appears in the Vocabulary á a equals Nâgu which has the equation (line 191, VII/2) "[ha-aš] equals [HĀŠ] equals [š]a-bú-1[um]

equals [e]n-ē[u]". The preferred translation would then be "abdomen", "hypogastrium" but also possibly and preferably "peritoneum". This last meaning seems desirable on the basis of such citations as TDP I 126:IV 11'(XIII col. IV:11'), 'š. imessu u ṛēš libbīšu --''; also KAR 195 r. line 16, 'š. sinnīštītu ulīdma elān ūrīša usahhalši emēšaša ilappataši --', "If a woman after she has delivered, has a piercing pain in her pubic region and her peritoneum aches --". The normalization and translation of line 57 are, 'š. KIMIN-ma ina emēššu ša immittī maḥiš ūmššu lā šabīt [ X -- imāt]', "If - ditto, then, the right side of his peritoneum is stricken (and) he loses his ability to act, [ X -- he will die]."

58. 'š. KIMIN-ma ina HĀŠ.GAL-šû šá CL GIG-iš KINa DÉ DÉ-[si X -- GAM].'

The logogram 'HĀŠ.GAL' is found only one other place and that is a pharmaceutical list in which it appears as descriptive of a particular malady, 'šumma aμēšu HĀŠ.GAL mariš emšù --', where it means a specific disease, perhaps "greater peritoneum" or "hypergastrium".280 The verbal form 'iltanasi' is discussed

280. Kocher: Pflanzenkunde 22, i line 38.
above in line 38 where it first appears. The normalization and translation are, 'š. KMIN-ma ina emšu-GAL-šu ša šumēli maḫiš kīma iltana-[si X --- imāt]', "If - ditto, then, the left side of his hypogastrium is afflicted, so that he continually cries out [--- he will die]."

59. 'š. KIMIN-ma ina DU_{10}.GUR-šú šá XV GIG-iš ū ina KA-šú ŪŠ BURU₀ [--- GAM].'

The logogram 'DU_{10}.GUR' appears only lexigraphically in A equals nānu where the equation states, "AN.DU_{10}.gu-rù, GUR equals AN.ZI.SUKUD equals ŠU.GUR equals Kin[šu]". It is known from numerous medical references and is used in omens, and means "shin bone", "lower leg". This is apparently its only occurrence in the whole of the 'SA GIG' series or accompanying fragments. The phrase 'KA-šú ŪŠ BURU₀' is similar to expressions found above in lines 11 and 40. The proper normalization and translation follow, 'š. KIMIN-ma ina kimšāšu ša imitti maḫiš ū ina pīšu dama i'azru[--- imāt]', "If - ditto, then, his right lower leg is afflicted and he passes blood from his mouth [--- he will die]."

281. CT 12, 46, II line 16-18.

282. e.g. CT 23, 3 line 17; CT 28, 16 line 82 ff. Kuchler: BKBM K 61, pl. I line 28. c.f. also Holma: Körperteile, p. 136 where it is read, 'qimšu/qinšu'.
It is impossible to state what precise malady this would be, but the possibility of its being infantile paralysis (poliomyelitis or the Heine-Medin disease) or even leukemia is worth noting.

60. ’Š. KIMIN-ma ina DU₁₀.GÚR-šú šá CL GIG-ig u ina KA-ša ÚŠ MUD ŠUB[--- GAM].’

This line is the correlative of 59; it is normalized and translated as, ’Š. KIMIN-ma ina kinsāšu ša šumēli mahiš u ina pīšu dama ida’am ittadi [--- imāt]’, "If - ditto, then, his left lower leg is afflicted and blood gushes from his mouth, [--- he will die]". The exact form of 'nadû' intended is not ascertainable as the phonetic complement was lost in the break of the tablet.

61. ’Š. KIMIN-ma ina GIR-šú šá XV GIG-ig ŠU DINGI(R) UTU ana UD [--- GAM].’

The normalization and translation of this text are, ’Š. KIMIN-ma ina šepīšu ša imitti mahiš qāt Šamaš ana UD [--- imāt]’, "If - ditto, then, his right foot is afflicted, (it is) the hand of Šamaš (after X days) [--- he will die]". The deity Šamaš is
mentioned in line 18 and the sun as an etiologic agent is mentioned in line 50.

62. 'š. KIMIN-ma ina GIR-šú šá CL GIG-šu ŠU DINGI(R) XV ur[ --- GAM].'

This line is the correlative of the above; it should be normalized and translated as, 'š. KIMIN-ma ina šepîšu ša šumêli mahîq qāt Ištar ur - [ --- imāt]', "If - ditto, then, his left foot is afflicted, (it is) the hand of Ištar, (it will endure ?) [ --- he will die]."

Lines 61 and 62 are typical of the 'SA.GIG' series in that they sharply divide between afflictions of organs on "right" and "left". Although the left in Mesopotamian omens is usually evil, malevolent, even foreboding yet in these texts both appear different in detail but about equal in outcome. This may be evidence to support the notion the Akkado-Babylonian was not primarily magical even though large numbers of its practitioners were exorcists or incantation priests.

63. 'š. KIMIN-ma GIR-šú šá XV i-maš-šar pâ-šû šu-dur mi-šit-ti [ --- GAM].'
This line is adapted from the two line statements in TDP I 142:3'-4'(XIV: col. IV:3'-4') which is partially restored on this basis. The phrase 'pāšu sudur' also appears in KIMIN II (LKU 78; VAT 14546) after the initial signs, 'š. KIMIN-ma'.

The verb 'mašāru' means "to drag", "to draw", as in CH law 256, 'Šumma pihasu apalam lā ilē ina eqlim šuati ina lātim im-ta-na-aš-ša-ru-šu', "If he has not been able to meet his obligation, through that field with the oxen they shall drag him". This root and usage must be kept separate from the Neo-Assyrian form 'mašāru' which is a defective development from 'wašāru', a verb which appears in the dramatic description in Gilgamesš XI when Utnapištim looses the dove and the raven on Mount Nišir, 'ušešīna turta- ha umaššir', "I set free a dove", this verb 'umaššer' > 'wuššurū' appears as 'uwaššer' in the Royal Inscriptions. The verb 'šudur' which also appears more commonly in the forms 'šunduru' > 'šudduru' means "to twitch" as in regard

283. Sennacherib; OIP II, 47 lines 27-29.

the eyes in cases of squint where nystagmus or maladie des tic
may be present as in the lexical citation, "[IG]I.[X ] equals
[šu-u]n-du-ru", or the name 'š unduri', "Blinky" or "Twitch"
cited in documents from various locations. The next word is
'mišitti' > 'mīšītu' derived from 'ešū' means in this context
either "confusion" or "blindness". The rest of the line is
restored from the extant portion of TABLETTE 14, the normalization
and translation follows as, 'š. KIMIN-ma 𓊧 𓊥 𓊥 imitti imaššar
appasu' 287 𓊳 𓊥 𓊨 imitti [rabīšī ūrrakma imāt], "If - ditto,
then, he drags his right foot and his nose twitches, (it is)
'confusion' [of a Rabīšu-demon, he will linger (and) he will
die]". The term 'Rabīšu' is used of various types of demons

285. Igituh equals tāmartu, Landsberger-Gurney; AfO 18, p. 81 ff.
286. BE, 14; 111 i 17.
287. Since 'ṣudurn' is used specifically of eyes and nose it
is preferable to understand the logogram 'KA' as equaling 'appu'.
Contra Labat who normalizes 'pāšu' and translates on p. 142 as
"bouche".
288. The word appears frequently in TDP I as an agent or title
of various maladies, (TDP I) 40:27 (IV r.:27) 'rabīšī[āšī]
pūt-su'; 182:40 (XXIII:40) 'rabīš ūrrhi'; 190:25 (XXVI:25)
'rabīš nāri'; and 192:40 (XXVI:40) 'qāt rabīši'. A discussion
of it appears in Poebel, AS 14 p. 55 ff., "--rabāšu from which
derives rābišu, "the overseer", "the guardian", "Aufpasser".
and of officials of state. 289 This line shows an interesting association of two rather different symptoms into a vague idea of syndrom formation. The only empirical association of these two entities may be assumed to have been their temporal coincidence.

64. 'š. KIMIN-ma GIR-šú šá CL i-maš-šar GIG DINGIR BA. BA₆ GIG-š GAM.' (Then on the same line another sentence follows.)

'š. KIMIN-ma GIR-ILšú am-ša-ma LAL 1₃ [DA-e GAM].' These two are separated in TDP I 142:5'and 11'(XIV col. IV:5' and 11') for no apparent reason; they appear together here. The statements in between also end with 'GAM' and contain the standard 'š D.N. GAM' formula, unless the unifying factor is that the line 11' citation deals with both feet and ends with 'GAM' while the others referring to podiatric ills are singular with the exception of line 10' which most likely ended with 'iballut'. 290 If this is true it may be possible that only the principle of the

289. Rabišu as an "overseer" is cited from many sources, Wiseman Iraq 20 p. 493 "rabišu limru" (Esarhaddon Treaty); but also in omina as in Krause TBP 28 rev. 5. and MRS 6, 235 ff.

290. This term appears a number of times in TABLETTE 14, and some of the prognostic statements in 'KIMIN II' are perhaps derived from this source.
prognosis was referred to, and general notions were applied to particular cases by the practitioners. The normalization and translation of the lines must be understood as, 'š. KIMIN-ma šeṣpu ša šumēli imaṣšar mihiṣ d'Baba maḥiṣ imāt -- š. KIMIN-ma šeṣpu anšama tarāṣa [lā ile’e imāṭ]', "If - ditto, then, he drops his left foot, he is afflicted, [(the) action of Baba, he will die] -- If - ditto, then, his feet are chilled he is unable to [stretch it out, he will die]." This latter section is quite similar to line 18, while the goddess Baba was discussed under line 26. These two lines and the form in which they are written are most certainly taken from 'SA.GIG', Tablet 14. There seems to be no necessary association between the symptom described as 'tarāṣa lā ile’e' and any one god or goddess, this may well indicate either paralysis or spasm, without any reference to the causative agent or progress of the patient.

65. 'š. KIMIN-ma GABA. MEŠ ša GIR-II-šú KU₁₀ MEŠ ŠU DINGI(R) [ XV urrak-ma GAM].'

This line is apparently adopted from TDP I 144:51' (XIV col. IV, line 51') from which the last four signs are restored in approximation of the space remaining on the tablet. The line is simple enough to normalize but excessively difficult to trans-
late, 'š. KIMIN-ma irāti ša šepāšu tarka qāt [Ištar urrakma imāt]. The semantic relationship of 'GABA.MES ša GIR-II-šú' defies translation unless 'GABA.MES' is understood in some prepositional sense,291 as it appears in Neo-Assyrian annals. The problem is that nowhere in such usages is the 'MES' written, Labat suggests the translation for the phrase, "'poitrine' de ses pieds".292 As far as can be researched no other such combination can be located in the 'SA.GIG' series, in line 28 above the logogram is found with 'ŠU.MES'. The suppositional translation must be then understood as, "If ditto, then, the instep of his feet throb, (it is) the hand of [Ištar, he will linger, he will die]". It is acknowledged that the anatomical location of many of the gross anatomical terminology is simply unknown.

66. 'š. KIMIN-ma kar-ši U.MES GIR-II-šu KU₁₀.MES [ — GAM].'

This line is similar and may be adopted from TDP I 144:49' (XIV col. IV:49') which has a variant reading, 'Karši ubānātīšu


292. Labat places a notation and a footnote beside 'poitrine', "Le dessus du pied?". TDP I, p. 145 r. 254, he would thereby understand the phrase to mean, "instep of the foot".
šepēšu šalma'. Line 66 however may be the podiatric variant of line 29 of 'KIMIN I'. If so, the normalization and translation would appear to be, 'š. KIMIN-ma karši ubēnantišu šepēšu tarka [u idome qēt etēmni imāt]', "If – ditto, then, the underneath (cuticle) of his toe nails are torn and dark, (it is) the hand of a ghost, he will die".

67. 'š. KIMIN-ma UZU, Meš-šú i-šam-ma-mu-šu IGI-II-šú ÚŠ D[IR -- -- GAM].'

This line has no parallel in the 'SA GIG' series although the logogram 'UZU' which is equivalent to Akkadian 'šēru' is frequent enough, it is used in 'SA GIG' rather infrequently. There is some complication concerning this term and its Hebrew, Ugaritic, Arabic and Syriac cognates. In Akkadian it appears to mean "flesh", "muscle tissue". The verb 'šamāmu' is of infrequent use but is translated by Labat and others as "paralysées", a possible substantival form of this word is cited in CT 16, 31 line 96. The phrase 'IGI-II-šu ÚŠ DIR' should be normalized as, 'INāšu dama malâ' as similar phrases in AMT 73, 1 line 20 which is equivalent to a more common phrase, 'INāšu dama šunnu'a' both of which may be translated, "his eyes are bloodshot". The line

293. Holma, Korperteile, pp. 1, 3, 4, 89.
67 may be normalized and translated as, 'š. KIMIN-ma šēerēšu išammamūšu Ināšu dama [malâ -- -- imēt]', "If - ditto, then, his flesh it is paralyzed, his eyes are blood[shot -- - - he will die]".

68. 'š. KIMIN-ma [ X ]MEŠ-šú uk-kak kīma ug-ga [ - - - - - - - ].

From the position of 'MEŠ-šú' directly under the same signs in the line above, Labat has restored the single missing sign as 'UZU' as in the above line. Like line 67 this line has no parallel in the extant 'SA GIG' series. The derivations and forms of both 'ukkak' and 'ugga' are suppositional making any translation provisional. The last sign of 'ugga' is defaced and this plus the loss of the remainder of the line renders it unrestorable. Labat's suggested translation is about all that can be maintained, "il gratte violemment ses [chairs], comme[ - - "].

69. 'š. KIMIN-m[a -- ?] DU ŠU-II-[ - - - - - - - - - - - - - ].

This line and the succeeding are too fragmentary for successful translation or commentary.

70. 'š. KI[MIN - - - - ] MI.M[EŠ - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - ]
71. 'š. KIMIN [---] is known from only one small fragment published as LUN number 72. 'š. KIMIN [---] demonstrates only 21 lines, none of which are complete. They 73. ['] KIMIN [---] the typical pattern, having the 'šš' sign followed immediately by 'šš' KIMIN 'justice' and then the 'šš' enclitic. Unfortunately, there is not enough of any one of the lines left to show parallel or position of 5 signs. However, even where there are longer fragments, they do not allow to be equivalent to any of the '3A E15' series as it now exists. It 74. is of course possible that this tablet represents a fragment, or continuation of the '3A E15' series which is presently not extensive. Since the tablet in LUN is so poorly drawn, and Labat has not provided any publication, TDP II, a new drawing of the text, is impossible to attempt to reconstruct the actual grammatical or syllabic signs. They simply cannot be recovered from the kind of transliteration offered by Labat. No basic commentary on the text is therefore possible. The only advice is to take some tentative and comparisons from the text and 75. transliterations offered by Labat with what is already known of KIMIN and the '3A E15' series in general. The first two
The fragment denoted by Labat in TDP I as TABLETTE KIMIN II is known from only one small fragment published as LKU number 78, VAT 1456. The plate in LKU is extremely poorly drawn and demonstrates only 21 lines, none of which are complete. They appear to have been shorter, or at least no longer, than the lines in KIMIN I. They are set up in the same order, with the typical pattern having the 'DIŠ' sign followed immediately by the KIMIN "ditto" and then the 'ma' enclitic. Unfortunately there is not enough of any one of the lines left to show parallels or position within the 'SA GIG' series. However, even where there are longer fragments they do not seem to be equivalent to any of the 'SA GIG' series as it now exists. It is of course possible that this tablet represents a fragment or continuation of the 'SA GIG' series which is presently not extant. Since the tablet in LKU is so poorly drawn and Labat has not provided in his publication, TDP II, a new drawing of the text, it is fruitless to attempt to reconstruct the actual logographic or syllabic signs. They simply cannot be recovered from the kind of transliteration offered by Labat. No basic commentary on the text is therefore possible. The only choice is to make some comments and comparisons from the text and transliterations offered by Labat with what is already known of KIMIN I and the 'SA GIG' series in general. The first two
lines, as they are presently extant, seem to deal with diseases or maladies of the eyes. The third extant line deals with blinking, twitching or spasms of the face. The next four lines deal with blood being emitted from the mouth under varying conditions. There then occur two lines, the first dealing with the teeth, the second with the face again, and after this a line apparently detailing a disease or malady of the anus; the next line being unreadable, then two lines dealing with conditions of the face, the next with the condition of the liver, the next two with maladies of the hands and feet. The nineteenth extant line deals again with the colon and difficulties with elimination, internal bleeding and possibly, vomiting and diarrhea. The last three lines are too fragmentary to deduce exactly which ailment is involved.

The most interesting thing in looking at this text is the fact that it appears to follow the classical Akkadian order for all medical and medical terminological texts as detailed in the Nabnitu Series, that order being, from head to foot. The lines appear to have been short, possibly too short to have included the usual etiological god, or divine name, at the end of the line. However it is quite possible that each line did end with the 'GAM' sign indicating the death of the patient if the malady
discussed continued for any length of time or persisted.

One serious objection to the understanding of this text as basically nothing more than a continuation of the mortality tables of KIMIN I, is the fact that the sixth line trails over into actually two lines. The last part of the first section is destroyed, as is the whole right side of the tablet, but the last line is extant. It states, "hand of Ninurta, he will be delivered and he will live". This of course belies any possibility, if such a phrase were general throughout KIMIN II, that the tablet can be directly connected as a mortality table with Tablet I. Nevertheless, on the other hand, it must be also mentioned that it is possible that both KIMIN I and KIMIN II were hand apparatus to be used by Mesopotamian physicians or possibly exorcists in the practice of their prognostics and diagnostics in the presence of an actual patient. As such, of course, one tablet would have detailed those diseases and maladies which would bring about death and another, those diseases and maladies which had a prognosis of recovery of health and continuation of life. Unfortunately, however until a new colation and drawing of the tablet published in LKU 73 can be actually made and published, it is impossible to draw any further conclusions or to make any further valid comments.
on the actual text of this particular tablet. However, the title 'KIMIN II' does seem sufficiently established by the text to continue its use.

We now turn our attention to a number of fragments also considered by Labat as were KIMIN I and KIMIN II to be unclassifiable, that is, to not fit clearly into any section of the 'SA GIG' series but to contain the same type of prognostic and diagnostic information which the 'SA GIG' series contains.

The first to be considered is that which was published as LKU 93 plus K 2274. This has been reprinted by Labat in a new drawing in TDP II, Plate XXIII. This fragment contains approximately 22 lines on the obverse and approximately 23 lines of text on the reverse. The fragment is small, not more than 75 mm in height. Only one side, and neither the top nor the bottom of the tablet, have survived. The signs are of the typical Neo-Syrian period. The writing is small and careful. In two lines where the whole, that is the end of the line, is extant due to the fact that it was folded over again and actually filled two lines, we find that the final word is the 'GAM' sign. This is of course well known from the series KIMIN I and many places in the 'SA GIG' series where it occurs to indicate a fatal prognosis.
for the patient. In Line 6 of LKU 93 there occurs one of these folded lines and the words are still apparent, 'ŠU DINGI(R)-šu GAM', which may be normalized as, 'qāt ilīšu imāt'. Phrases following this formula occur in well over 85 percent of the text in KIMIN I and are also found in great abundance in 'SA GIG' itself.

In LKU 93, interestingly enough, in lines eight through twelve of the obverse, there is still remaining the very clear reading, 'ŠU DINGI(R) LAMASTI', which is apparently to be translated, "the hand of the god Lamasti". This of course is one of the famous Assyrian demons who was the messenger of the "God Sīn".

The text is so badly destroyed that no discernable order of the parts of the body can be made out, except to say that in line sixteen the head is mentioned, while in the preceding line, the feet are mentioned, and in the last fragment of the twenty-fourth line of the reverse it appears that the ears are mentioned. In summation, about the only consistent comment that can be made is that this too appears to have been either a shortened list for a student or someone just learning the Mesopotamian medical canon or else a hand apparatus of some sort.
The next fragment to which we turn our attention is K 6717. This also Labat has seen fit to reproduce in a new publication, TDP II, plate XII. According to Labat's note in his index of these plates this particular copy of K 6717 was made according to a copy of F. W. Geers. In this case again the text is in extremely bad condition. On the obverse the left edge still remains and in the extreme right hand corner, the bottom of the tablet can be made out. Every line that can still be read on the extreme left edge begins with the 'DIŠ' sign which of course is a logogram for 'Šumma'. In line four the KIMIN sign is seen after the remains of the 'ir' sign, however there is no evidence to link this fragment with either KIMIN I or KIMIN II. The obverse contains fragments of approximately 22 lines, the reverse of only 14. Unfortunately due to the extent of damage to this particular fragment almost nothing of any continuous sentence structure of what appeared to be prognoses can be made out. At no point in the tablet is the ending of a particular line, nor the beginning, preserved, except for the few 'DIŠ' signs which can be read on the left hand side of the obverse. Even these appear to be followed by lacuna.

This text however does have some very few lines or at least some fragments of lines which can be equated with existing lines in
the 'SA GIG' series. In dealing with any of these fragments there is always the possibility that it may represent some single tablet or some single fragment of a tablet which is not extant. It is known that by comparing the 'SA GIG' catalogues with the 'SA GIG' fragments as we have them, large gaps appear in the series but to which place in the gaps, or if in the gaps at all, these fragments may be assigned, is impossible to tell on the basis of our present knowledge.

The last fragment with which we must deal was published as LKU 92 plus K 6422. Labat published this as TDP II, plate XXIX. This is a much larger, much better preserved fragment wherein both sides of the tablet, that is, their original sides, are extant. However, for some reason, much of the largest preserved area of the tablet is empty. The signs, as in the lower segment of the reverse of KIMIN I, are mostly blank; a few similar signs set off here and there in pairs. This tablet again, possibly because of the large amount which is preserved, may be matched up with certain individual statements found in the 'SA GIG' series. The tablet appears to be a catalogue of maladies and the number of lines which are preserved seem to end again with the typical Babylonian prognostic statement, 'ŠU DINGI(R)' and then a divine name. Only the face of the tablet is preserved;
the obverse appears to have been lost in antiquity. This fragment again, like those of the KIMIN and those of the 'SA GIG' series, is written with a large number of logograms and apparently come rather late in the Mesopotamian scribal tradition.

The importance of all these fragments when taken together with KIMIN I and KIMIN II is that they illustrate that there was aside from the canonical text of the 'SA GIG' series, a large and complicated distribution of fragmentary texts, that is, not that the tablets were broken up but that they represented only parts or adaptations of the 'SA GIG' series. These may have been used for a variety of purposes. They may have been used to train younger scholars to write the 'SA GIG' series. In essence then they would be school texts, or, on the other hand, they may also have been hand apparatuses. The problem with this latter suggestion is that the tablets appear to have been so short and the order so disorganized that there would be little hope of finding what one wished to find in any one of the tablets. The problem of what relationship the canonized text (or texts) of any of the technological series from Mesopotamian libraries maintain in regard to all of the various kinds of secondary and subsidiary texts is an interesting and difficult one. Suffice it to say that before any final solution can be given to this
problem it will be necessary to have vastly more texts and vastly better and better organized fragments than we currently have. Last but not least, it would be advisable to have in one large series, such as is proposed by Kocher, plates of the actual cuneiform text all done by one hand and all published at the same level of quality so that the texts can be adequately compared. Labat has rendered a singular service, first by collecting all the various pieces of the 'SA GIG' series and making a very concerted attempt to put them in some kind of order, and secondly by the collection of these various fragments, and thirdly by the publication of a large number of the texts in cuneiform. However, as has been seen in the commentary which has been given above on the KIMIN I series, Labat's fashion of transliteration actually presupposes a certain manner and mannerism of normalization which of course destroys the actual signs. It would perhaps be better if the actual signs were transliterated, then a normalization supplied, and after this the translation and any relevant notes.
The position of these texts in the Mesopotamian Medical Corpus 'SA GIG' has been to some degree, discussed above, both in the commentary on KIMIN I and KIMIN II and in the commentary on the fragments. However, certain other observations must be incorporated into this particular study. The 'SA GIG' series which is large, combines various kinds of statement placed in various forms, as has been noted above. Undoubtedly in antiquity for any facility in use of the 'SA GIG' series to be gained it must have abbreviated to yield a list of the most important and more commonly used diagnostic and prognostic statements. Just exactly what these prognostic statements were used for is not clear. Obviously they were used to inform both the physician and exorcist of the condition of the patient of the possibility of his survival and the probability of his demise. They may also have been used to instill at least some hope in the patient himself.

There is also the problem of any cosmological significance to these tablets. Is it possible that human maladies and physiologic
peculiarities and disease entities were looked upon by the Babylonian soothsayer in the same fashion as he would look upon a two-headed chicken or any malformed barnyard animal. The evidence given by the 'SA GIG' series and the evidence given by KIMIN I and KIMIN II and the fragments is not sufficient to answer this question. There is however a clear demarcation between the type of texts and the type of ideas found in the 'SA GIG' series and the type of idea and text which is listed in Kraus TBP where the texts are purely physiomatic and such peculiarities of human anatomy as freckles and birth marks set side by side with disease entities and various types of injuries. Labat points out in his introduction the prognosis of healing, of the patient getting well, occurs approximately 176 times in the 'SA GIG' series and the prognosis of the patient's death, approximately 423 times, with the latter more than twice the former.

It is possible then that the KIMIN I series which supposes the death of the patient in every case, may also suppose that the patient is left without treatment. Evidence for this is the fact that not once in the KIMIN I series is any type of treatment or duration of the patient's condition mentioned. KIMIN I then is purely prognostic, its prognosis being based on a
diagnosis no matter how short and insignificant this might seem to be, and is in no way therapeutic. That is, it neither supposes nor discusses any treatment on the part of the author of the tablet or the specific person reading the tablet. It neither exhorts in helping the sick, nor instructs the reader to refrain from offering aid.

Labat in his introduction to the 'SA GIG' series in TDP I comments on two interesting factors of KIMIN I tablet. First, that the observations of all the principle parts of the body and their diseases from head to toe are drawn particularly from the twelve tablets of the second part of the 'SA GIG' series. Secondly, that every line appears to end in a prognosis of death. It is our feeling, however that Labat is mistaken in stating that the mortality which is described and forecast in each of the KIMIN I prognostic statements was not the primary and sole specific object of putting all of these specific statements together. It seems that the very finality and severity of these prognoses and the diagnoses upon which they are grounded would make their collection in one particular and easily referred to manual, reason enough in itself for writing this particular composition. Such compositions might be made up on the spur of the moment or be peculiar to one
particular part or section of the country, or even unique to one school of medical praxis or type of exorcism. It is not inconceivable that the same variance exists between the 'SA GIG' series and the KIMIN I and II tablet as would exist between a modern treatise on disease and a thumb-indexed physician's desk reference, the one to be used in theoretical study of practice and concept, and the other to be used as a manual for the daily application of the healing art.
IV. The relationship between the codified lists of diagnostic-prognostic texts and the Assyrian Medical Texts from the library of Assurbanipal, located in the British Museum and published by Reginald Campbell Thompson, Oxford, 1923.

(Section 11)
The text dealing with maladies and symptoms published by Rene Labat as "Traité Akkadien de Diagnostics et Prognostics Medicoux", published in Paris, 1951, (1-48), Labat has attempted to re-organized the 'SA GIG' series on the basis of not only the colophons found at the end of each text but also in accord with the literary catalogues excavated from ancient Mesopotamia, giving the titles of the tablets in the series.

It was the custom in Mesopotamia to utilize the first line of the tablet for the initial phrase as a title of the whole. Literary catalogues listing these titles are not uncommon. The correctness of Labat's assumptions in the reorganization of the 'SA GIG' series has been demonstrated by the Nimrud catalogue edited and published by J. Kinnier-Wilson. The diagnostic-prognostic series was originally comprised of some forty tablets. The outline of the division of the forty tablets is as follows. The first part, Tablets I and II, the title of which is "When the exorcist arrives at the house of a sick man". The second part, Tablets III to XIV, "When you are about to
approach a sick man"; the third part, Tablets XV to XXIV, the
title, "If being stricken during one day, etc."; the fourth
part, comprising Tablets XXV to XXXIV, apparently had a title
"When (some action of the physician)...." but unfortunately
the rest of the line of the very first tablet in this particular
section is lost. The fifth part, Tablets XXXV to XL, had the
title, "If the expectant mother during her pregnancy, the top
of her forehead is yellow, etc."

Labat has stated that the first two tablets comprising the first
part of the 'SA GIG' series are actually a preamble to the work
itself. He is correct in maintaining that these tablets are
in fact not medical but that they are formed of extracts adapted
from the omina and deal not with the patient himself but the
exorcist or any other person attending the patient while on his
way to the patient's home and at the point of entrance into the
patient's house to approach the patient's bedside. It is more
likely that this first part should be considered as the first
step in the treatment of the diseased man. That, with typical
Mesopotamian logic, the circumstances and the existential
situation in which the patient is found should be thoroughly
observed because of its divinitory aspect.
In the second part does the work begin with essentially medical measures. There are listed here initially certain prophylactic measures in a definite order of application from head to foot. The list, as worked out, presents itself in this fashion.

Tablet III - skull and head,
Tablet IV - temples and forehead,
Tablet V - eyes, iris, associated muscles, edge of the eye, eyelids,
Tablet VI - nose, nostrils, lips, teeth,
Tablet VII - tongue, mouth, palate, speech, complaint of the sick man, that is, what he has said in his speech,
Tablet VIII - the ear (Much of this tablet is defaced.),
Tablet IX - face,
Tablet X - neck, nape of neck, larynx, throat, esophagus, arms, clavicle, elbows,
Tablet XI - palms, hands, muscle of the hands, fingers,
Tablet XII - chest, breast, kidney, upper back, spine, peroneum and several unknown anatomical associations,
Tablet XIII - epigastrium, stomach, entrails, lower abdomen, intestines and maladies of such,
Tablet XIV - upper thigh, buttock, anus, penis, urine, testicles, thigh, and again several unidentified anatomical locations, finally completing with the feet, the foot particularly,
and the ankles.

The third part of the series is extremely badly damaged. This appears to have less to do with actual anatomical detail as it does with manifestations of illness, such as nausea, vomiting, flux, difficulty in appetite, inordinate desires, and even such semi-religious and magical concepts as voodoo, love sickness, etc.

The fourth part of the 'SA GIG' series is better preserved and details the multiple forms taken on by disease. This seems to deal with influences and how one influence can have many symptomatic aspects.

The fifth and last part of the treatise deals almost completely with women and infants. Of the six tablets, XXXV to XL, that compose it, only three have reached us in any readable fashion. The thirty-fifth tablet deals particularly with pregnant women. Involved with the prognosis of pregnancy is also a long, detailed account of the possible prediction of the sex of children. These divinitory aspects are largely noted on the basis of color in spots of the pregnant woman's forehead, the mouth, the nose of the future mother, the appearance of her breasts, of her face and of her abdomen, but such physiological aspects as
nausea and bloody vomit are also considered as of diagnostic significance. The very last of these tablets details infantile diseases and problems of nursing and teething. It also deals with intestinal ailments, attacks of fever, convulsions, vomiting, frights, cries and weeping of children, and natural and super-natural events in their growth. It is completed with a short discussion on demon possession, changelings, the affliction of the evil-eye, and witches potions.

It can be seen then that there are many aspects to this great corpus of Mesopotamian medicine, and not one canon of consideration nor aspect of eventuation can decide which became canonized in the text at what point. It is only known that all of our extent copies are late but that due to the parallels with omens and the use of Sumerian logograms there is a possibility that they had an earlier provenience.
V. Conclusions.

(Section 12)

During the course of these studies we have surveyed the existing material on the subject of Akkadian Medicine. As can be seen, the gaps in our knowledge almost surpass the information which may be filled in. This unfortunately is due to two great factors. Initially, that the survival of any specific tablet collection is a matter of accident. This means that some relatively important and unimportant sources may by the degree of their reaction be elevated to an unequal position of importance. This is certainly true as we have seen above in the early publication of dosage-fail texts and of omens which were then taken to be narrative for Akkadian medical practice. Secondly, there is the problem that never at any one point is it probable there will be a large number of investigators in the field. This means necessarily that older publications must be relied on even though they may be seriously out of date and their conclusions drawn into serious debate.

The one general aspect that is becoming increasingly clear
During the course of these studies we have surveyed the existing material on the subject of Akkadian medicine. As can be seen, the gaps in our knowledge almost supersede the information which may be filled in. This unfortunately is due to two great factors, initially, that the survival of any specific tablet collection is a matter of accident. This means that some relatively secondary and unimportant source may by the degree of its preservation be elevated to an unequal position of importance. This is certainly true as seen above in the early publication of dosage-form texts and of omens which were then taken to be normative for Akkadian medical practice. Secondarily, there is the problem that never at any one point is it probable there will be a large number of investigators in the field. This means necessarily that older publications must be relied on even though they may be seriously out of date and their conclusions drawn into serious debate.

The one general aspect that is becoming increasingly clear
through the continued study of this type of cuneiform literature is the fact that the origins of modern, experimental observational science must be extrapolated backwards long before the Presocratic philosophical schools and the rise of Hippocratic medicine. Even the superb Egyptian surgical and orthopedic texts do not offer the vast display of observational material and causative understanding that is displayed in an orderly fashion in the 'SA GIG' series.

The question then comes to mind, how far afield was the practice and the literature of Babylonian medicine disseminated in antiquity. The mention of Mesopotamian physicians in Mari and Amarna tablets is common knowledge but the question must always be asked and answered if possible, what importance or what application does this medical literature of Mesopotamia have in our understanding of the Hebrew Bible. On the face of the Biblical record and from a purely objective view the answer must be, none. However no sooner is the answer given then it must be qualified. There is no doubt about the fact that many Biblical terms are based syntactically, morphologically and philologically upon Akkadian terms. There is little or no evidence in the Bible that the 'Ašiputu' type of medical practice was considered valid in Israel. On the other hand the overwhelm-
ing evidence of Biblical discussion of disease is the underlying importance of disinfection and quarantine. Whether of transcendental or phenomenal origin, when quarantine is applied there must be a presupposition of a concept of contagion. It is noted that only diseases in the Old Testament are noted as being contagious. Injuries such as fractures, wounds, and sun stroke are not so treated. As in Babylonian medicine, many of the disease entities are not easily identifiable nor can modern terminology be applied to them. However the study of the etymology of the Biblical disease terms is another field of endeavor. Suffice it to say that any profound study to be complete of the Biblical concept of illness and health, must needs draw considerable content from the medical practice of Mesopotamia which in many ways and from many standpoints must be considered superior even to that of fabled Egypt.

There are basically only nine overt forms of disease mentioned in the Old Testament: boils, fever, leprosy, consumption, irritation, sun stroke, ulcers, loss of sense perception as blindness and deafness, and loss of mobility as lameness. These latter often due to mechanical action. About the only dosage-forms mentioned are ointments, pultices, or embrocations, as in Isaiah 1:6, II Kings 27, Ezra 30:21, and secondary illustrations
of these in other types of contexts. It would be indeed difficult to isolate from these less than twenty-five references any coherent picture of the actual practice of medicine but it is doubtful that it would disagree in essence from any general picture that could be made of a combination of Assyro-Egyptian medicine or a reasonable orientation between those two great medical traditions.

As was stated in the note in the dissertation's original outline, the lack of a fully printed corpus of all cuneiform diagnostic, prognostic and praxis texts make it necessary to investigate each group of one subject in detail. Only as such studies are made can a coherent picture of ancient cuneiform technology emerge and it is hoped that this series of studies may have accomplished at least one step in that direction.
VI. Bibliography.

(Sections 13-17)

The bibliography used in this series of studies falls into three classes. The first is the list of authors and titles of works dealing directly with specific tablets or collections of tablets containing Medical Literature. The second is the list of authors and titles dealing with a large number of aspects of Mesopotamian Coniform Technological Literature. The third compilation is of the reference works and histories of medicine used and cited in these studies. Note: works quoted frequently by abbreviation are found in the list of abbreviations located at the front of this volume. Works not directly connected with the studies in this volume, yet quoted, are noted in the footnotes. These lists omit volumes, such as dictionaries, which are included in all Assyriological Research.

A. Bibliography of Mesopotamian Medical Literature.

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C. General Bibliography.
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(Section 18)
Erimhuš, A Bibliography of the Tablets and their Order in the Series.

<table>
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<th>Code 2</th>
<th>Code 3</th>
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<td>A.</td>
<td>K 214</td>
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<td>B.</td>
<td>Rm II 429</td>
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<td></td>
<td>C.</td>
<td>Rm II 587</td>
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<td>A.</td>
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<td>B.</td>
<td>Bl 2 - 4, 447</td>
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<td>Sm 52</td>
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<td>J.</td>
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    E. Khorsabad 1932/1933 No. 44

V. A. O 171
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    C. K 7331 plus 12056
    D. K 5448a
    E. TH - 1905 - 4 - 9, 31 and 32
    F. BM 37925
    G. K 14334 plus 16174
    H. BM SH 153 plus 197 plus 261 plus 351 plus 600

VI. A. VAT 10262 plus 12965
    B. VAT 13100
    C. VAT 681
    D. A 1595
        a. VAT 10426
        b. K 4256
        c. Sm 25
        d. VAT 10307
Disease Catalogue from CT 19.

K 207 equals CT 19:3-4
plus 264 equals 19:45
plus Sm. 24 equals 19:3-4
plus Rm. 2, 24 equals 19:34

K 207, Col. I

1. [šà-x] [x]y lib-bi
2. [šà-x] [x]y-at da-me
3. [šà-x] [libb]u(ŠÂ) qa-ti
4. [šà-x] [libb]u(ŠÂ) i-šar
5. [šà-x] [l]ibbu(ŠÂ) it-tan-paḥ
6. [šà-x] libbu (ŠÂ) e-šil
7. [šà-dib] libbu (ŠÂ) ú-za-an*–ni

Text has BAR.

8. [šà-dib] ka-ma-lu
9. [šà-]y it-ta-na-gi-iš
10. [...] x ha-dir
11. [...] x i-ta-nam-dar
12. [...] i-ta-na-ra-ar
13. [...] [i]-te-ni-ki-ik
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<td>[i]-te-ni-ki-il</td>
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<td>15.</td>
<td>[... ]</td>
<td>[i]-tap-hu-zu</td>
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<td>16.</td>
<td>[... ]</td>
<td>[i]-t-ta-nap-la-as</td>
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<td>17.</td>
<td>[... ]</td>
<td>[i]-ta-na-mar</td>
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<td>18.</td>
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<td>19.</td>
<td>[...-]a</td>
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<td>[...-]a</td>
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<td>šu-tam-tu-ú</td>
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<td>25.</td>
<td>gug-su-gug</td>
<td>pi-in-du-ú</td>
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<td>26.</td>
<td>su-um</td>
<td>ha-ša-lu</td>
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<td>27.</td>
<td>šu-tab</td>
<td>um-ša-tu</td>
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<td>ka-tar-ru</td>
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<td>[s]ukud-dir</td>
<td>šu-ma</td>
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<td>30.</td>
<td>su-UM</td>
<td>ta-ir-kum</td>
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<td>31.</td>
<td>sa-UM</td>
<td>e-ri-im-mu</td>
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<td>32.</td>
<td>te-gùn-nu</td>
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<td>33.</td>
<td>[s]a-níg-šar</td>
<td>kan-kan-su</td>
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<td>34.</td>
<td>dàr-mu-uš</td>
<td>ú-ra-šu</td>
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<tr>
<td>35.</td>
<td>[K]A-ru-gú</td>
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<td>36.</td>
<td>gú-gi4</td>
<td>ša-na.HU</td>
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<td>37.</td>
<td>gú-gil</td>
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38. [I]G-ss-an-za
39. [IM]-gú-gú-UH-ri
40. [I]s.NI-an-za
41. [ú]-hub
42. [K]A-ra-ab
43. [z]r-lm-ug₅
44. ug₅-dim-RI

[Rest destroyed]

K 207, Col. II

1. a-mud-a-sì-ga
   ma-li-e* me-e
   Text has A.

2. a-ša-ga-si
   KI.MIN

3. a-gal-la-ti-la
   KI.MIN

4. a-gal-la-ti-la
   ra-ab im-tu

5. ša-bur-šu-ná-a
   e-ri-a mu-ri-im

6. ša-mah
   e-šil-tu

7. ša-ta-ha-ar-gig
   ši-me-ir-tu

8. ša-dib
   ki-šir-tu

9. mar
   mi-ig-ga-nu

10. mar-gal
    iš-kip-pu

11. mar-ša-sur
    KI.MIN

12. iš-ti-ki-šim-tab
    li-biš-tu

13. sa-SAR-sa
    maš-ka-du
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<td>sa-GA plus KASKAL-sa</td>
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<td>15.</td>
<td>sa-ad-gal</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>16.</td>
<td>sa-gig</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>17.</td>
<td>sa-bu-i</td>
<td>ni-pi-iš-tu</td>
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<tr>
<td>18.</td>
<td>sa-ad-dir</td>
<td>ša-na-du</td>
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<td>19.</td>
<td>sa-ad-dugud</td>
<td>ša-áš-šá-ṭu</td>
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<td>20.</td>
<td>sa-ms-EL-gal</td>
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<td>21.</td>
<td>sa-ad-gal</td>
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<td>22.</td>
<td>sa-nim-mar-ra</td>
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<td>23.</td>
<td>sa-ad-nim</td>
<td>KI.MIN</td>
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<td>ba-en-nu</td>
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<td>ra-pa-du</td>
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<td>26.</td>
<td>sa-PAD</td>
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<td>27.</td>
<td>sa-PAD-ba-ag-a</td>
<td>KI.MIN</td>
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<td>28.</td>
<td>sa-HI-ra-ra</td>
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<td>29.</td>
<td>HI-PAD</td>
<td>ma[-(x)]</td>
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<td>30.</td>
<td>HI-ba-ra-lá-e</td>
<td>[...]</td>
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<td>31.</td>
<td>al-šú-[šú(?)]</td>
<td>[...]</td>
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<tr>
<td>32.</td>
<td>sag-ní-[x]</td>
<td>[...]</td>
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<tr>
<td>33.</td>
<td>sag-ba-x[(y)]</td>
<td>[...]</td>
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[Rest destroyed]

K 207, Col. III

1. ra-[ra(?)] | ra-sa-bu
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<td>šIDla-[g.ŠID(?)]</td>
<td>da-a-kum</td>
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<td>šIDza-ad[-zu(?).ŠID(?)]</td>
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<td>4</td>
<td>gi₄-[g]i₄</td>
<td>KI.MIN</td>
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<td>5</td>
<td>du₁₁-[g]a</td>
<td>KI.MIN</td>
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<tr>
<td>6</td>
<td>ab-ra</td>
<td>ma-ha-su</td>
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<tr>
<td>7</td>
<td>te-[t]e</td>
<td>su-hu-lu</td>
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<tr>
<td>8</td>
<td>te-[t]e</td>
<td>du-ru-ú</td>
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<td>9</td>
<td>te-[t]e</td>
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<td>10</td>
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<td>su-hu-mu</td>
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<td>11</td>
<td>te-te</td>
<td>du-ku-šu</td>
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<td>12</td>
<td>te-te</td>
<td>zur-ru-bu</td>
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<td>13</td>
<td>te-te</td>
<td>pul-lu-hu</td>
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<td>[h]ur-ru-šu</td>
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<td>15</td>
<td>te-te</td>
<td>[n]a-tu-u</td>
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<td>16</td>
<td>te-te</td>
<td>[nu-]ut-tu-u</td>
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<td>17</td>
<td>zé-zé</td>
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<td>hum-hum</td>
<td>[hu]m-mu-šu</td>
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<td>šu-si-an-na-hum-hum[um_hum(?)]</td>
<td>[(x)]y-la-ta ha-meš</td>
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<td>[x-]ša-du</td>
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<td>gir-[hum]</td>
<td>[ha-]ma-šu</td>
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<td>gir-[tag]</td>
<td>[h]a-meš-tu</td>
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<td>gir-gá-ba-[x-du]</td>
<td>[it-te-i]q-lip-pu-u</td>
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<td>24</td>
<td>níg-na-ma-aš-x[y]</td>
<td>[KI.MIN]</td>
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<td>25</td>
<td>gir-al-g[il(?)]</td>
<td>[i]t-[te(!)]ni-gi-i</td>
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<td>26.</td>
<td>gr-x[yy(y)]</td>
<td>Še-pa up-pu-da-tu</td>
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<td>27.</td>
<td>[gîr-x(xx)]</td>
<td>nu-pu-ha-tu</td>
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<td>na-mu-ši-ša-tu</td>
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<td>29.</td>
<td>[du-du-u]r-hi</td>
<td>na-mu-ši-šu</td>
</tr>
<tr>
<td>30.</td>
<td>[(x-)] DUN</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>31.</td>
<td>[(x-)] BAD</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>32.</td>
<td>[g]u-ru-un</td>
<td>da-mu</td>
</tr>
<tr>
<td>33.</td>
<td>[ù]-mu-un</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>34.</td>
<td>šeš</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>35.</td>
<td>mud</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>36.</td>
<td>sa</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>37.</td>
<td>BAD</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>38.</td>
<td>BAD.UD</td>
<td>šar-ku</td>
</tr>
<tr>
<td>39.</td>
<td>BAD BAD.UD dé-dé</td>
<td>da-mu u šar-ku a-la-ku</td>
</tr>
<tr>
<td>40.</td>
<td>BAD BAD.UD kü-kú</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>41.</td>
<td>BAD.KU-da</td>
<td>ni-i-tu</td>
</tr>
<tr>
<td>42.</td>
<td>x-ga</td>
<td>gu-ri-iš-tu</td>
</tr>
<tr>
<td>43.</td>
<td>x-ga</td>
<td>laq-laq-qu</td>
</tr>
<tr>
<td>44.</td>
<td>[za]-ra-ah</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>45.</td>
<td>[x(xx)]-gi₄</td>
<td>bu-ul-tí-tu</td>
</tr>
<tr>
<td>46.</td>
<td>[x(xx)]y</td>
<td>KI.MIN</td>
</tr>
<tr>
<td>47.</td>
<td>[・・・]</td>
<td>kal-m[a]-tu</td>
</tr>
</tbody>
</table>

[Rest destroyed]
K 207, Col. IV

1. [x]y-[ŠILIG]-z KI.MIN
2. [(x-)]ah KI.MIN
3. x-bal KI.MIN
4. x-an-dib KI.MIN ša ÍL
5. [(x-3] bar tu-ga-nu
6. [HA]R-gig uq-qu
7. x-zé-gig ši-i-qu
8. [b]a-ab-silig-gi tu-uš-ka-at-ta-ma
9. [x]-ta-ru ma-ha-ar
10. [x-t]a-ru-ru i-ma-har
11. [(x-)]tur sa-a-ú
12. [(x-)] LUL KI.MIN
13. [(x-)]KAxLI KI.MIN
14. [x-]dàg-gi sa-a-a-hu
15. [lù(?)-l]û(?) i-te-iq-lip-pu-u
16. [lù(?)-l]û(?) i-ta-ak-tu-mu
17. [(xxx-)]y pa-ru-ú
18. [...] i-te-iq-lip-pu-u
19. [...] i-tàk-tu-mu
20. [...] [dul(?)]-lu-ha-an
21. [...] [ha]a-a-šu
22. [...] "
23. [...] [š]a(?)-ha-tu
24. [...] \(x\ y[z(z)]\) (few or no lines missing, ll, 24 and l' possibly identical)

1'. [...] [mi(?)-]ik-tu
2'. [...] [KI.MIN(?)-]
3'. [...] [x]y-nu
4'. [...] [x-]ha-lu
5'. [...] [x-]im-ta
6'. [...] [KI.MIN pi(?)-]li-e
7'. [...] [KI.MIN qa-]ni-e
8'. [...] [KI.MIN i-š][i-im
9'. [...] [xxx]qa-ni-e

[Rest destroyed]

CBS 13267, Col. II

1. [KU(?)-]gig \(šu\)-\(bur\)-ru \(x[y]\)
2. [KU(?)-x]-dug₄-ga \(šu\)-\(bur\)-ru \(ib\)-t[u(?)]\)
3. x-šu-pi-y-QA na-\(sh\)-\(lum\)
4. [a]-ri-a "
5. NE garₓ-du
6. gana ga-ar-šum
7. gana garₓ-bu
8. [a]-ga-en-gar ip(!)-qé-nu
9. [a]-ga-en-tùm "
<p>| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| CBS 13267, Col. III |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |</p>
<table>
<thead>
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<th></th>
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<tr>
<td>12.</td>
<td>mud(!)**</td>
</tr>
<tr>
<td>13.</td>
<td>[lu]gud</td>
</tr>
<tr>
<td>14.</td>
<td>[(x)]y-ga</td>
</tr>
<tr>
<td>15.</td>
<td>[(x-)]KAK</td>
</tr>
<tr>
<td>16.</td>
<td>[x]-ME-bar-ra</td>
</tr>
<tr>
<td>17.</td>
<td>[x]y-a-bar</td>
</tr>
<tr>
<td>18.</td>
<td>[x]y-a-z-giš</td>
</tr>
<tr>
<td>19.</td>
<td>[igi]-[lul(!)]-lul(!)</td>
</tr>
<tr>
<td>20.</td>
<td>[a-ma]d-a-si-ki</td>
</tr>
<tr>
<td>21.</td>
<td>[a-gal]-l[a]-til-la</td>
</tr>
<tr>
<td>22.</td>
<td>[a-sà]-ga-si</td>
</tr>
<tr>
<td>23.</td>
<td>[śà-bur-šu]-ná-a</td>
</tr>
</tbody>
</table>

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**End of column; IV destroyed**
VIII. Postscript.

(Section 19)
The completion of this dissertation represents not only another 'kudurru' in the continual course of my education, but also the close of my career at the Dropsie College. I am thankful for the opportunity afforded me as a working student with a large family to have studied with prominent scholars in an atmosphere of the highest standards in Jewish learning. To the College, its President Dr. Abraham A. Neuman, my major Prof. Dr. Moše Held, my minor Prof. Dr. Theodore H. Gaster, and Dr. Frank Zimmermann, I express my gratitude and a sincere and lasting, "Thank you."

Wm. White Jr.