TIBETAN MEDICINE COMPARED WITH ANCIENT
AND MEDIAEVAL WESTERN
MEDICINE

By Marianne Winder

It is well known that Tibetan medicine has inherited many features from Indian Ayurvedic medicine (three humours, seven constituents, curing by contraries) and some from Chinese medicine (hollow and solid organs, pulse diagnosis). What is less known is how many parallels there are with ancient and mediaeval western medicine. The following points deserve attention:

a) humoral pathology
b) ether
c) psea

d) diseases during seasons
e) seats of humours
f) hot and cold diseases
g) urinocesopy
h) bloodletting
i) theory of generation
j) name of Galen
k) anatomy illustrations

a) Humoral pathology

The three humour in Tibetan medicine are wind (lung), bile (mkkhig) and phlegm (badhak). The term 'humour' renders Tibetan ses pa, Sanskrit dosha. The Sanskrit word dosha means 'fault'. But the three, wind, bile and phlegm, are necessary in the body. They are causes of diseases only when they are unbalanced, that is, when there is too much or too little of any of them com-
pared with the other two. The English word ‘humour’, therefore, probably expresses its meaning better. It is derived from the Latin humor, Greek khymos (English derivative chymie), which means ‘fluid, moisture’ as we know it in the English word humidity. This meaning is exactly right in the case of the western four humours as taught in ancient and medieval times: blood, black bile, yellow bile and phlegm. It does not fit so well the Indian and Tibetan systems with their wind, bile and phlegm, because wind is not a fluid. But if we take ‘humour’ not in the literal sense of ‘fluid’ but rather in a metaphorical one for a substance permeating many parts of the body, a case can be made out for it. Indeed, in English the word ‘humour’ has also undergone a change in its meaning when, after meaning a body fluid it came to mean a temperament caused by the preponderance of that fluid and finally came to mean that sense of the comic which we call humour in modern English.

The term ‘wind’ for Tibetan rlung, Sanskrit vιra and ปιรιม, may be preferable to ‘air’ because air is also an element in which case the Sanskrit term for rlung is śvav. The Sanskrit word for ‘element’ is  الماضي, Tibetan kanyagwa. If ‘air’ is used readers may begin to confuse the five Tibetan elements earth, water, air, fire, ether, with the three humours.

In the west we find the same three humours in Plato’s Timaeus where wind is called pneuma, bile khole and phlegm phlegma. 1)

Plato lived from 428 to 348 B.C. The collections of the greatest Ayurvedic writers Caraka and Susruta are attested during the first centuries of the Christian era but probably go back to much older sources. The Vedas themselves contain allusions to some medi-
cal ideas. How is it that Plato has the same three humours as the Ayurveda and then Tibetan medicine, while the rest of Greek philosophy and medicine postulate four humours in which the fourth is blood while the Indians and Plato postulate wind? One explana-
tion given is that Plato was a member of the Pythagorean school of thought. 2)

Now, Pythagoras who lived in the 6th century B.C. was assumed by none to have visited India at some time, where he could have learned about Ayurvedic medicine. 3)
Eduard Zeller in his *History of Greek Philosophy* mentions that Pythagoras was reported to have travelled far and wide and even to have visited the Brahmins but though it is quite possible the testimonies are too uncertain.

There is another possibility which might explain why the theory of three humours was handed down to Plato and not to the other great Greek thinkers like Hippocrates (about 460-377 B.C.) and much later Galen (129-200 A.D.) who assumed four humours, namely blood, yellow bile, black bile and phlegm. And it is the four humour theory which was handed down to the European Middle Ages.

The explanation could lie in the fact that Plato travelled to Cyrene, the Greek colony in Libya, and to the Greek colony of Sicily and to Egypt and could have picked up ideas in all those places which differed from the views held on the Greek mainland and its surrounding islands. We know that under King Darius (reigned 521-485 B.C.) the Persian army had conquered part of India and part of Libya so that it is not impossible that Indian medical ideas were current in North Africa and on the opposite shore of Sicily. We read in Herodotus 5) who wrote his *History* between 450 and 410 B.C.: "All these people of Libya from Egypt to Lake Trionitis are nomads who live on meat and milk. Cow's flesh they will not taste, for the same reason as the Egyptians, nor will they keep pigs. Even the women of Cyrene think it wrong to eat cows, because of Egyptian Isis, whose feasts and feasts they observe religiously... Many Libyan nomads... take their children when they reach the age of four and burn the vesica of their scalps, sometimes of their temples too, with a flame of greasy wool, so they may never thereafter be troubled by phlegm running down from their heads."

We see that both, Egypt and India avoided the eating of cows for religious reasons, and that the Libyans practiced matthiasition and believed that phlegm coming down from the head was the cause of disease. Though the latter was a general Greek belief, other medical ideas like that of matthiasition, may have persisted in North Africa and not percolated to Greece proper.

Plato learned other medical ideas from the Sicilian doctor Phileon of Lokri whom he met during his first Sicilian journey in 386 B.C., but in the fragments of Philaleon come down to us, a three humour theory is not mentioned. 6), 7)

(7)
The Greek development towards the western mediaval assumption of four humours including blood was a gradual one. First, a watery fluid corresponding to phlegm coming down from the brain was made responsible by Timocles of Metapont for most diseases. Then Herodotus postulated two humours: bile and phlegm. Then Philo of Byzantium posited blood as a third cause of diseases. Though Plato followed Phileias in his cosmological speculations in the Timaeus, he definitely deviated from him in the assumption of wind as the third humour and not blood. Finally Polybus, the son-in-law of Hippocrates, the Father of Western Medicine, divided bile into black and yellow, so that the four humours, that is, blood, phlegm, black bile and yellow bile, were to correspond to the four elements fire, water, air and earth. 9)

In Indian 10) and Tibetan medicine the three humours are each subdivided into five kinds. This elaboration does not exist in western medicine.

b) Ether

In Plato’s cosmology, like in the Indian and Tibetan one, there are five elements, the fifth being ether, Samskarā Śāśā, Tibetan nem nhā. Aristotle (384-322 B.C.), his pupil, in his Meteorologica has ether, ‘ether’ as the fifth element.

c) Pneuma

The Greek word pneuma used by Aristotle for the fine substance endowed with generative power and having from the stars is the same word Plato and Phileas use for the humour ‘wind’, and other writers use for the wind in the weather sense. It is also used in Greek for ‘breath’ and for ‘breath of life’ and finally in the New Testament for the Holy Spirit. In Tibetan the word rlung is used for ‘wind’ as a humour. But in Tibetan embryology many different rlung are mentioned, quite apart from the five subdivisions as in the case of the other two humours.

One might attempt the following correlations:

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Tibetan</th>
<th>Greek</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parabrahman</td>
<td>Tshang pa</td>
<td>Theos</td>
<td>Godhead</td>
</tr>
<tr>
<td>Brahman</td>
<td>Tshang pa</td>
<td>Pneuma</td>
<td>Spirit</td>
</tr>
</tbody>
</table>

(*)
<table>
<thead>
<tr>
<th>Tänya</th>
<th>bDagaid</th>
<th>Theos,</th>
<th>Ego Sylf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pussha</td>
<td>skyebum</td>
<td>Psykêse</td>
<td>World Soul</td>
</tr>
<tr>
<td>Vayu</td>
<td>rlug</td>
<td>Avê,</td>
<td>Pneuma Air</td>
</tr>
<tr>
<td>Väta</td>
<td>rlung</td>
<td>Pneuma</td>
<td>Wind</td>
</tr>
<tr>
<td>Präña</td>
<td>dUgs</td>
<td>Pneuma</td>
<td>Breath</td>
</tr>
</tbody>
</table>

The reason why blood can appear instead of pneuma as one of the humours seems to be explained by the views of some of the Stoic philosophers that the blood is the physical substrate of the pneuma. 11)

The importance of the blood had been observed very early just as that of the breath. For when the breath stopped a patient died, and when he lost too much blood the same happened. Therefore blood came naturally to be connected with disease. 12)

### Diseases during seasons

The view that certain humours predominate during certain seasons can be found in Ayurveda, Tibetan medicine and Hippocrates. The usual approximate date for Hippocrates of Cos is 460-377 B.C. Though there is no doubt that he existed, the treatises ascribed to him were written by a number of authors, some of them centuries later. 13) The Tibetan chief medical work, the rGyud. bkhi or Four Treatises says: "Diseases of air (wind) accumulate during the spring, break out during the summer and subside during the autumn. Bile diseases accumulate in the summer, break out in the autumn and subside in the winter. Phlegm diseases accumulate in the winter, break out in the spring and subside in the summer." 14)

In the Hippocratic Corpus we find: "Phlegm increases in a man in winter. In spring too phlegm still remains strong in the body, while the blood increases. In summer blood is still strong, and bile rises in the body and extends until autumn. In autumn, blood becomes small in quantity, as autumn is opposed to its nature, while bile prevails in the body during the summer season and during autumn. But in summer phlegm is at its weakest. For the season is opposed to its nature. But in autumn blood becomes least in man. It is black bile which in autumn is greatest and strongest. When winter comes on, bile being chilled becomes small in quantity, and phlegm increases."

(9)
Seats of humour

In Tibetan medicine the chief seat of phlegm is the brain. According to the rGyud bshis, 15) the brain produces mucus and is both a basic and an auxiliary cause of ignorance, mental darkness and gloom. Therefore sleepiness and slothfulness are mostly felt in the head, ‘and again, principally’, the seat of air (wind) is below the abdomen, the seat of bile in the region between the heart and the abdomen, and the seat of phlegm in the area above the chest.

The head is regarded as the chief seat of phlegm also by Aristotle 15) who contrasts the cold of the brain with the heat of the heart, and ‘when the nutrient steams upwards through the blood vessels, its refuse portion is chilled by the influence of this region, and forms delusions of phlegm and serum. It is the brain again which is the cause of sleep’. 17)

Hot and cold diseases

In the Indo-Tibetan humoral system diseases are divided into hot and cold ones, and diseases are cured by a contrary remedy, that is, hot diseases by cold remedies and vice versa. For instance, Vagbha says in his Ashtanga-hridaya-cintanava (18). According to the prevalence of the qualities ‘hot’ and ‘cold’, the power in it (in a substance) is taught to be twofold, namely, ‘healing or cooling’. While there is an occasional mention of this kind in Sanskrit medical works, the division of diseases and remedies into hot and cold has become a cornerstone of Tibetan medicine, beginning with the rGyud bshis. Vagbha’s Ashtanga-hridaya-cintanava was written in Sanskrit in the 7th century and translated into Tibetan in the 11th. According to Tibetan tradition, the rGyud bshis is an 8th century translation of a Sanskrit work going back to the 4th century A.D. According to F. Meyer, 19) it is more likely to be an indigenous Tibetan work because of the passages on diagnosis by means of the pulse and on moxibustion which he regards as Chinese features. Indeed, we know that King Strong-btsan-sgam-po married in the 7th century a Chinese princess who, with her books, brought medical works to Tibet, so that Chinese medical lore may have been woven into an indigenous rGyud bshis in all other respects indebted to knowledge drawn from Sanskrit works or Ayurvedic teachings. Be that as it may, in one respect the rGyud bshis differs from ancient Sanskrit
and Chinese medical works, and that is the great emphasis put on the difference between hot and cold diseases. Later on, perhaps during the Middle Ages or in modern times, this differentiation must have reached India and South East Asia because it plays an important role in present-day Ayurvedic and in the Burmese and Thai indigenous system of medicine today.

In western medicine hot and cold diseases are mentioned in Galen. 20) However, they are always dealt with together with moist and dry diseases and thus simply divided according to the four Aristotelian qualities. But during the Middle Ages Galenic medicine was developed into an elaborate system of four degrees of cold in diseases which had to be matched with the right one out of four degrees of heat in herbal, mineral and animal remedies. Writers on these ideas were, for instance, Raymondus Lullus (1234-1313) and Arnulfus of Villanova (1225-1311). 21)

a) Urinocopy

Diagnosis by means of investigation of the urine was practised east and west wherever physiology was based on the system of humoral pathology because the urine was often regarded as the exact outward reflection of the humoral situation within the body. 22)

b) Bloodletting

Similarly, bloodletting seems to have been a universal ancient practice. This is the more remarkable as blood was not regarded as a humour in India.

In fact, in Indian and Tibetan medicine the importance of the blood was derived from the idea that the mother's menstrual blood together with the father's semen and the right karma had the generative power to produce a new human or animal being. 23) In the same way, Aristotle regarded the blood as born in the human body together with pneuma, the physical substance of finest corporeality treated above under the heading c). The pneuma is the microcosm of the human body, according to this view, corresponds to the ether in the macrocosm, the universe. The idea that man is a small reflection of the universe, a microcosm repeating the features of the macrocosm, is a very old one and occurs in most ancient civilizations. According to this, the body fluids running through

(11)
veins and channels can be compared to rivers, the digestive fire which transforms the food in the stomach to the heat of the sun, the bones to the wood of the trees, and so forth. Either, according to Aristotle, as the fifth element, is quite different from the other four elements, and the pneuma in the body, which corresponds to the ether in the universe, is different from the other constituents of the body because it is endowed with generative power. 24)

Because blood was born together with pneuma it was so important. And because it was so important, any bad blood or superfluity of it and to be removed by bloodletting. The Indians used leeches, just as was done in the west throughout Antiquity and the Middle Ages and in some places right into modern times. The Tibetans were and are more civilised in using a scalpel or a small knife.

1) Theory of generation

There are several east-western parables in the theory of generation. In Indo-Tibetan medicine the following sequence is given: "There are seven principal constituents which help to sustain life: 1. Salvia, 2. blood, 3. bone, 4. marrow, 5. flesh, 6. fat, 7. sperm... The formation of sperm takes about seven days: on the first day after digestion (use of salvia), the secretion from food forms blood; on the second day blood becomes flesh; on the third day flesh becomes fat; on the fourth day fat becomes bone; on the fifth day bone forms marrow, and on the sixth day marrow forms sperm." 25)

In Plato's Timaeus we read: "The natural order is that the flesh and sinews should be made of blood, ... and the glutinous and rich matter which comes away from the sinews and the flesh not only glues the flesh to the bones, but nourishes and imparts growth to the bone which surrounds the marrow, and its remains a part, consisting of the purest and smoothest and oiliest sort of triangles, which filters through the solid texture of the bones, from which it drops like dew and waters the marrow." 26) Here the flesh, instead of taking the 5th place, comes between the blood and the bone, yet the rest agrees in a remarkable way.

In the Indo-Tibetan embryology the foetus is described as it progress week by week. 'First week: through the drog-lang
(that is, breath of life, pneuma) of the father's semen and the
kun.gzi.rnam.shes (consciousness) in the mother's blood every
particle is thoroughly mixed like milk when churned into curds.
Aristotle says: 'What the male contributes to generation is the form
and the efficient cause while the female contributes the material.
In fact, as in the conglomeration of milk, the milk being the material,
the kuj usur or rennet is that which contains the curdling principle,
so sets the secretion of the male, being divided into parts in the
female...each part should correspond to the material being neither
too little to concoct it and fix it in form, nor too much so as
to dry it up.'

This idea was repeated during the Middle Ages by the
Abbas ibn 'Abid of Ibn (999-1179) and by Michael
Scottus (1175-1235?).

These various agreements between Indo-Tibetan medicine and
Aristotle are too specific and striking to be accidental, especially as
they cannot be based on usual independent observation. If the
Sarmentasam and the Carok-ramdila had drawn on Aristotle, it
means that the relevant passages cannot date back to earlier than
the 4th century B.C. As they are composite works whose beginnings
may reach far back into the distant past but which were continuously
added to, this is not impossible. On the other hand, Aristotle was
the tutor of the young Alexander the Great (316-323 B.C.) whose
subsequent campaigns took him right into India. We may give
more credence to Pliny in his Natural History 31) than Alexander
von Humboldt did in his Kosmos. 32) Perry the Elder (2179 A.D.)
says: King Alexander the Great being fired with a desire to know
the nature of animals and having delegated the pursuit of this
study to Aristotle as a man of supreme-eminence in every branch
of science, orders were given to some thousands of persons throughout
the whole of Asia and Greece, all those who made their living by
hunting, fowling, red fishing and those who were in the charge of
warrens, herds, apriates, fishponds and artisanies, to obey his
instructions, so that he might not fail to be informed about any
creature born, anywhere. His inquiries addressed to those persons
resulted in the composition of his famous works on zoology, in nearly
fifty volumes'. Humboldt asserted that hardly any information about
India, except a passage on elephants, is extant in Aristotle's work
and that, therefore, Pliny's statement must be wrong. But it is

(12)
known that Alexander corresponded with his former tutor throughout his campaigns and, considering that much of Aristotle’s work has been lost, the remaining passages agreeing with Indian ideas could well be used as a proof that Pliny’s account of this subject is true.

In the chapter on embryology of the *Shadgaṇḍa* (32a) the following passage can be found: ‘The signs that most probably a boy is going to be born are that the baby comes on the right side of the belly facing the mother’s backbone, that the right side of the belly is high, and that the milk starts coming in the right breast. For the prognosis of a girl, all this applies to the left side, and when born it faces the front.’ Galen of Pergamon, the Greco-Roman writer on medicine, showed 32b) that boys were more likely to come into being on the right-hand, better side of the womb than girls because it is warmer than the left-hand one as the result of being near the liver and the special pathways of the vessels there. ‘Warmth’ was associated with ‘life’, ‘force’ ‘soul’ and higher value. 32c)

Five hundred years before Galen, Aristotle already said the following: ‘It is said by some, as by Anaxagoras, ... that this antithesis (between male and female) exists from the beginning in the germs or seeds: ... the male is from the right, the female from the left testis, and so also the male embryo is in the right of the uterus, the female in the left. 33d)

1) Names of Galenos: had kan

There occurs in the history of Tibetan medicine a certain Doctor Galenos, court physician to King Strong.bstan ngam.po in the 7th century, who came from Persia. What was his connection with the great Galen (129-200 A.D.) who was to dominate the history of western medicine for a thousand years? Either the Persian doctor assumed the pen-name Galenos, 33) or he had translated Galen, from the Greek, probably into Syriac because translations into Persian were not made at the time and the time of the great translations of the Galen’s work into Arabic had not yet come. If any translations of medical texts mentioned for that period in Tibetan histories were still extant they would be of vital interest to western as well as eastern medical history because very
little has survived of the pre-Islamic period of that part part of
the world.

The Tibetan word for 'phlegm' already occurring in the
rGyu 'dbrtshi, is bad.kan. a word which does not look Tibetan at
all. The Arabic word for 'phlegm' is badgam which is obviously
derived from Greek phlegma. It looks as if Tibetan bad.kan,
Mongolian badgan, was derived from the Arabic. The difficulty
here is that the first Arabic works on medicine were translated
from the Greek in the 9th century, that is, the works of Galen
and of Paulus of Aegina which were translated by Hunain Ibni
Iskak.

Though the Tibetan word is now pronounced peken it is
likely that it was pronounced bagdan in the past in which case it
could have been derived from the Arabic because m and n sound
very similar, and (l) can easily turn into d. One need only think of
the Greek names Odysseus becoming Latin Ulysses, or of the Latin
odor 'odour' being related to Latin olea 'oil' from which comes Latin oleum, English oil.

If the rGyu 'dbrtshi was translated from the Sanskrit or composed
in 750 A.D. the question is where the word bad.kan came from.
The Persians use the Arabs loan word badgham. But they could
not have done so before the Arabs had acquired it from the
Greek. The Mongolian translations of medical works come into
the picture only much later. Thus the etymology of Tibetan
bad.kan presents a great riddle and may be vital in the dating of
the rGyu 'dbrtshi.

k) Anatomy illustrations

Another subject for comparison are the anatomical illustrations. There exists a series from the Medical College of LChags po
ri near Lhasa of which a copy found its way to the Young ho Kung
Temple at Peking. Some of the figures are shown in a squatting
position. 34) This is the position which also appears on a set of
Persian anatomical drawings the extant copies of which probably
date back to the 17th or 18th century but may go back to much
older prototypes. A similar set has been found on 13th century

( 15 )
European manuscripts. According to Karl Sudhoff 31) the Persian and the European examples may go back to a lost prototype in Alexandria during the Hellenistic period between 300 B.C. and 300 A.D. It is then thinkable the Perisan illustrations were imitated in India and reached Tibet in this way. But though there are many fine Indian miniatures in existence, no example of an Indian anatomical illustration has been found unless the yoga diagrams showing macrocosm and microcosm were counted as such. The Tibetan illustrations the date of which is unknown may also go back directly to Persian models.

There is also a Tibetan standard picture of surgical instruments. Some of them are similar to those appearing in the Arabic work of Abulcasis 36) (died c. 1013 A.D.) who lived in Cordoba in Spain. Manuscripts of this work are widely scattered and a beautiful one exists in Patna in India. Transmission certainly could have taken place one way or the other. But until more dates and data are available no conjecture can be made as to in which direction.

Modern application

Until now the parallels have been set down, taking them at their face value. But should this be done, for instance, with the three humour theory? The Indian three humours had early on been associated with the three guñas or chief qualities: Sanskrit sattva (goodness) correlated to wind, Sanskrit rajas (energy) to bile, and Sanskrit tamas (inertia) to phlegm. The humours, in their turn, were brought into connection with the Buddhist three fires: an excess of greed will lead to a wind disease, an excess of hatred to a bile disease, and an excess of spiritual dulness to a phlegm disease. Conversely, an excess of phlegm will make you slow and dull, an excess of bile irritable and irascible, and an excess of wind lustful and greedy. A similar connection of the humours with human temperaments was made in the west: the choleric, angry temperament was conditioned by yellow, hot bile, the melancholic, sad temperament by black, cold bile, the sanguine, optimistic temperament by blood, and the lethargic, phlegmatic temperament by phlegm.

However, in Tibetan medicine the three humours seem to have, in a way, swallowed up the idea of the three guñas as it exists in Hinduism, so that wind, bile and phlegm mean far more
universal quantities than just these substances in the body. They refer to constitutional types, the way the temperaments do in the west. In Tibetan medicine, all diseases are divided into hot and cold, and these again subdivided into wind, bile and phlegm diseases of which there is a total of 404. Here the humours have been far more closely systematised than had ever happened in the west. This scheme has survived in Tibetan medicine to the present day, and if it is to be used effectively it has to be reinterpreted in the light of modern knowledge.

Studying the history of Tibetan medicine and adapting it to modern use are two different tasks. For the first we have to study and translate the texts of which only an infinitesimal part has been translated into English, French or German until now. 37) For the second task we have to investigate whether the ideas behind certain practices are valid today or whether the practices can be defounded on new, modern grounds or can be usefully transformed. This investigation can, however, only take place effectively when we have become acquainted with the texts.

References

1) There is a third class of disease which may be conceived of as arising in three ways, for they are produced sometimes by wind and sometimes by phlegm and sometimes by bile, Plato Timaeus 54c, Collected dialogues edited by Edith Hamilton and Huntington Cairns, Bollingen Series 71, Princeton University Press, 1963, pp. 1204-5. Translatica of Timaeus by Benjamin Jowett.

2) ‘Because, as I think you yourself are aware, we Pythagoreans have a theory of the soul which is roughly like this’. Plato, Phaedo 86B, ibid., p. 70, translation by Hugh Tredennick. These words have been put into the mouth of Simmias but Socrates whose point of view represents that of Plato admits the Pythagorean theory that the soul wears out a number of bodies (Phaedo 87D). From other passages, too, it has been conjectured that Plato was a Pythagorean.

3) Jean Filsonat, The classical doctrine of Indian medicine, its origins and Greek parallel, Delhi, Manohar, Manohar, (17)
1964, p. 229: 'Armand Delpeuch in his *Lagoute et rhumatismes. Park, 1900, pp. 26 ff. has been struck on finding in the Timaeus --- quite aberrant in comparison with Hippocratic medicine, the classical teaching of Ayurveda, whereby diseases are provoked by the wind, bile and phlegm. But he believed that he could refer this teaching back to the Veda and thought that Plato had received it from the Pythagorean tradition, Pythagoras being reported to have searched for a medical philosophy in India. It is impossible to accept the idea that the doctrine in question goes back, in its complete form, up to the Veda, but it is certain that its analogy with the thesis of the Timaeus is remarkable.'

4) 'Selbst zu den Brahmanen soll er gekommen sein ... Die Sache wäre an sich wohl denkbar, aber die Zeugen sind zu unsicher.' (he is believed to have reached even the Brahmins ... The idea itself is quite conceivable but the testimonies are not convincing enough). Eduard Zeller, *Die Philosophie der Griechen in ihrer geschichtlichen Entwicklung*, 2nd ed., Tubingen, L. F. Fues, vol. i, 1856, p. 219, n. 4, p. 220
See Clemens of Alexandria (*f. 300 A. D.*), *Stromata 1* 348B. German trl. Overbeck, Basle, B. Schwebe, 1936, Book I, ch. 13, par. 68, 1; p. 198.


11) Ludwig Stein, Die Psychologie der Stoic Leipzig, S. Calway, 1880, p. 141 : 'Offenbar kann diese Pneumaverschlechterung nach stoischer Ansicht nur durch die mangelhafte Qualität der Blutausströmungen oder durch die schlechte Beschaffenheit der eingetrunkenen Luft erfolgen'. (The deterioration of pneum, according to Stoic views, is due to the bad quality of the exhalations from the blood or the bad quality of the air breathed in). See also Marielene Putscher, pneuma. Spiritus, Geist, Wiesbaden, Franz Steiner Verlag, 1974, p. 23.


14) rGyud. bsh, bShad. rGyud, ch. 9, Rechung, Tibetan medicine, p. 50. In the present article, whenever rGyud. bsh is mentioned, the singular is used though the title literally means 'Four treatises'. In actual fact, they are four volumes of the same work - Hippocrates, On the nature of men, ch. 7. ed Littre, Oeuvres complètes, Paris, J. B. Baillière vol. 6, 1849, pp. 46-49 ; Hippocrates, Trl. W. H. S. Jones, vol. 4, p. 19.

15) rGyud. bsh, bShad. rGyud, ch. 4, Rechung, Tibetan medicine, p. 39.


22) 'Wenn nämlich Krankheit auf einer fehlerhaften Mischung der Körpersäfte beruhte, ... so musste dieser krankhafte Zustand auch im Harn sichtbar werden'. (If disease was based on a faulty mixture of the humours, so this diseased state had to become visible in the urine). Johann Bleker, *Die Geschichte der Nierenkrankheiten*, Mannheim, Bothinger, 1972, p. 17. See also Esther Fischer-Hombberger, *Geschichte der Medizin*, Berlin, Springer, p. 27.


25) *rGyud stshis, bShad rgul ch. 2*, Rechung, *Tibetan Medicine*, p. 43, 44.


27) *rGyud stshis, bShad rgyud, ch. 2*, Rechung, *Tibetan medicine*, p. 33.


32a) *rGyud stshis, bShad rgyud, chapter 2*, Rechung, *Tibetan medicine*, p. 36.


(21)

34) See Ilia Veith, Medizin in Tibet, Leverkusen, Bayer, 1960. plates I, III, and V.


(22)