

VII.
SOME CONSIDERATIONS
REGARDING THE AGE OF THE EARLY MEDICAL
LITERATURE OF INDIA.¹

BY

JULIUS JOLLY,
Professor of Sanskrit, University of Würzburg.

Conflicting Views regarding the Age of Hindu Medicine.

THE exaggerated theories of the antiquity of Indian medical literature which were put forward by Dr. Hessler, author of a Latin version of "Suśruta," and others, have been succeeded in Germany by the hypercritical views advanced by Dr. Haas, who endeavoured to refer the composition of Suśruta's standard work to the period between the twelfth and fifteenth centuries A.D., *i.e.*, a great deal more than two thousand years later than Dr. Hessler had attempted to do. The ingenious theories of Dr. Haas have been refuted, in their turn, by Weber, and particularly by the late lamented Professor August Müller, by whose elaborate investigations² the influence of the Indian writers on medicine on the medical literature of Arabia has been finally established.

Persian Writers on Medicine.

The same influence may be traced in the contemporaneous works of Persian writers on medicine, as may be gathered from Abu Mansur Muwaffak's copious work on Pharmacology, translated very recently into German by a young Persian physician, A. Achundow.³ This learned composition contains references both to "the medical men of India" generally, and to authorities with such unmistakably Indian names as Sri-Fargavadat, *i.e.*, Śrī-Bhārgavadatta, and Jāthak-Hindī, *i.e.*, the Indian work on nativity. What is more, the 584 remedies enumerated and described in this work include many such as are

¹ This paper was not sent in till after the Congress, though we were prepared for the learned author's contribution, and are glad to give it a place in our Proceedings.—ED.

² Arabische Quellen, zur Geschichte der indischen Medicin, in the Journ. of the Germ. O. S., xxxiv.

³ Die pharmakologischen Grundsätze des A. M. Muwaffak, in Prof. Kobert's Historische Studien aus dem pharmakologischen Institut der k. Universität Dorpat, 1873.

more or less confined to the soil of India, as, *e.g.* aloes, tamarinds, and sandal-wood; and a number of drugs with which the author had become acquainted during his extensive travels in India are expressly designated by him as Indian drugs. Professor Kobert, the learned editor of Dr. Achundow's translation, having placed the names of these drugs before me, I have tried to identify them with the names of Indian plants, and my suggestions, such as they are, have been printed by Professor Kobert.¹ I have come across a drug with an evidently Indian name since, *viz.*, *amladsch*, *Emblica officinalis*, which, according to Muwaffak, is an Indian word meaning "a stone."² This designation is clearly identical with the Sanskrit term *amala*, *Emblica officinalis*.

The Bower MS.

Direct proof of the existence of a native Indian system of medicine at a far earlier period than the time of the Arabian and Persian writers on medicine has been furnished by the discovery of the Bower MS., and of the two Sanskrit works on medicine contained in it. The date of this MS. has been referred to the fifth century A.D. both by Dr. Hörnle and by Professor Bühler,³ and it is therefore the earliest Sanskrit MS. extant. Suśruta and the other leading authorities in the field of medical science come out as prominently in this early work as in the hitherto known Sanskrit compositions on medicine. For a detailed analysis of the principal points of coincidence between the Bower MS. and the printed Sanskrit works on medicine, I may refer to Dr. Hörnle's excellent annotated edition and translation of the Bower MS. (Journ. Beng. As. Soc.). Some minor details might be added to the points noticed by Dr. Hörnle. Thus the legend regarding the origin of garlic, and the rules regarding its various medical uses, may be traced in the *Ashtāṅgahridaya* and other works on medicine, as I have shown elsewhere.⁴ Regarding the cure of weak digestion, B. 47 has the following:—*mande tu laṅghanam pūrvam paścāt pācanadīpanam*; and so A. (Ci. 3, 124, p. 335) ordains *mande dīpanapācanah*. B. 87 foll. has a great deal about plasters for the face; Bh. (Madhy. 4, p. 61) agrees⁵ with Bh.

¹ Die pharmakologischen Grundsätze des A. M. Muwaffak, in Prof. Kobert's Historische Studien aus dem pharmakologischen Institut der k. Universität Dorpat, 1873, pp. 294-296.

² Ibid., p. 146.

³ Journ. Beng. As. Soc., vol. ix.; Wiener Zeitschr. f. d. Kund. d. Morgenlandes, v. 302 ff.

⁴ "Der Knoblauch in der indischen Medizin," in a collection of papers published in 1893 on the occasion of Professor von Roth's anniversary.

⁵ Abbreviations:—A. = *Ashtāṅgahridaya* (ed. Kunte). B. = Bower MS. (ed. Hörnle). Bh. = *Bhāvaprakāśa*. C. = *Caraka* (ed. Jibānanda). S. = *Suśruta*. V. = *Vishṇu*. Y. = *Yājñavalkya*.

as to the ingredients to be used for such plasters, as, *e.g.* *yashṭi*, *can-dana*, *kushṭha*, *tila*; and whilst B. remarks that the patient should not let the plaster become dry, *nadhārayeta śuskhaṃ pralepaṃ vadane manushyaḥ*, Bh. observes accordingly, *śuskhas tu trinahīnaḥ syāt tathā dūshayati tvacam*. On remedies against cough, B. 120 has the remark, *ghṛitair mārutakāsināṃ sānnair upācareddhīmān*, corresponding to A. (Ci. 3, 1, p. 328), *kāśām snehair ādāv upācaret . . . ghṛitaiḥ*; and so there is perfect agreement between the other remedies against cough in both works. The causes of premature grey hair are stated as follows in B. 112:—*rasadoshād vyavayācca pittāṣoṇitadūshant | bhavaty akālapalitaṃ*. Bh. (Madhy. 4, p. 63) has an analogous statement, *krodhasōkaśramakṛitāḥ śarīroshma śirogataḥ | pittaṃ ca kośān pacati palitaṃ tena jāyate.||*

Relation of Medical Writings to other Branches of Sanskrit Literature.

The mutual relations between medical literature and other departments of Sanskrit literature have not been receiving much attention hitherto,¹ in spite of their importance for purposes of chronology. It will be my endeavour to show that the medical theories and rules of diet in which the early law-books of India, the Smṛitis, abound, agree to a considerable extent with the corresponding portions of the medical works.

Formation of the Body.

Generation and the formation and growth of the human body is described as follows by Caraka (Śār. 4, p. 351 foll.), those passages which agree literally with the corresponding sections of the Vishṇu (96, 43 foll.), and Yājñavalkya (3, 72–100), Smṛitis being marked out by cursive type:—*Garbhas tu khalv antarīkshavāyagnitoyabhūmivikāras cetanādhisṭhānabhūtaḥ sa hy asya shashṭho dhātur uktaḥ . . . yathā pralayātyaye sisṛīkshur bhūtāny aksharabhūtaḥ sattvopādānaḥ pūrvataram ākāśam sṛijati tataḥ krameṇa vyaktataragunān dhātūn vāyvādīkāś caturah . . . sa sarvagunavān garbhatvam āpannaḥ prathamē māsi saṃmūrchitaḥ sarvadhātukalushīkṛitaḥ khetabhūto bhavati . . . dvitīye māse ghanāḥ saṃpadyate tritīye māsi sarvendriyāni sarvāṅgāvayavās ca . . . tatṛāsyākkāśātmakeṇ śabdaḥ śrotraṃ lāghavam saukshmyaṃ vivekaś ca vāyvātmakam sparsaḥ sparsānaṃ ca raukshyaṃ preranaṃ dhātuvyūhanaṃ ceshṭās ca śārīryaḥ agnyātmakam rūpaṃ darśanaṃ prakāśaḥ paktīr aushnyaṃ avātmakam raso rasanaṃ śaityaṃ mārđavaṃ snehaḥ kledaś ca pṛithivyātmako gandhaḥ ghrāṇaṃ gauravaṃ sthairyam mārtiś ca . . . tadā prabhṛiti garbhaḥ*

¹ Certain coincidences between works on medicine and the Vedas, Pāṇini, Varāhamihira, and the Amarakośa. have been pointed out by Professor Weber.

*spandate tac caiva kâraṇam apekshamânâ na dvaihridayam vimâna-
nanâgarbham icchanti kartum . . . tasmât priyahitâbhyâṃ garbhîṅgîṃ
viśeṣeṇopacaranti kuśalâḥ . . . garbhasyâpadyamânasya vinâśaṃ
raivâpyam vâ kuryât | caturthe mâsi sthîratvam âpadyate . . . pañcane
mâsi garbhasya mâṃsaṇitopacayo . . . śaṣṭhe mâsi garbhasya
balavarṇopacayo saptame mâsi garbhaḥ sarvabhâvair âpyâyata . . .
aṣṭame mâsi garbhaś ca mâtṛito garbhataś ca mâtâ . . . muhur
muhur ojaḥ parasparata âdadate . . . tasmât tadâ garbhasya janma-
gâpad bhavati.* For an analogous, though less copious, description
of the formation of the body, see S. (Śâr. 3, p. 10), and A. (Śâr. 1, p.
183 foll.). Both of these works, however, do not agree with Yājñi-
valkya and Viṣṇu so closely as Caraka. In this place the Indian
theory regarding the causes of the production of male or female
children or of hermaphrodites may be fitly referred to. It is com-
mon to Manu (3, 49), and to the medical works S., A., C., Bh., and
others.

Anatomy.

The subject of anatomy, in the medical and legal works referred
to, is discussed together with the formation of the body. The
analogous statements of these works regarding the structure and
parts of the body may be exhibited in a tabular synopsis. It will be
seen that, in this case also, the learned composition of Caraka, the
superior antiquity and authenticity of which has been well brought
out by Dr. Haas, agrees far more closely with the legal works than
the other compilations. The parts of the body are—

Parts of the Body.	Viṣṇu and Yājñav.	Caraka.	Suśruta.	Aṣṭ.	Bhāv.
Elements (dhātu) . . .	7	7	7	7	7
Skins	6	6	6	6	6
Parts of the body . . .	6	6	6	6	6
Orifices	9	9	9	9	9
Bones	360	360	300 (360)	360 (300)	300
Veins (sirâ)	700	700	700	700	700
Ligaments (snâyû) . . .	900	900	900	900	900
Arteries (dhamani) . . .	200	200	24	24	24
Muscles	500	400	500	500	500
Tubular vessels (sirâdhamani) }	2,900,956	2,900,956	...	...	...
Vital parts (marma) . . .	107	107	107	...	107
Joints	200	2000	210	210 (200)	210
Objects of the senses	5	5	5	5	5
Organs of perception . .	5	5	5	5	5
Organs of action	5	5	5	5	5
Hairs	300,000	2,900,956	...	...	innumerable
Excretions (mala)	12	7	7	7	7
Seats of vitality	10	10	...	10	...

The agreement between Caraka and the law-books, especially Yājñavalkya's, is exhibited very plainly, moreover, in what the former calls *koshthāṅgāni*, i.e., the navel, the heart, and the rest; and in his list of fifty-six *pratyaṅgāni*, which correspond to the *sthānāni* of the law-books. But it is in the department of osteology that this agreement shows itself most distinctly. The bones are:—

Bones.	Vishṇu and Yājñav.	Caraka.	Bones.	Vishṇu and Yājñav.	Caraka.
Teeth	32	32	Clavicle	2	2
Bones at their root .	32	32	Palate	2	2
Nails	20	20	Flat buttocks . . .	2	2
Fingers and toes . .	20	20	Secret part	1	1
Long bones of each } hand and foot } [Roots of each hand } and foot] }	60	60	Back	45	45
Heels	2	2	Neck	15	15
Ankles	4	4	Breast	17	14
Manikas of each hand	...	2	Ribs, together with } Sthālakas and } Arbudas }	72	72
Elbows	4	4	Chin	1	1
Legs	4	4	Root of the chin . .	2	2
Knees	2	2	Nose	1	1
Cheeks	2	2	Eyes	2	1 (?)
Thighs	2	2	Ears	2	1 (?)
Arms . . . .	...	2	Forehead	2	1 (?)
Shoulders	2	2	Temples	2	2
Upper part of the } spine } Temples (lower part)	...	2	Head	4	4
	2	2		360	360

A. has the identical figure of 360 bones, which, however, are specified in the Commentary only. The 300 bones of S. and Bh. consist of 120 of the extremities, 117 of the trunk, and 63 of the head.

Quantity of Blood, &c.

Yājñavalkya states the respective quantities of blood, water, bile, &c., in the human frame, in *añjalīs* or sotticefuls. Precisely the same statements occur in C.

Physiology.

Turning from anatomy to physiology, we may note, first, that the theories of the law-books and of the works on medicine regarding menstruation and conception are absolutely identical. Thus the well-known rule of Manu, 3, 46-48, on this head recurs in A. (Śār. 1, 27 foll.), Bh. (i. 1, 18), and Su. (Śār. 7 foll.). Impotency, together with

¹ Vishṇu, 22, 81; and Manu, 5, 135.

its causes and cure, is discussed in Bh., i. 1, 23, and v. 218 foll.; S. Śâr. 9, C. 848 foll. The classification of impotency as comprising seven kinds, some of which are curable and the rest incurable, as well as the names of certain Klîbas, such as, *e.g.* *îrshyaka* and *âsekya*,¹ recur in the Nârada-smṛiti, xii. 11 foll., and so do some of the remedies prescribed against impotency. Childhood, or the period of minority, extends to the age of sixteen, both according to legal and medical authorities. The theories of the medical writers regarding the varying influence of the six seasons on the system seem to underlie the rules of the legislators regarding the various quantities of poison to be given, according to the time of the year, to a person who is to be tested by the ordeal of poison.² The best of climates, according to the medical authorities, is the climate of an arid (*jâṅgala*) country; accordingly, the legislators advise the king to settle in a *jâṅgala* country.³

Diseases.

The numerous diseases referred to in the law-books, especially in connection with the subject of Karmavipâka, correspond to the nomenclature of the medical writers, and so do the poisons which are referred to on occasion of the ordeal by poison.

Hygieneology.

The department of hygieneology and personal duties presents a vast number of analogies between legal and medical literature. A man shall rise early in the Brâhma Muhûrta; he shall not take food or a bath during an indigestion; he shall after meals cleanse his teeth with a stick of a certain kind of wood; he shall not travel without a companion; he shall not scratch the ground without reason; he shall not step on ashes, excrements, chaff, or potsherds; he shall not cross a river (swimming) with his arms; he shall not ascend a tree or a boat of doubtful solidity; he shall not exert himself without a purpose; he shall never look at the sun; he shall not serve low people; he shall not stop at the root of a tree at night, nor at a cross-road; he shall avoid the smoke of a burning corpse. These examples have been collected from the Dinacaryâdhyâya in A., Sû. 2. Many other instances may be gathered from Bh. I. i. 114 foll., and the whole of the Dantakâshthavidhi, *ibid.* 90, agrees almost literally with the sixty-first chapter of the Vishṇusmṛiti.

¹ Sevyâśca, Nâr., xii. 13, is probably wrong for âsekyaśca.

² This fact has been pointed out by Professor Stenzler in his *Essay on Indian Ordeals*, Journ. Germ. O. S., ix. 674.

³ Manu, 7, 69; Yâjñ., 1, 320; Vi., 3, 4.

Philosophy.

The philosophical and cosmological tenets of both sets of works offer many points of resemblance, besides those contained in the above-quoted chapter on embryology. Thus the human body is said to consist of the five elements, of earth, water, fire, air, and ether. Manas, "mind," is distinguished from buddhi, "intellect," and âtman or jîva, "soul." The entire Sâmkhyan theory of the twenty-four Tattvas is found both in the Bhâvaprakâsa (I. 1, 9 foll.) and in the Vishṇu-smṛiti (97). The author of the Code of Manu shows himself fully acquainted with the three qualities of Sattva, Rajas, and Tamas in the mortal frame which play such an important part in the Hindu system of medicine. The whole creation consists of immovable and movable things (*sthâvara* and *jaṅgama*). The *sthâvara* things,¹ according to Suśruta and other medical writers, may be divided into the four kinds of *vanaspati*, *vriksha*, *vîrudh*, and *oshadhi*. This division corresponds to Manu, i. 46-48. Of *jaṅgama* things there are also four kinds, both according to Manu and Suśruta, viz., *jarâyujâ*, *andaja*, *svedaja*, and *udbhijja*. The well-known medical theory of the three humours in the human frame, viz., wind, bile, and phlegm, underlies the term "*sânnipâtika*, diseases," which occurs in the law-books.

Weights and Measures.

The legal writers trace weights and measures from *trasareṇu*, the atom of dust which is seen to move in a sunbeam. Writers on medicine define the term *trasareṇu* in the same way, but they further divide a *trasareṇu* into thirty *paramâṇus*. The various coincidences and differences between the medical and legal writings on the subject of weights and measures have been fully pointed out by Colebrooke in his Essay on Indian Weights and Measures.

Proverbial Sayings.

Considering this general agreement between the teaching of the legal and medical writers, it is not surprising to find that they should have a number of proverbial sayings in common, among which those relating to the instability of human life (Vishṇu 20), and to the eight things commanding reverence in this world (Nârada xvii. 54) may be mentioned.

¹ In Manu, i. 46, also the reading *sthâvarâh* is perhaps preferable to the reading *taravâh*, which has been printed in my edition of Manu.

Points of Difference.

On some points there exists a difference of opinion. Thus the medical writers assert that neither the father nor the mother should be very young; the former being less than twenty-five years old and the mother less than sixteen, the child will either die in the womb, or it will not live long, or the senses or limbs will be incomplete. The legal writers, on the other hand, are advocates of infant marriage, as has been shown elsewhere. Again, the law-books denounce alcoholism and animal food in the strongest terms, whereas the works on medicine prescribe spirituous drinks, broths, and divers kinds of meat for certain diseases. These differences of opinion, however, may be easily accounted for by the different ends which the legal and the medical writers had in view.

Antiquity of Indian Works on Medicine.

The coincidences referred to are the more remarkable because they extend over the whole range of Smṛiti literature. If, *e.g.* the chapter on anatomy in the Vishnu and Yājñavalkya Smṛitis were the only case of close agreement between legal and medical works, it might be argued that this agreement does not prove much for the antiquity of works on medicine, as the two law-books in question can be hardly older than the third century A.D. Such analogies, however, as those occurring, *e.g.* in the section on personal duties, which is among the earliest relics of Smṛiti literature, prove distinctly that the groundwork of Sanskrit writings on medicine is genuine and old, not inferior in antiquity, apparently, to any other branch of Indian learning.