

VI. MEDICINE

SOME SIGNIFICANT ASPECTS OF THE ORIGIN AND DEVELOPMENT OF MEDICINE IN ANCIENT INDIA

(Abridged)

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The origin of *Āyurveda* is shrouded in the mist of great antiquity. Texts and traditions attribute its origin to Brahma, the creator of the universe. Many authorities see in the Vedas, particularly the *Rg.* and the *Atharvan*, the beginnings of medicine in ancient India. It is, however, seen that the large number of references available in the *Agniveśasanhitā* show that it was a product of social changes. This *saṃhitā* refers to a period, in the proto-history of India, when people led a pastoral life and lived a natural life free from disease. As civic life and urban culture developed, the society is seen to have been subjected to many changes and numerous diseases, not known in the earlier ages. The earlier Vedic medicine was not equal to the challenge. The wise men of the time (the *Rṣis*) are stated to have imported into the Indo-Gangetic plains a rational and systematized medicine—the *Āyurveda*—from a more advanced Himalayan culture. Subsequent development of medicine in the Indo-Gangetic plains kept pace with the increasing urbanization and this lasted till the Sunga-Kushana period.

The long history of the evolution of medicine in ancient India was coeval with that of the Indian society. According to traditional beliefs, all these developments took place between the latter half of the *Kṛtayuga* and the commencement of the *Kalīyuga*. These *yugas* refer to aeons and not to millennia or centuries. However, the dating of these developments, having regard to known and accepted parameters of archaeology and history, involve considerable difficulties. It has, therefore, been suggested that, leaving aside the problem of fixing the probable or credible periods of the proto-history of India *vis-à-vis* the *ādikāla* or primal age, an attempt may be made to envisage a time-bracket for the origin and development of medicine. The fifth millennium B.C., corresponding to the earliest period of antecedent development before the main cultural phase of Harappan civilization, ranging from c. 2300 B.C. to c. 1750 B.C., and the fourth period of Hastinapura, viz. early second century B.C. to late third century A.D., have been suggested as the lower and upper limits respectively of the time-bracket.

I propose to confine myself, in this paper, to some significant aspects of the origin and development of medicine in ancient India.

Symposia, seminars and conferences—both at the national and international levels—are not new innovations introduced in this country in the more recent past. They are as old as the culture of India and have formed an integral part of it. In fact they represent an essential discipline of the cultural activities of ancient India and have served as the media for the dissemination and exchange of knowledge. Apart from the numerous *sadas*

conducted by kings, symposia, seminars and conferences, spoken as *tadvidyā-sambaṣā pariṣads*, attended by experts and specialists in different aspects of medicine, drawn from many parts of the then civilized world, took place from time to time in ancient India.

The *Agniveśasaṃhitā*, known popularly as the *Carakasamhitā* after one of its important redactors, can be said to be a compilation of the transactions of a number of such symposia, seminars and conferences. The *Suśrutasamhitā*, a contemporary work, is also seen to be more or less a record of a series of seminars through which the knowledge of medicine, surgery and obstetrics was imparted to Suśruta and others by Kaśirāja Divōdāsa Dhanvantari.

One such conference with which the *Agniveśasaṃhitā* begins is seen to have taken place on the slopes of the Himalayas to consider and devise measures to meet the challenge posed by the occurrence of numerous new, difficult and often fatal diseases that arose as a direct consequence of the shift from the *ādikāla* culture to that of the urban.¹ In another symposium which took place in a similar setting, the *ṛṣis*, who attended it, had to deal not only with diseases that were unknown in the earlier periods but also with the growing problem of a rapid decline in the life-expectancy, and of premature senescence, as well as of infirmities of different kinds.² Between them, the proceedings of the two conferences, referred to above, provide extremely valuable information relating to the nature of the Indian society in the period described as *ādikāla*, corresponding to the pre-Āyurvedic period, and how the impact of urbanization affected it. In fact, the change from an essentially agriculture-oriented rural culture to that of the urban in ancient India is seen to have set the stage for the introduction in the Indo-Gangetic plains of a rational and systematized medical science from a more advanced culture and civilization that had developed in the mid-Himalayan regions in the north.

THE ĀYURVEDIC CONCEPT OF THE GENESIS OF THE SCIENCE OF LIFE—ĀYUṢ VEDA—INCLUDING MEDICINE

The origin and development of Āyurveda or the Science of Life, including medicine, as furnished by the *Agniveśasaṃhitā*, deserve consideration and discussion in its two different aspects, viz.: (i) conceptual and (ii) historical or chronological, which have a direct bearing on the early Indian thoughts and the proto-history of India.

Āyurveda or the Science of Life, according to Bhagavān Punarvasu Ātreya, is eternal as it had no beginning and deals with tendencies that flow innately from nature. The nature of matter is eternal. There was at no time a break in the continuity either of life or intelligence. The experience of life is perennial. Ease (*sukha*) and dis-ease (*duḥka*), with their respective causative factors, are without a beginning, in view of their mutual interdependence. The concept comes under the purview of Āyurveda.³ Amplifying

this, Bhagavān has proceeded to observe that at no time can it be said that Āyurveda came into being, having not been in existence before. The functions of this science are implicit in nature and it owes nothing to artifice.

The concept of matter and life advanced by Ātreya is based more or less on the *Nirīśvara Sāṅkhya* doctrine of the evolution of the matter-stuff of the phenomenal universe, as well as of the elements of the mind and senses from the primordial matter or nature, i.e. the *Mūla-Prakṛiti*. In this view, the potentiality of life is implicit in the different species of *bhūtānūs* or the atoms of matter, and life is stated to manifest itself when *anūs* or molecules combine under appropriate conditions, i.e. *deśa* or space, *kāla* or time, *vṛtti* or mode, and *kāraṇa-kārya niyama* or causal laws. Matter and life were, therefore, considered to be not only eternal but also inseparable. In this view, at a fundamental level—at the level of mass and energy—‘everything exists in everything else without prejudice to the generic and specific difference of things; inorganic matter, vegetable and animal organisms are essentially and ultimately one as far as mass and energy are concerned.’⁴ This concept invites attention to a current view that ‘life originated from ordinary chemical reactions by a slow evolutionary process and, at a fundamental level, matter/energy is the only permanent reality’.

The difference between the ancient Indian ideas and the current theories may be expressed as follows: In the case of the former, the slow process of evolution observed at the living organic level is only an extension of the process that has been going on all the time at the so-called non-living inorganic level, whereas in the case of the latter, the process of evolution is confined to the living organic level only. The life-stream carried in its current its own supporting wisdom that became manifest at the beginning of each cycle of time.⁵

Āyurveda and the Vedas—The traditional belief, tracing the origin of Āyurveda to the Vedas,⁶ specially the *Atharvaṇa*, should not be regarded as a final verdict on the subject. It would appear that the highly systematized and rational Āyurveda, in its eight specialities, the *aṣṭāṅgas*, was not a direct outcome of the earlier Vedic medicine, though the medical knowledge and experience of the Vedic times served as a background on which the new knowledge—exotic in origin—was planted, leading to the synthesis of the two. They are only linked together by their common objectives, namely the promotion and preservation of life.⁷

THE SHIFT FROM ĀDIKĀLA LIFE TO LIFE UNDER URBAN CULTURE AND THE BIRTH OF RATIONAL MEDICINE—A SIGNIFICANT LANDMARK

We owe to the *Agniveśasamhitā* an insight into the state of the society, culture and civilization of India from about the fourth millennium B.C. The

pre-Āyurvedic or *ādikāla* period is important and significant for more than one reason. In the first place, it was towards the close of this period that Āyurveda, which aims at the preservation and maintenance of health and the promotion of longevity on the one hand, and the prevention or relief and/or cure of the disease on the other, was introduced in the Indo-Gangetic valley, and later on, it spread to other parts of the subcontinent. It was also during this period that the life- and health-promoting principles and tenets reflected in *svasthavṛtta* and *sadācāra*, postulated by Āyurveda, became a way of life, practised both by the elite and the common people. In the second place, it was during the early phases of this period that the inadequacy of the Vedic medicine as such to meet the growing needs of the changing society and of the rapidly developing urban culture and civilization was realized. This realization was followed by action to import the much needed knowledge of a rational and advanced system of medicine from beyond the confines of the north Indian plains.

In the third place, the *saṃhitās* of Agniveśa, Suśruta and Kāśyapa have referred to a more advanced and highly developed culture that existed in the 'cold districts' of mid-Himalayas, which is found to have profoundly influenced the development and growth not only of the science and art of medicine of the plains below but also their culture and civilization. These *saṃhitās* provide sufficient internal evidence to show that the culture of the Indo-Gangetic plains—the *Brahmāvṛtta*—belonged more to the Himalayas than to any place in the north-west or outside the Indian subcontinent, assuming that the mid-Himalayan region, the *Ilāvṛta*, which is supposed to have been the cradle of an ancient culture and civilization, was a part of the proto-historic India. I have, in what follows, drawn from the exhaustive references to the genesis of Āyurveda that obtain in the *Agniveśa-saṃhitā*.

The Pre-Āyurvedic Period—It is seen from the *Agniveśasaṃhitā* that the outlook of the Indian culture in the period described in it as *ādikāla*, corresponding to the earlier phases of the *kṛtayuga* according to some, and the era that preceded this *yuga* according to others, was one of the forest-, village- and agriculture-oriented types. This was characterized by plain living and high thinking; its community life was governed and regulated by high moral and ethical codes. The expectancy of life of the members of this community was found to have been incredibly long and they lived in harmony with nature and close to the divine. The nature too is stated to have been kind and bountiful. Ill health and disease appear to have been rare and uncommon in this society. This summarizes the description of man and the society during the *ādikāla*, as found in the *Agniveśasaṃhitā*.⁸ The duration of *ādikāla* is seen to be indeterminate. In the present state of the knowledge of Indian proto-history and considering the nature of the evidence now available, which

is regrettably meagre, it may be safe to assume that, regardless of its actual duration, this period may refer to the earlier Vedic age or, better still, the pre-Āyurvedic age.

The shift from the *ādikāla* life and culture to life in townships, City-States, and under urban civilization has, according to this *saṃhitā*, set the pace for all-round and rapid deterioration, followed by a steep decline in the moral and ethical values, leading *pari passu* to political, economical and emotional imbalances and the occurrence of numerous difficult and often fatal diseases, as well as to an increase in the mortality rate, and a corresponding fall in the expectancy of life. Bhagavān Punarvasu Ātreya is seen to have observed that 'as *kr̥tayuga* wore on, those, who were better circumstanced, became heavy of the body. It bred lassitude, lassitude gave rise to indolence, indolence created the need for accumulation of goods, the accumulation necessitated acquisition, and the spirit of acquisition engendered greed. All these came to pass in the *kr̥tayuga*.'⁹

Referring to the several consequences that followed on the decline of moral and ethical values—*dharma*, Bhagavān observes further: 'As a consequence, the bodies of human beings, failing to receive sustenance as before from the progressively deteriorating quality of food, being affected by the lack or inadequacy of exercise, and being afflicted by heat and wind, soon succumbed to attacks of fevers and other diseases. Thus, there was a gradual decline in the life-span enjoyed by the successive earlier generations. Thereafter, in the second age, the *tretāyuga*, the *dharma* found itself deprived of a quarter of its plenitude. From this loss of the fourth part of the *dharma*, there followed a similar deterioration, in the course of the succeeding ages, in the beneficent power of the earth and other natural elements.¹⁰ The *ṛsis* were also deeply affected by this change and not spared of its several consequences which caused great concern to them.¹¹

The deteriorating situation became unmanageable by about the *tretāyuga*, and it affected not only the generality of the people but also the *ṛsis* themselves. A solution to the problem of increasing incidence of premature senility, difficult diseases and mounting death-rate could not be found with the resources of the medical knowledge then available, i.e. the Vedic medicine. Hence, according to the *Agniveśasaṃhitā*, a conference of the great *ṛsis* was convened on the slopes of the Himalayas to consider and find a solution to the vexed and serious problems that had arisen. They initiated the following inquiry: 'Health is the supreme foundation of *dharma*, *artha*, *kāma* and *mokṣa*. Diseases are the destroyers of health and of good life itself. Now, the great impediment to the progress of humanity has arisen in the form of diseases. What shall be the measures to remedy the situation?'¹²

After considerable discussion covering the different aspects of the problem, the conference is seen to have decided on the deputation of the Sage

Bharadvāja to Indra,* the 'amarādhīpati' of the Himalayas, to obtain the knowledge of measures to meet the challenge of diseases that had cropped up. According to the *Agniveśasamhitā*, the great-ṛṣis approached Indra twice, once by Bharadvāja in an one-man commission and, on another occasion, by a team of their representatives.¹³

Indra is then stated to have referred to the source of his own knowledge, and to town-dwelling or urban life as the causes that were responsible for decay and disease that had overtaken the humanity. He then 'taught aetiology (science of causes), symptomatology and therapy to Bharadvāja'.¹⁴

On his return to the plains, the Sage Bharadvāja is stated to have imparted the knowledge of Āyurveda, acquired by him from Indra, to other ṛṣis; one of the latter, Bhagawan Punarvasu Ātreya, then taught the science to Agniveśa, Bhela, Kṣārapāṇi, Hārīta Jātukarna and Parāśara, who, in their turn, wrote treatises of their own.

It is also seen from the *saṃhitās* of Suśruta and of Kāśyapa that the latter and Kāśīpati Divōdāsa Dhanvantarī, too, obtained their knowledge of *kaumārabhr̥tya* and *śalya-śālākya tantras* respectively from Indra. This is in addition to the knowledge of Āyurveda, in general, which also they are stated to have learnt from Indra. In their turn, they imparted their knowledge to several of their pupils who, for their part, wrote separate treatises on different medical specialities, viz. general surgery, special surgery—relating to the treatment of the diseases of the eye, ear, nose, mouth, throat, obstetrics and paediatrics, etc. The period, commencing from the time of the introduction of Āyurveda to the close of the third century A.D., represents the phase of optimum development of medicine in India and its many specialities. This epoch may be justifiably described as the Āyurvedic period.

The Post-Āyurvedic Period—This period begins in the late third century A.D., after which no further or significant advances are seen to have taken place in the field of Indian medicine. On the other hand, the arrest of progress and gradual decline of Indian medicine mark this period.

It will be seen from the account of the genesis of medicine—the Āyurveda—in the proto-historical period, furnished by the *Agniveśasamhitā* which is an authoritative encyclopaedic, secular treatise on medicine, that the introduction of Āyurveda in the *Brhm̐v̥ṛta* from *Ilāvṛta* in the Himalayas, some time during the later phases of *Kṛtayuga*, and its development in the *yugas* that followed, synchronized with the different vicissitudes through which the society had to pass in the proto-historic India. From this point of view at least three phases of its development could be made out. They are: (i) the phase corresponding to the period described as the *ādikāla* which is seen not

* He is not the Indra of the Vedas—the King of Gods in Heaven—but a ruler of great wisdom, virtue and culture in the mid-Himalayan region during the post-Vedic age.

only to have preceded but also extended to the earlier parts of *kṛtayuga*. This phase pertains to the *Agniveśasamhitā* version of an ideal Indian community consisting of 'Men like Gods' who probably inhabited forests, hills, mountains and villages. This was obviously not a nomadic primitive society of clans and tribes; (ii) a phase commencing from about the middle of *kṛtayuga* and extending up to the concluding phases of the *dvāparayuga*; (iii) the phase extending from the commencement of *kaliyuga* to the late third century A.D. corresponding to the *Suṅga-Kuṣāna* period.

The reckoning of the probable dates of the commencement of *kṛta*, *trētā* and *dvāpara yugas* may not be easy, as they refer to aeons and not to centuries or millennia. These are incredibly long periods which may be considered fanciful rather than conceivable in the light of archaeological data now available. We are, however, on relatively firm ground as regards the date of the commencement of the *kaliyuga*. Thus, according to the *Aihole* inscription of Pulikeśin II (seventh century A.D.), the Mahābhārata War is stated to have taken place in 3102 B.C., which was the starting-point of *Kali* era, on the basis of the astronomical tradition represented by Āryabhaṭa.¹⁵ Monier Williams has noted that this *yuga* began between the midnight of 17th and 18th February 3102 B.C.¹⁶ The second and third phases refer to the period of progressive devolution of the Indian society from an ideal state of living—its gradual deterioration keeping pace with the fast developing City-States and the rapidly growing urban civilization.

DATING

The dating of the *ādikāla* is attempted here on the basis of (i) internal or literary evidence and (ii) archaeological grounds.

(i) *Internal or Literary Evidence*—The internal or literary evidence relates to the contemporaneity of the Sage Bharadvāja, Kāśirāja Divōdāsa Dhanvantari—the preceptor of Āchārya Suśruta, Rājaṛṣi Viśvāmitra—the father of Suśruta, Pratardana—the son of Kāśirāja, King Daśaratha of Ayodhya and his son Śri Rāmachandra, and Bhagavān Punarvasu Ātreya. It is seen that, according to the *Taittirīya Brāhmaṇa* and the *Mahābhārata*, the Sage Bharadvāja was the *purōhita* of three generations of the rājas of Kāśi, and that he imparted initially the knowledge of Āyurveda to Rāja Divōdāsa (Dhanvantari).¹⁷ The latter, according to the *Suśrutasaṃhitā*, obtained further knowledge of Āyurveda from Indra.¹⁸ In the same work it is stated that Kāśirāja taught Āyurveda, in general, and *śalya-śālākya tantras*, in particular, to Suśruta and others in his hermitage (situated in the Himalayas).¹⁹ According to the *Harivaṃśa* and the *purāṇas*, Kāśirāja, after his defeat by Haihayas in a war, abdicated in favour of his son, Pratardana, and took refuge under the Sage Bharadvāja in the Himalayas, where he adopted the life of a *vānaprastha*.

It is stated in the *Rāmāyana* that Kāśirāja Divōdāsa Dhanvantari was a close friend of Rāja Daśaratha of Ayodhya and that he was present at the *putrakāmeṣṭiyāga* performed by the latter before the birth of Śri Rāmachandra (and his brothers).²⁰ Even so, Pratardana, the son of Kāśirāja, is seen to have attended the coronation of Śri Rāmachandra after his return to Ayodhya from his exile.²¹ Suśruta is stated to be the son of Rājaṛṣi Viśvāmitra.²² The latter, according to the *Rāmāyana*, was closely associated with Śri Rāmachandra at the time of his marriage with Sīta. Most of the *ṛṣis*, specially Jamadagni, Vasiṣṭha, Bṛgu, Gautama, Pulastya, Bhārgava, Ātreya, Agastya and Viśvāmitra, among others who are stated to have attended the conference referred to elsewhere, belonged to the Vedic period and they were very aged at the time of the *Rāmāyana*. It thus follows that the Sage Bṛhadvāja, Bhagavān Punarvasu Ātreya, Kāśirāja Divōdāsa Dhanvantari, Kāśyapa and the disciples of these celebrities, viz. Agniveśa, Suśruta and others, were contemporaries of Śri Rāmachandra. The *Rāmāyana* period, according to the *Purānas* and traditions, belongs to the terminal phases of the *tretāyuga*, 3000 B.C., if not earlier, has therefore been suggested as the period of Śri Rāmachandra. Hence the period somewhat earlier to 3000 B.C. is likely to have been the time when Āyurveda was introduced in the Indo-Gangetic plains. This has been reckoned on the basis of (a) the genealogy of *Ikṣvāku* dynasty,²³ and (b) the horoscope of Śri Rāmachandra, mentioned by Vālmiki in his *Rāmāyana* and by Bhōja in his *Rāmāyana Campu*.²⁴ Likewise, the shift from the *ādikāla* or the pre-Āyurvedic culture to that of the urban must have become a *fait accompli* by this period.

(ii) *Archaeological Grounds*—It will be seen from the foregoing that, from the point of view of literary evidence and astronomical grounds, a date of 3000 B.C. approximately would represent the lower limit and the third century A.D. the upper limit of the time-bracket for the evolution of the rational medicine in ancient India. The period anterior to the lower limit, extending possibly beyond the fifth millennium B.C., may be considered to represent the period of *ādikāla* or pre-Āyurvedic culture.

It may now be shown that this view is also supported by the results of modern archaeological excavations. The time-bracket for the Indus Valley Civilization has been established to cover variously the periods c. 2500–1500 B.C., 2350–1800 B.C. and c. 2300–1750 B.C.²⁵

It is now recognized that the Indus Civilization had a long antecedent development before the Harappan culture reached its main cultural period. Pusalker has opined that the Indus Civilization may well reach beyond 3500 B.C. This agrees more or less with the lower bracket, c. 3000 B.C., for the origin of Āyurvedic or urban culture, proposed by me on the strength of internal evidence. The urban civilization of the Indus valley was not confined to the Indus valley alone, but spread extensively as far east as Alamgirpur in the

Gangā-Yamunā basin in Uttar Pradesh, and as far south as Bhagatray on the Kim.²⁶ Āyurveda was for the most part a product of the culture of the Gangā-Yamunā *doāb*, and in its spread, it had extended to and embraced not only the Indus valley but also the southern peninsula. Its development, spread and decline were coeval with the vicissitudes of this region. The account of the vicissitudes of the changing society, specially the shift from the *ādikāla* or pre-Āyurvedic culture to that of the urban, described vividly by the *Agniveśasamhitā*, has a direct bearing on the occurrence in this region 'with seeming suddenness of an evolved and widespread culture almost worthy of the name "civilization" by about the second quarter of the first millennium B.C.' It is important to note here the relationship between the cultures of the Gangā-Yamunā *doāb* and the Indus valley which, as will be seen later, were not different, but mutually determining.

From archaeological considerations Sir Mortimer Wheeler observes:²⁷ 'Urban life began in the *doāb* about 1000 B.C. and since that time has been continuous here.'

The contributions of Indian archaeology lend support to the lower and upper limits of the time-bracket which cover the periods of the origin, development, spread, arrest and decline of Āyurveda, keeping pace with similar cultural sequences in the Gangā-Yamunā valley. They have, in addition, lent support to the *Agniveśasamhitā* version of the *ādikāla* in which 'the idea of town life was unknown' in the northern plains and the 'sudden burgeoning' of civic life in the Gangā-Yamunā basin in what may be called the post-*ādikāla* periods.

However, in the light of these views, as well as of the *Agniveśasamhitā* version of the place from where the science and art of medicine—the Āyurveda—was derived and introduced in the Indo-Gangetic plains, it is suggested that the 'cold districts' in the mid-Himalayas may have nurtured a relatively more advanced culture round about the third millennium B.C. It is significant to note, in this connection, that while Harappans were flourishing in the Indus valley, a number of pre-Harappan neolithic cultures were also seem to have been flourishing in the foothills of the Himalayas and Vindyas, as is evident from the exploration of Himachal Pradesh and southern U.P., although it is not possible at the moment to assign any fixed chronological order. This culture-complex of the Himalayas may have some reference to *Ilavṛta*, mentioned in the ancient Indian literature as the cradle of culture. It is also suggested that there must have been regular and active cultural traffic between the Himalayan districts, mentioned above, and the northern plains below in the same period. This suggestion is based among others on the legend that Lord Buddha and Śākara (Indra) met a number of times, and that on one occasion the former spent about three months in the latter's abode (in the Himalayas). It is also seen, according to this source, that Śākara

(Indra) along with Ānanda Anuruddha and others participated in the performance of the last rites of Lord Buddha.²⁸ These traditions lend support to the view that the Indra (Śakara) tradition was in existence even as late as the fifth century B.C. and persisted thereafter for a long time.

Another equally significant point that emerges from the *Agniveśasamhitā* version of the culture of the *ādikāla* relates to its possible contemporaneity with the earliest period of 'antecedent development' of the main Harappan culture. It may be considered as a logical corollary that the Indus valley, as indeed the regions to the north, north-west and south, which later came under the influence of the Harappan culture, may have initially shared the *ādikāla* culture with the Gangā-Yamunā basin.

It is further suggested that townships, City-States, urban culture and civilization may have begun to evolve in the Indus valley long before similar developments overtook the *ādikāla* culture in the Gangā-Yamunā *doāb*. The anteriority of the development of an urban culture and civilization in the Indus valley and in the western coast of India may have been influenced by an immediate and increasing maritime and overland contact with the developing civilization in the Euphrates-Tigris basin. This was obviously not the case with the Gangā-Yamunā basin in the contemporary periods in which the *ādikāla* culture must have continued to exist uninfluenced, or not much affected, by the developing trends in the Indus valley. The only possible contact it must have had was perhaps with Saindhava-Sauvira, Saurāṣṭra, Gāndhāra and Bāhlika. It would also appear that, notwithstanding the slow changes that were taking place in these countries, they still continued to be rooted in the same basic culture as was in vogue in the Gangā-Yamunā valley. This observation gains support, for example from the current view, based on the study of a number of seals found at Mohenjo-Daro which carry the figure of the *Yogeśvara* aspect of Śiva (Paśupati), that 'Śiva was one of the principal deities of the people'.²⁹ Besides, Śiva, reference to whom occurs in the *Ṛg-Veda*,³⁰ had his abode, both according to texts and traditions, in Mt. Kailāsa in the Himalayas. The find of Śiva (Paśupati) seals in the Indus valley sites, therefore, betokens the prevalence of the Gangā-Yamunā valley culture in this area. Apart from the foregoing, there is adequate evidence in literature, viz. the early Āyurvedic treatises, which are secular works, and the two Indian epics which relate to events that took place at two distinct periods of time and belong to the *doāb*, to show that the western, northern, eastern and southern regions of ancient India shared a common culture with possibly some regional variations, and they were in constant contact with each other. The *Agniveśasamhitā* has made pointed reference by name to some of the principalities in the western wing of the Indo-Gangetic plains, the soil condition of these regions, their vegetation, their people, and their food habits and health conditions. Thus, according to Bhagavān Punarvasu Ātreya, 'The

people of Bāhlika, Saurāṣṭra, Saindhava and Sauvira—whether residents of rural areas or city-dwellers or itinerants—indulge in salt. They become languid, flabby, anaemic, and are unable to bear hardships. They habitually take salt even with milk. In saline regions, herbs, creepers and trees do not grow at all. They are of poor quality, due to the inhibiting effects of salt on their growth . . . Even persons, adapted to salt, suffer from premature baldness, grey hair and wrinkles.³¹

Without getting into more details, the view may now be advanced that while the western and eastern wings of the Indo-Gangetic plains shared a common basic culture-complex of the Himalayan origin, the evolution of an urban culture and civilization, which might have begun earlier in the Indus valley, invaded the Gangā-Yamunā basin at a much later period. It may be added that, whereas the development of City-States and urban civilization in the Indus valley was gradual and spread over long periods of time, its impact on the Gangā-Yamunā basin at a much later period must have been sudden, and its spread rapid. This observation is based on the more recent archaeological finds of early and late 'Harappan type' in a number of sites in the *doāb*, e.g. at Alamgirpur belonging to about 2000 B.C. It may be added that the excavations at Alamgirpur and Bargaon³² have revealed the existence of Harappan culture in the Gangā-Yamunā basin, but without any trace of town-planning for which Harappan civilization was reputed, e.g. in Mohenjo-Daro. The stresses and strains engendered by the rapid changes in the conditions of life in this area must have created numerous problems affecting the health of the people, so that the medicine of *ādhikāla* or pre-Āyurvedic period was found unequal to the task of successfully tackling them. This must have led to the introduction, in the *doāb*, of a highly systematized and rational medicine—the Āyurveda—from a more advanced culture-complex of the mid-Himalayas. This medical system not only served as the basis of the development of medicine in the Gangā-Yamunā valley in subsequent periods, but also spread to the Indus valley, Gāndhāra and Bāhlika in farther north-west and Saurāṣṭra in the south. This observation is made on the basis, among others, of the mention of Kankāyaṇa, made in the *Agniveśasamhitā*, who was a physician from Bāhlika and participated in the seminars presided over by Bhagavān Punarvasu Ātreya.³³

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- ² *Ibid., Cī., I, Pāda II, 3, and Pāda IV, 3-4.*
- ³ *Ibid., Sū., XXX, 27.*
- ⁴ *Yogavārtika, Sū., 3, Pāda IV, and Sū., 14, Pāda III.*
- ⁵ *Carakasamhitā, Vol. 1, p. 17 (Jamnagar edition).*
- ⁶ *Suśrutasaṃhitā, Sū., I, 5.*
- ⁷ *Carakasamhitā, Sū., XXX, 21.*
- ⁸ *Ibid., Vi., III, 24.*

- ⁹ *Carakasamhitā*, Vi., III, 24.
- ¹⁰ *Ibid.*
- ¹¹ *Ibid.*, Ci., I, Pāda IV, 3.
- ¹² *Ibid.*, Sū., I, 15-16.
- ¹³ *Ibid.*, Sū., I, and Ci., I, Pāda IV.
- ¹⁴ *Ibid.*, Sū., I, 24.
- ¹⁵ *Epigraphica Indica*, VI, pp. 11-12. See also *The Vedic Age*, p. 268.
- ¹⁶ Monier Williams, *Sanskrit-English Dictionary*, p. 854.
- ¹⁷ Preface to *Carakasamhitā*, Vol. I, pp. 34-35 (Jamnagar edition).
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- ¹⁹ *Ibid.*, Sū., I, 3.
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- ²⁸ Kern's *Manual of Buddhism*, pp. 16, 33 and 45.
- ²⁹ Pusalkar, A. D., *op. cit.*, 187.
- ³⁰ *R̥g-Veda*, II, 6, 33, 9; X, 92, 9.
- ³¹ *Carakasamhitā*, Vi., I, 17-18.
- ³² *Indian Archaeological Review*, 1958-59, pp. 50-55.
- ³³ *Carakasamhitā*, Sū., XII, 6.