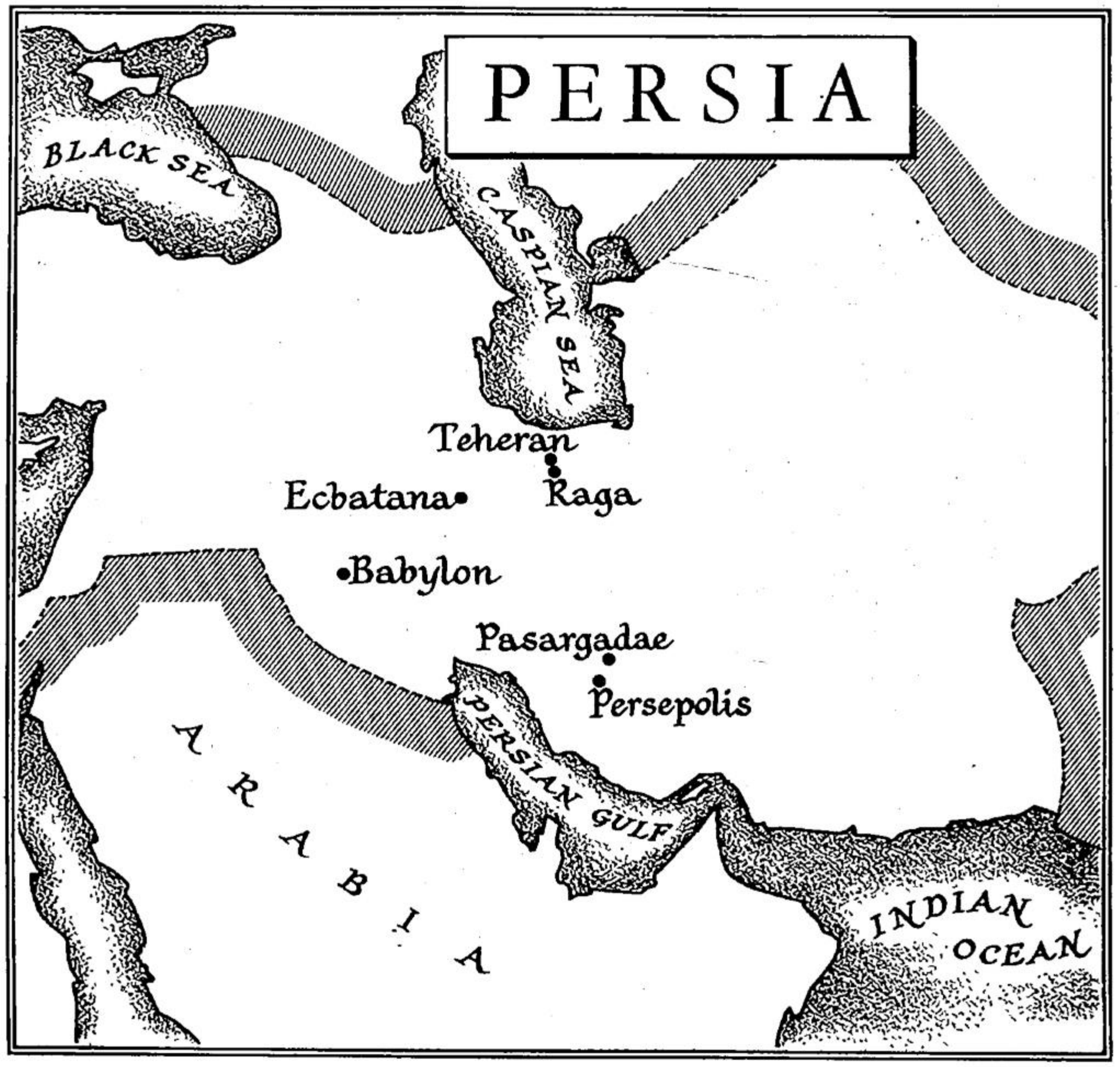
III. MEDICINE IN ANCIENT PERSIA


PERSIA
BLACK SEA
CASPIAN SEA
Teheran
Ecbatana
Raga
Babylon
Pasargadae
Persepolis
PERSIAN GULF
ARABIA
INDIAN OCEAN

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Ancient Persia

Although we have reached the point at which we might begin to discuss the Golden Ages of Greek and Indian medicine, the blossoming forth of systems of medicine such as the world had not seen before, yet we must insert here a brief interlude. Between India and Greece lie the highlands of Iran, where a strong and aggressive empire had developed in the sixth century B.C.—a menace to both Greece and India.[1] We spoke of the Persians as the conquerors of Babylon and Egypt in the first volume of this history, and we pointed out that there was constant intercourse between the Greek colonies of Asia Minor and the Persian state, sometimes friendly yet more often hostile. Persia was a formidable military power which with every decade extended its frontiers further. When Cyrus died in 529 he left an empire that reached from the Aegean Sea to the Indus, from the Black Sea, the Caspian Sea, and the mountains of Central Asia to the Persian Gulf and the Indian Ocean. And Cyrus' successor Cambyses II added Egypt to the empire. Under Darius, and perhaps even earlier, Persia had two satrapies in the Indus Valley. But India was a large country that could develop its culture even while some border regions were occupied by a foreign power. To small Greece the aggressive policy of Persia was a question of life and death, and not until the Persian peril had been averted could Greek culture develop freely and produce its most beautiful creations.

It is well known how the Persian menace was strong enough to unite the Greek city-states temporarily for common defense, how in a war that lasted almost half a century the Greeks succeeded in

maintaining their independence and defeated the superior might of the Persian army and navy in the decisive battles of Marathon, Thermopylae, Salamis, Plataea, Mycale, and others, battles which even after two thousand years are still an inspiration to mankind, since they were the heroic battles of a brave, small people in a great war of independence. One hundred years later Alexander the Great destroyed the Persian empire, and himself marched against India, spreading Greek culture in the wake of his armies.

The giant empire of Persia collapsed after only two centuries, because it had no culture of its own. The Persians were Indo-Europeans like the Greeks and the Indians, but most of their cultural creations reflect foreign influence. Every young nation borrows from its neighbors in the beginning, but it assimilates foreign modes and one day finds its own means of expression. Persia never did, with one exception to be discussed presently. The gigantic structures, tombs, temples, and palaces erected by the Great Kings at Pasargadae, Persepolis, and Susa and decorated with monumental reliefs are most impressive even in ruins, but they remind us of Babylonia and Assyria. They are not copies, to be sure, yet the inspiration is foreign. And the Great Kings wrote their triumphant inscriptions recording their great victories in cuneiform script, while they also used the Aramaic alphabet and even the language for their diplomatic correspondence. The calendar they took over from Egypt. They were not barbarians by any means, but learned from their neighbors wherever they could, and ruled and administered their large empire wisely. The Greeks obviously had a grudge against them, and the accounts they gave of Persian life were neither entirely accurate nor fair. But the fact remains that Persia never developed a civilization of its own strong enough to influence the course of human culture or leave a permanent mark on it, except in one respect, religion.

Before the sixth century B.C. and long thereafter, Medians and Persians had a nature religion with a colorful pantheon, similar to that of other Indo-European immigrants. Their priests were the Magi. They brought animal sacrifices to the gods, among whom Mithra held a prominent place. They did not bury the dead but

exposed them to be torn by birds and dogs. But in the sixth century B.C. a reformer arose, Zoroaster or Zarathustra, who preached a purified religion and attacked the traditional gods.[2] He was a Median nobleman born in Raga, south of the Caspian Sea, son of a daughter of the last Median king, Astyagas, and of Spitama, chief of a Median clan. Through his mother he was also related to the ruling Persian house. But he was a revolutionary who strove for liberation of the peasants. Proscribed by his home town and indicted by Cambyses, he wandered through the lands teaching and preaching until Hystaspes, father of Darius, gave him protection and asylum. When Herodotus traveled in Persia toward the middle of the fifth century B.C., he never heard the name of Zoroaster; the religion he met with was that of the Magi. In other words, the teachings of Zoroaster were not accepted widely, and his followers were few until Darius embraced the new faith, which then gradually spread from the court to other strata of the population.

The tenets of the new religion are to be found in the Avesta, a collection of the holy books of the Persians.[3] Like the Old Testament, it contains writings by different authors and from very different periods. The oldest part, the Gathas, hymns, are Zoroaster's own work, written in a Median dialect—a language as artificial as Homer's Greek—the traditional language of ancient Persian poetry. Other books contain prayers, invocations, moral precepts, tales of the origin of the world, and similar matters that are found in so many ancient religious books. One, the Videvdad, is a code similar in intent to the biblical Leviticus. Although it is a late book it is most important to us, for it reflects many hygienic views, and also gives valuable information about the physicians, their training and practice.

The whole Avesta is Zoroastrian and post-Zoroastrian, and it has come down to us in late editions, but it obviously contains much ancient material, old myths, reminiscences of old views, customs, and practices. Together with the archaeological findings and Greek reports it is the most important source of our knowledge of Persian culture and also medicine. The Avesta, moreover, contains many

elements that are not purely Zoroastrian, for the old nature religion did not die. Driven into opposition, the Magi worked their way into the new religion, and even became its priests. The Zoroastrian Great Kings were buried, not exposed, but gradually the old custom of exposing corpses was generally re-introduced, and today the Parsees of India have their 'Towers of Silence' in Karachi, Bombay, Calcutta. The old gods also came back gradually, first of all Mithra, who was to play such an important part in the Roman empire, and was to become a serious competitor of Christ. Homa took a position similar to that of Dionysus.

The word 'homa' is linguistically the same as the Vedic word 'soma,' but while 'soma' is the juice of an undefined plant, 'homa' is simply wine.[4] Students of Indo-European linguistics have taken great pains to search for identical words and concepts in the old Iranian languages and Vedic Sanskrit. Where such words and ideas can be found, they are considered to point to common Indo-European origin or to influence from one country on another. I think that this has been greatly overdone[5] and that great caution is necessary here. All archaic civilizations have a great deal in common, and archaic medicine is very much the same everywhere. Water, fire, air, or wind play an important part in the thinking of many peoples, and such views need not necessarily be borrowed from neighbors. Similarly, I think there is no need to assume that the humoral theory of disease originated in India and reached Greece by way of Persia,[6] for the important part played by blood and other humors was recognized everywhere.

Zoroaster's religion in its pure form was monotheistic. It does not have the many gods of the Magi, only the one god Ahura Mazda, the Wise Lord, the Creator who upholds the cosmos and directs its course. His world is the world of light, purity, and goodness. But he is opposed by the spirit of evil, Angra Mainyu, whose world is one of darkness, where the daevas are attached to him, not demons but the old nature gods of the Magi who now are condemned to a life of darkness. Thus there are two primordial principles, good and evil, light and darkness, and man must make a choice between the two.

If he chooses Ahura Mazda, the life of light, the true creed—'In our profession of faith is embodied: Right, shall be strengthened; Evil, shall be destroyed! I desire the union with Good Will, I renounce every communion with the evildoer' [7]—then his will be a happy life in this world and the hereafter; but if he chooses the world of darkness and continues to worship the daevas, his lot will forever be Hell. Christianity has much in common with the religion of Zoroaster: God and the Devil, Heaven and Hell, Good and Evil, man's obligation to make a choice between the two.

The Videvdad in its present form was probably written in the beginning of the Arsacid period—that is, between 250 B.C. and A.D. 224—but since it undoubtedly embodied much older material, we may be justified in studying it in this chapter.[8] The Videvdad is a law book, a code, which states what is allowed and what is forbidden, and indicates the penalties for transgressions. It reminds us of Assyrian codes, particularly in its attitude toward sex life. Girls were to marry past their fifteenth year.[9] Women were highly respected. Marriage with relatives was recommended and seems to have been customary, as it was in Egypt and still is in Arab countries.[10] Abortion was considered a great crime, tantamount to manslaughter, and if a girl was made pregnant and had recourse to an abortionist woman, she, the woman, and the man were all considered equally responsible,[11] and if a child was born, the father had to support it until it had grown up.[12] Sodomy was rated one of the greatest crimes. The passive and unconsenting victim was to be whipped to death;[13] for the active and consenting pederast there was no way of atoning—he was a daeva and worshiper of daeva forever.[14] Assault with battery was punished with whipping, which was increased whenever the criminal relapsed.[15] Bodily injury was punished by retaliation, not only injury inflicted on men but also that inflicted on dogs, for dogs were holy animals, firmly protected by law.[16]

Much space was devoted to purity regulations. Fire, earth, water, and vegetation were not to be defiled, prescriptions similar to those we found in Hesiod's *Works and Days*. Man became unclean as a result of physiological processes such as menstruation, childbirth,

elements that are not purely Zoroastrian, for the old nature religion did not die. Driven into opposition, the Magi worked their way into the new religion, and even became its priests. The Zoroastrian Great Kings were buried, not exposed, but gradually the old custom of exposing corpses was generally re-introduced, and today the Parsees of India have their 'Towers of Silence' in Karachi, Bombay, Calcutta. The old gods also came back gradually, first of all Mithra, who was to play such an important part in the Roman empire, and was to become a serious competitor of Christ. Homa took a position similar to that of Dionysus.

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ejaculation of sperm, and death. Whoever touched a corpse, whether of man or dog, became unclean and had to purify himself through elaborate rites,[17] views very similar to those of Leviticus. Strange was the position granted to the dog, which in most of the other civilizations was very low in the scale of living beings. But since the dog, like the vulture, was allowed to devour the dead, he was privileged among other animals.

We mentioned in another connection that the Persian Great Kings had Egyptian body physicians, and that Darius thought so highly of them that he had the medical school of Sais restored. Yet we also saw that Greek doctors became very serious competitors of their Egyptian colleagues.[18] Why were foreign physicians so popular with the Persian court and nobility? Had they not physicians of their own? They had indeed, but what the Persian physicians practiced was mostly magico-religious medicine. They never reached the level of Egyptian medicine as it had developed in the late centuries of the New Kingdom, or of medicine as the Greeks practiced it as early as the sixth century B.C. They were priests, specialized priests like the Babylonian physicians, and as priests they belonged to the client class of Persian society, a society of four classes—nobility, clients, peasants, and slaves.[19] They were trained in temple schools, the most famous of which seems to have been at Raga. Three types of physician were distinguished: 'If several healers offer themselves together, O Spitama Zarathustra, namely, one who heals with the knife, one who heals with herbs, and one who heals with the holy word, it is this one who will best drive away sickness from the body of the faithful.' [20]

In other words, Persia had surgeons, herb doctors, and incantation priests. Filliozat and others have pointed out that these three methods of treatment are the same ones that Pindar mentions in the ode where he speaks of Chiron instructing Asclepius,[21] and from that analogy they concluded that this threefold division of medicine must be Indo-Iranian.[22] They overlooked the fact that the division of medical treatments into pharmacology, surgery, and magic is universal in archaic medicine, and may be found in Egypt and

Mesopotamia as well as in China. The great Greek contribution was the development of dietetics, which raised the standard of medicine far beyond the archaic stage.

Physicians, as a rule, were not licensed to practice in antiquity. Everybody could claim to be expert in matters of health and disease, and treat sick people for a fee. In ancient Persia, however, there seems to have been some kind of licensing of surgeons. Ignorance is more immediately fatal in surgery than in medicine, or rather, mistakes are more easily apparent to the laymen. The Babylonians protected society against malpractice of the surgeon by making him liable for his actions.[23] The Persian document dealing with the admission of physicians to the practice of surgery is the earliest preserved regulation of this kind. It reads:

> O Maker of the material world, thou Holy One! If a worshipper of Mazda want to practice the art of healing, on whom shall he first prove his skill? On worshippers of Mazda or on worshippers of the Daevas?
>
> Ahura Mazda answered: On worshippers of the Daevas shall he first prove himself, rather than on worshippers of Mazda. If he treat with the knife a worshipper of the Daevas and he die; if he treat with the knife a second worshipper of the Daevas and he die; if he treat with the knife for the third time a worshipper of the Daevas and he die, he is unfit to practice the art of healing forever and ever.
>
> Let him therefore never attend any worshipper of Mazda; let him never treat with the knife any worshipper of Mazda, nor wound him with the knife. If he shall ever attend any worshipper of Mazda, if he shall ever treat with the knife any worshipper of Mazda, and wound him with the knife, he shall pay for it the same penalty as is paid for wilful murder.
>
> If he treat with the knife a worshipper of the Daevas and he recover; if he treat with the knife a second worshipper of the Daevas and he recover; if for the third time he treat with the knife a worshipper of the Daevas and he recover; then he is fit to practice the art of healing forever and ever.
>
> He may henceforth at his will attend worshippers of Mazda; he may

at his will treat with the knife worshippers of Mazda, and heal them with the knife.[24]

Physicians practiced mostly[25] as itinerants, just as the Greek doctors did at that time. The population was scattered over a wide area and large cities were few, so that this was the best way for the doctor to serve the people and, at the same time, to make a living. Like the Code of Hammurabi, the Videvdad had a fee tariff, and here as in Mesopotamia the fee was determined by the social status of the patient. Since this is another document of very great importance, I quote it here:

> A healer shall heal a priest for a holy blessing; he shall heal the master of a house for the value of an ox of low value; he shall heal the lord of a borough for the value of an ox of average value; he shall heal the lord of a town for the value of an ox of high value; he shall heal the lord of a province for the value of a chariot and four.
>
> He shall heal the wife of the master of a house for the value of a she-ass; he shall heal the wife of the lord of a borough for the value of a cow; he shall heal the wife of the lord of a town for the value of a mare; he shall heal the wife of the lord of a province for the value of a she-camel.
>
> He shall heal the son of the lord of a borough for the value of an ox of high value; he shall heal an ox of high value for the value of an ox of average value; he shall heal an ox of average value for that of an ox of low value; he shall heal an ox of low value for the value of a sheep; he shall heal a sheep for the value of a meal of meat.[26]

This text shows that the physician treated not only his fellow men but also animals and was remunerated for his veterinarian services.

What kind of medicine did these priest-physicians practice? We have no medical writings from ancient Persia, and the books of the Avesta—religious books—are our only source. All evidence, however, points to the fact that ancient Persian medicine was archaic medicine, a blend of religious, magical, and empirically grounded rational views and practices very similar to those we have encountered in other civilizations and have discussed in great detail. Hence, we shall be very brief here.

Diseases are named in various passages of the Videvdad and of other Avestan books. They are diseases of the skin, scabies perhaps, filth diseases which itch,[27] and also leprosy; here as in Mesopotamia the lepers were considered unclean and were excluded from society.[28] Fevers are mentioned very frequently,[29] and this generic term obviously designated a great variety of disease entities that we distinguish today. The heat or chill of fever were the outstanding symptoms. Nervous and mental diseases here as in other civilizations were the favorite object of magico-religious treatments.[30] Epilepsy was in all probability one of them, but it would be futile to attempt a diagnosis of other nervous diseases. Cripples are mentioned, hunchbacks,[31] dwarfs, the deaf and the blind, and individuals who have the evil eye.[32] We have entire lists of diseases, but unfortunately they contain only names not symptoms, so that we have no way of even attempting identifications.[33] The number of evils which beset mankind was very large. Ahura Mazda had created the world with all that was good and beautiful and bright in it, but the evil one, Angra Mainyu, created '9 and 90 and 900 and 9000 and 9 times 10,000 diseases.'[34] They had to be fought with the holy word, with sacred formulas, incantations which are described as divine, strong, victorious, and healing. They are not different in character and style from those of Egypt, Mesopotamia, or Vedic India; therefore, one example will suffice:[35]

> To thee, O Sickness, I say avaunt! to thee, O Death, I say avaunt! to thee, O Pain, I say avaunt! to thee, O Fever, I say avaunt! to thee, O Disease, I say avaunt!
>
> By their might may we smite down the Drug (the evil angel)! By their might may we smite the Drug! May they give to us strength and power, O Ahura!
>
> I drive away sickness, I drive away death, I drive away pain and fever, I drive away the disease, rottenness, and infection which Angra Mainyu has created by his witchcraft against the bodies of mortals.

Incantations were the chief means of treating patients in a system of magico-religious medicine, and the priest who knew the right

charms and spells was the most important physician. He was called in all serious cases of illness. But like all other ancient peoples, the Persians also made wide use of drugs. Medicinal plants were the gift of Ahura Mazda,[36] and there can be no doubt that potions were drunk, pills were swallowed, salves applied to aching limbs, in most cases of minor ailments. Homa—that is, wine—was drunk for therapeutic as well as religious reasons, and here as everywhere else in archaic medicine pharmacological treatment was frequently nothing but the manual procedure of an otherwise religious rite. Being a collection of religious books, the Avesta naturally does not give any information on which drugs were used for which diseases, just as it does not describe surgical operations. Yet we know that Persia had surgeons since severe tests were prescribed for them before they could practice their craft. The armies of Persia needed surgeons, and there is no doubt that they knew how to treat battle wounds, perhaps just as well as their Greek and Babylonian colleagues, because operations are easily learned from neighboring countries.

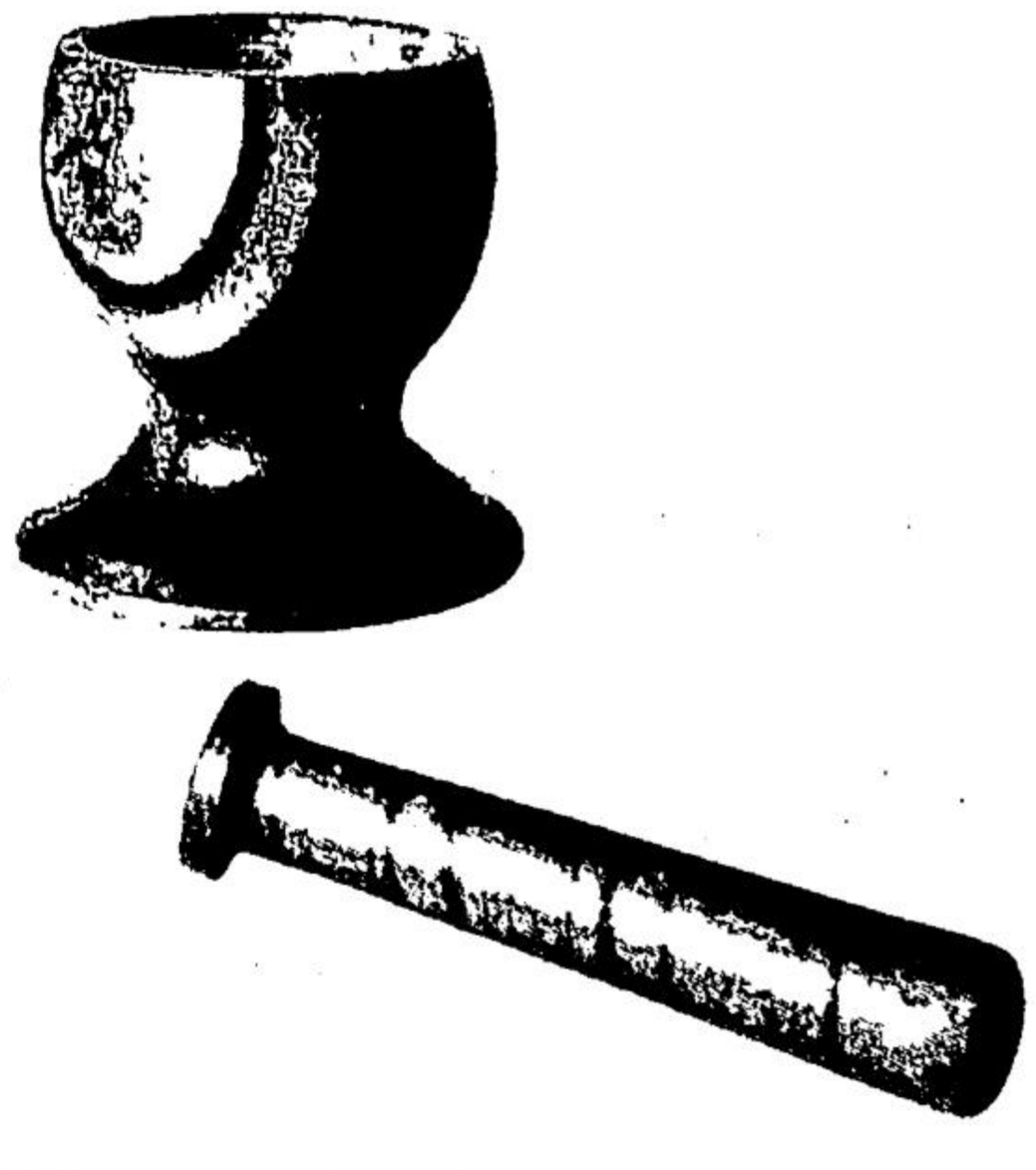
All in all, it can be said that ancient Persia did not in any way contribute to the advancement of medicine. It did produce great rulers, great soldiers, and above all a prophet and poet who taught a pure and highly ethical religion. Medicine, however, remained primitive. Persia's time to make its contribution to world medicine came much later, in the tenth and eleventh centuries of our era. Again it was a foreign impulse, Islam, that activated latent forces. At that time Persia gave to the world great physicians as well as immortal poets.

NOTES

1. About Persian history in general see *Cambridge Ancient History,* vol. IV, *The Persian Empire and the West,* Cambridge, 1926.
2. The basic study on Zoroaster is E. Herzfeld, *Zoroaster and His World,* Princeton, 1947, 2 vols.; see also J. Hertel, *Die Zeit Zoroasters,* Leipzig, 1924.
3. Edition of the text by K. Geldner, Stuttgart, 1889–95; English translation by James Darmesteter and L. H. Mills in *Sacred Books of the East,* ed. by F. Max Müller, vols. IV, XXIII, XXXI, Oxford, 1880–87 (our quotations

are from this translation); French trans. by James Darmesteter, *Le Zend-Avesta,* traduction nouvelle avec commentaire historique et philologique, Paris, 1892–3, 3 vols.; German trans. based on Bartholomae's Dictionary by F. Wolff, *Avesta, Die Heiligen Bücher der Parsen,* Strassburg, 1910 (reprinted Berlin and Leipzig, 1924).

4. Herzfeld, op. cit. p. 543ff.
5. E. g. by Filliozat, *La Doctrine classique de la médecine indienne,* Paris, 1949, p. 35.
6. As is claimed by C. Elgood, *A Medical History of Persia,* Cambridge, 1951, p. 19f.
7. Herzfeld, op. cit. p. 412.
8. On ancient Persian medicine see H. Fichtner, *Die Medizin im Avesta,* Leipzig, 1924, and Elgood's first chapter.
9. Videvdad, 14, 15.
10. Yasna, 12, 9; Videvdad, 8, 13.
11. Videvdad, 15, 14.
12. Ibid. 15, 15.
13. Ibid. 8, 26.
14. Ibid. 8, 31.
15. Ibid. 4, 17f.
16. Ibid. 13, 10ff.
17. Ibid. 9, 1ff.
18. See this book, vol. I, pp. 324 and 357.
19. Herzfeld, op. cit. p. 110ff.
20. Videvdad, 7, 44. See also Yasht, 3, 6, where in addition to these three types of healers two others are mentioned, 'one may heal with Holiness, one may heal with the Law.'
21. *Pythiae,* III, 91.
22. Filliozat, op. cit. p. 33; see also his note 4.
23. See this book, vol. I, p. 428f.
24. Videvdad, 7, 36–40.
25. Visprat, 9, 2.
26. Videvdad, 7, 41–3.
27. Yasht, 8, 56; 13, 131; 14, 48; Videvdad, 7, 58.
28. Yasht, 5, 92; Videvdad, 2, 29.
29. E. g. Yasht, 3, 8; 13, 131; Videvdad, 20, 7.
30. Yasht, 5, 92–3; 13, 131; Videvdad, 2, 29, 37; 7, 57.
31. E. g. Videvdad, 2, 29.
32. Ibid. 20, 3.
33. Ibid. 20, 3, 6, 7, 9.
34. Ibid. 22, 2.
35. Ibid. 20, 7–9.
36. 'And I Ahura Mazda brought down the healing plants that, by many hundreds, by many thousands, by many myriads, grow up all around the one Gaokerena,' Videvdad, 20, 4.



1. Mortar and pestle, Treasury, Persepolis. From Erich F. Schmidt, *The Treasury of Persepolis,* University of Chicago Press, 1939 (Oriental Institute Communications, no. 21), fig. 41.

2. Beardless attendant with cosmetic bottle and towel, Palace of Darius. Ibid, pl. 149.

3. Seals, showing animals, Ibid. fig. 25.

4. and 5. Coins, Treasury, Persepolis. Ibid. fig. 56.