

ANCIENT INDIAN CONTACTS
WITH WESTERN LANDS

In the last century and in the first decades of the present century the historians of India laid stress on the isolation of the subcontinent by the mountains and seas surrounding her on all sides and cutting her off as a separate universe. The progress of modern research has shown how mistaken this view was. We now see the true facts much more clearly than ever. The mountain barriers, though formidable at many points, are broken by gaps which have always allowed a considerable intercourse across the frontiers on the northwest as well as the northeast and at some points due north as well. By her position in the center of the littoral of the Indian Ocean, India enjoyed ample facilities for communication by sea with the countries lying to her west and east, and we now know that she and her neighbors availed themselves of these facilities from time immemorial. The Indian Ocean was navigated freely from very early, even prehistoric, times, and there was a series of lively maritime exchanges—migratory, commercial, and cultural—among the peoples of Africa, India, and Indonesia, or more generally Southeast Asia. Western Asia and the lands adjoining the

Levant also took, from the beginning, a prominent part in this commerce of goods and ideas between India and the world. It is the aim of this paper to trace briefly the ancient contacts between India and the Western countries to the time when the rise and spread of Islam and the Islamic impact on India ushered in a new epoch.

Archeology has shown that the dawn of civilization occurred first in Mesopotamia around 4000 B.C. and that Egypt and the Indus Valley developed along similar lines about a thousand years thereafter. These civilizations and that of Minos had so many resemblances that Sir John Marshall was led to postulate a common parent for all the four cultures—a common Afrasian choleolithic culture of which they were articulations adapted to local conditions.

It is worth recalling in this context that students of art history (A. K. Coomaraswami, Parmentier, etc.) have been struck by the employment of common architectural forms and motifs (e.g., entwined dragons and serpents in stones, vases, and on knife handles; or the deer with four bodies and one head) over the vast area stretching from the Mediterranean to China and Indonesia and have felt the need for a postulate similar to that which Marshall has suggested. Both by the tremendous area of its provenance and by the continuity of its influence on later Indian civilization, the civilization of the Indus Valley takes rank as perhaps the most important among these ancient civilizations. "The Indus civilization," according to Gordon Childe, "represents a very perfect adjustment of human life to a specific environment that can only have resulted from years of patient effort. And it has endured; it is already specifically Indian and forms the basis of modern Indian culture."¹ The contacts between the Indus civilization and the western Asian lands appear to have been constant and culturally important. Commerce linked the cities of Sumer with those on the Nile and on the Indus, and the specialized products of urban industries were traded in their bazaars. Several Mesopotamian cities have yielded stray seals, beads, and even pots which were not Sumerian but common in the contemporary cities of Sindh and the Punjab, more than a thousand miles away. We can visualize regular caravans crossing the mountains and deserts of Iran, fleets of boats following the coast of the Arabian Sea, and colonies of Indus merchants settled at Ur, Kish, and Babylon. To quote Professor Childe again:

1. *New Light on the Most Ancient East* (1934), p. 220.

Ancient Indian Contacts with Western Lands

Now that sort of commerce in the Orient is not, and never can have been, a mere transportation of bales of merchandise from place to place. At the termini and at stations on the way caravans and merchant dhows must make prolonged halts. Representatives, probably colonists from the exporting country, must receive the goods at their destination and arrange a return load, entertaining the travellers in the meantime. Just as there are permanent colonies of British merchants in Oporto, Stamboul, and Shanghai, so we may imagine colonies of Indian merchants settled at Ur and Kish. Trade under such conditions is very really a means of intercourse, a channel by which ideas can be diffused on an international scale.²

We now lack the means, however, of determining the nature and range of the ideas of the time, and we must await the satisfactory interpretation of the inscribed Indus seals for light on this matter. We know, however, that trade between the mouth of the Indus and western Asia by way of the Persian Gulf and perhaps the Red Sea also continued down to Buddhist times. Hiram, king of Tyre, imported "ivory, apes and peacocks" for decorating the palaces and the temple of King Solomon (*ca.* 975 B.C.).³ Apes, Indian elephants, and Bactrian camels are represented on the obelisk of Shalmaneser III (860 B.C.), and the Bāveru Jātaka mentions Indian merchants. "It has been claimed," says H. G. Rawlinson,⁴ "that the word *Sindhu*, found in the library of Assurbanipal (668–626 B.C.) is used in the sense of Indian cotton, and the word is said to be much older, belonging in reality to the Akkadian tongue, where it is expressed by ideographs meaning 'vegetable cloth.'" Assurbanipal is known to have been a great cultivator and to have sent for Indian plants, including the "wool-bearing trees" of India, as Herodotus called them. After the fall of Assyria in 606 B.C., Babylon rose to be a crowded market city, the meeting ground of all races—Iranians, Jews, Phoenicians, Indians, and others who came to sell their wares. The Greek words for "elephant" and "tin" (*Kassiteros*) are clearly derived from India and of Sanskrit origin (*ibha-danta* and *Kastira*).

2. *Man Makes Himself* ("Watts, Thinkers' Library," No. 47 [1941]), pp. 149–50. Stuart Piggott seems grossly to underestimate the role of Indus civilization by extending to the whole of its history the traits that marked its decadence about 1500 B.C. (*Some Ancient Cities of India* [O.U.P., 1945], pp. 16–17). Toynbee (*Study of History*, I, 107–8) and Langdon (*JRAS*, 1941, p. 593) have stressed the extraordinary affinity between the Sumerian and Indus Valley civilizations and postulated a close connection or even identity between the two.

3. I Kings, chaps. 10–22.

4. *Intercourse between India and the Western World* (Cambridge: Cambridge University Press, 1926), p. 2.

The second stage of Indian civilization was the period of the *Rig-Veda* in the second millennium B.C. The agreements between the languages and mythology, the religions, traditions, and social institutions of Indians and Iranians, on the one hand, and those of the Greeks, Romans, Celts, Germans, and Slavs, on the other, are well known and need no elaboration here. But the evidence from western Asia needs special notice. Hittite kings bore Aryan names; and inscriptions from Boghaz Keui and elsewhere in Asia Minor, dating from about the beginning of the fourteenth century B.C., reveal the names "Mitra," "Varuna," "Indra," and "Nāsatyas," and some numerals and other words, not in their later Iranian forms, but in the earlier Indian. These have been held to be the records of the Aryan people not yet differentiated into Iranians and Indians;⁵ if this view is correct, and it is widely accepted, these records are of little value to a study of Indian contacts with Western lands. But Jacobi held another view, and Sten Konow⁶ strongly supports it. He believes that the Indra of the Mitani was the well-known Indian god, not a pre-Indian Aryan deity. We must accordingly assume that Indian civilization had, in the middle of the second millennium B.C., extended to Mesopotamia and beyond, and date its beginning much earlier. The interval was perhaps long, for the Asvins are invoked in the Mitani treaty evidently to protect the marriage of Subbiluliuma's daughter with Mattiuaza, king of Mitani. In other words, the bulk of the *Rig-Veda*, including the marriage hymn in the tenth *mandala*, must be assumed to have been in existence before the date of the treaty.

Even in a study of these very early contacts, we should not confine our attention to the northwest and north of India but take the south also into view. J. Kennedy has rightly pointed out that "rice, peacocks, sandalwood, every unknown article which we find imported by sea into Babylon before the fifth century B.C., brought with it a Dravidian, not a Sanskrit designation."⁷ In the seventh century B.C. traders from the West "introduced into South China a system of inscribed coinage based on a Babylonian standard," and a sea trade between Babylon and China necessarily includes South India. A beam of Indian cedar found in the palace of Nebuchadnezzar (604-562 B.C.) and the teak logs found in the

5. *Cambridge Ancient History*, I, 13.

6. *The Aryan Gods of the Mitani People* (Kristina), p. 39.

7. "The Early Commerce of Babylon with India," *JRAS*, 1898.

Ancient Indian Contacts with Western Lands

temple of the moon-god at Ur at levels belonging to about the same age or a little later furnish further evidence of the role of South India in this intercourse. Facts like these should receive more attention from the present generation of Indian archeologists, who, along with Sir R. E. M. Wheeler, seem to be inclined to place a bigger burden on the evidence of excavations at Brahmagiri, Arikamedu, and other places than it can bear and to date the beginnings of the historical Davidian civilization in the Mauryan epoch or only a little earlier.

The prehistoric overland contacts between India and the Western lands could not have ceased altogether at any time, and the rise of the Achaemenid Empire of Persia in the sixth century B.C. linked the Greeks of the West closer to India by way of well-laid roads that came into being throughout the empire. The connections between the Ionian Greeks of Asia Minor and the eastern countries became so varied and numerous that there must have been many occasions for the exchange of ideas between the Greeks and Indians then living in Persia. "At no time were means of communication by land more open or the conditions more favourable for the interchange of ideas between India and the West." Indian troops took part in the invasion of Greece in 480 B.C., while Greek officials and mercenaries served in various parts of the empire, including India. As Filliozat points out:

During the Achaemenid times the valley of the Indus, which had been conquered by Darius, remained for two centuries linked to the Iranian empire, having the same status as Egypt, Syria, Asia Minor, and Mesopotamia, and it came to have extensive intercourse with these countries. But the centre of the Indian civilization at the time was in the Ganges valley, where flourished, surpassing all, the eastern kingdom of Magadha. After having traversed the Persian empire Alexander rapidly overran its ancient Indian satrapies. He could not push beyond that. The seizure of these territories by him, far from constituting a conquest, had rather the effect of making it possible for Indian civilization to reclaim these regions within a short period, a development which the Achaemenids had been able to avoid.⁸

The rise of the Achaemenid Empire coincided with the close of a period of the most intense religious and philosophical speculation in India, the age of the *Upanishads*, the next great epoch in the history of Indian civilization after that of the *Rig-Veda*. This period may be taken to have lasted from 900 to 600 B.C. Its main characteristics have thus been summed up by Radhakrishnan:

8. "Les Échanges de l'Inde et de l'Empire romain aux premiers siècles de l'ère chrétienne," *Revue historique*, janvier-mars, 1949; translated into English by Sourindranath Roy M.A., *Journal of Indian History*, Vol. XVIII.

For the first time in the history of thought, the Upanishads indicate a religious view which has for its integral elements: the supremacy of the Absolute spirit; the reality of mystic consciousness; the distinction between intellect soberly contemplating the intelligible and intellect rapt into enthusiasm and borne above itself; higher and lower knowledge; the *via negativa* as the way of approach to the mystic consciousness; the nonultimateness of the pluralistic universe with its independent existents, some with life, some with consciousness; insistence on ascetic discipline; rebirth determined by the law of Karma, until the destiny of man is realized which is release or deliverance. . . . This religious outlook seems to have affected the thought of the West from very early times.⁹

The age of the *Upanishads* in India was also important in the history of Greek thought. It witnessed a revolt against the traditional polytheism reflected in Homer and the rise of philosophic speculation. The coincidences between Indian and Greek philosophy are so numerous that some historical connection between them has to be postulated, and the alternative explanation that similar conclusions were reached by Greeks and Indians independently of each other does not strike one as adequate. Thales (*ca.* 640-550 B.C.), the father of the Grecian philosophy, imagined everything to have sprung from water; this reminds us of the Vedic myth that the waters were first created and that the whole universe evolved out of them. A little later the Eleatic school—Xenophanes, Parmenides, and Zeno—taught ideas very similar to those of the *Upanishads*, that is, that God and the universe are one, eternal, and unchangeable, that reality is due to this universal being alone, neither created nor to be destroyed, and omnipresent, that whatever is multiple and mutable is not real, and that thinking and being are identical. Some are inclined to see a remarkable agreement even in the style of presentation. Richard Garbe, for instance, notes that in both the *Upanishads* and Parmenides “we find a lofty, forceful and graphic mode of expression and the employment of verse to this end.”¹⁰ The same scholar, while deprecating extreme and dogmatic views on the subject, is definitely of the opinion that in this respect Greece was the debtor to India. He says: “The *historical possibility* of the Grecian world of thought being influenced through the medium of Persia must unquestionably be granted, and with it the possibility of the above-mentioned ideas being transferred from India to Greece.”¹¹ Likewise, Hugh E. M. Stutfield

9. *Eastern Religions and Western Thought* (Oxford, 1939), p. 133.

10. *The Philosophy of Ancient India* (Chicago: Open Court Publishing Co., 1897), pp. 32-33.

11. *Ibid.*, p. 38.

has said: "Especially does there seem to be a growing probability that from the historical standpoint at any rate, India was the birthplace of our fundamental imaginings, the cradle of contemplative religion and the nobler philosophy."¹² There are also striking agreements between the Sāṅkhya teaching and the views of Heraclitus, Empedocles, and Anaxagoras which need not be set forth here in all their details. To Heraclitus, moreover, logos was the eternal law of the course of the world. In *Rig-Veda* (X. 125) *vāk* (a feminine noun meaning voice, speech, word) already appears as an active power and develops in the *Brāhmanas* to something more similar to the Logos in the beginning of the Gospel of John—*Vāk* being regarded as the consort of Prajāpati, the creator, in union with whom and by whom he accomplishes his creation. The doctrine of Logos was taken over from Heraclitus by the Stoics and by Philo, and later became the basis of Neo-Platonism.¹³

When we turn to the mystery cults and the teachings of Pythagoras and Plato, we find the clearest evidence of the debt to India and almost a decisive break from the general trend of Greek rationalism. Orpheus, reputedly a Thracian, became the prophet of a religious sect with a code of rules of life and a system of purificatory and expiatory rites. Dionysus is the god of the cult, and faith in immortality of the soul is a cardinal feature of the Orphic religion. There is no unbridgeable gulf between God and the soul, and the release of the higher divine elements in man from the lower non-divine is the objective of the Orphic discipline and religion. There is a long way to go before this freedom is attained, and the soul transmigrates from body to body in a perpetual journey through the great circle of necessity. The wheel of birth goes on until the soul escapes it by attaining release. Orphism transcends the limits of blood groups and holds that all men are brothers. It takes little account of the civic virtues characteristic of Greek morality. All life is one, and by his lyre Orpheus spread harmony in the animal world and softened the hearts of men. Orphic religion was very different from the anthropomorphic worship of Homeric Greece. Its adherents were organized in communities based on voluntary admission and initiation. In the cosmogony of Orphism the world egg plays a big part as in the Indian cosmogony: "Those who are familiar with the vedic hymns of creation,"

12. *Mysticism and Catholicism* (London: T. F. Unwin, 1925), p. 31, cited by Radhakrishnan.

13. See Garbe, *op. cit.*, pp. 33-37, 53-55.

says Radhakrishnan, “will note that the conceptions of night and chaos and the birth of love, as well as that of the cosmic egg, are accepted by the Orphics.”¹⁴ Writing about the Orphic verses inscribed on a number of thin gold plates from Thourioi and Petelia, the earliest documents of Orphism to which we have access and which “belong to a time when orphicism was a living creed,” Professor John Burnet says: “The doctrine has a startling resemblance to the beliefs which were prevalent in India about the same time, though it seems impossible that there should have been any actual contact between India and Greece at this date.”¹⁵ This statement is valuable for its first part, which admits the startling resemblance; but the second part is questionable in two respects: first, the beliefs were prevalent in India not merely “about the same time” as the date of the gold plates but many centuries before; second, it is wrong now to deny the possibility and even the probability of contact between India and Greece at the time. Radhakrishnan’s comment on Burnet’s statement clinches the issue. He says: “The beliefs held in common are those of rebirth, the immortality and godlike character of the soul, the bondage of the soul in the body, and the possibility of release by purification. If we add to them metaphors like the wheel of life and the world egg, the suggestion of natural coincidence is somewhat unconvincing.” He adds in a note: “There are certain striking resemblances in the matter of the passage to heaven. In the *Rig-Veda* heaven is the home of the soul to which, after death, it returns purified (X. 14. 8); before reaching heaven it has to cross a stream (X. 63. 10) and pass by Yama’s watchful dogs, ‘the spotted dogs of Saramā’ (X. 14. 10).”

Closely akin to Orphism was the Eleusinian cult, which used the Orphic hymns and was in essence more magical than ethical. If the ritual is correctly performed, the great goddess will protect the performer here and hereafter—a doctrine basically the same as that of the Vedic sacrifice. The theoretical background is the same as in Orphism. Divinity dwells in man wrapped in darkness; initiation into the cult, regarded as a second birth, and correct performance of ritual secure the recovery of our true self. At the end of the initiation, the initiate is urged to go in peace—which recalls the Upanishadic refrain: “Sāntih, sāntih, sāntih.” Aristotle noted: “The initiated are not supposed to learn

14. *Op. cit.*, p. 138.

15. *Early Greek Philosophy* (London: A. & C. Black, 1908), p. 88.

anything, but to be affected in a certain way and put into a certain frame of mind." Not all who entered benefited in equal measure or grasped the full meaning of what they saw and heard at the ceremonies. But these mystic cults were favored by the tragic poets of Greece and were popular in considerable measure until they were banned by Christian emperors.

The Orphic doctrines were taken up by a man of genius, Pythagoras of Samos, who went to Italy and settled at Croton, where he was well received. His dependence on Indian philosophy and science is clear from the facts that the Greeks themselves regarded his doctrine as foreign and that, since Sir William Jones first pointed out the analogies between the Sāmkhya system and Pythagorean philosophy and Colebrooke underlined them, the consensus of modern scholarship has accepted this as a settled fact. Pythagoras taught in the second half of the sixth century and looked upon Orpheus as his chief patron. The universe is, for Pythagoras, not only a proportioned order but a *harmonia* or "being in tune." He enjoined the ascetic way of living in which abstention from meat was an essential requirement. He believed in rebirth, and there are stories attesting his capacity to remember his former births and to identify those of others. He also believed in the purification of the soul by successive higher births. Plato affirms that the Pythagorean way of life was still known in his day. The Pythagorean order was a religious brotherhood recruited by voluntary initiation. In the *Phaedo* Plato refers to the Pythagorean doctrine that men are strangers to the world, that the body is the tomb of the soul, and that escape from it by suicide is wrong. Contemplation is held to be the end of man, as it leads to purification of the soul and cessation of births. Like the *Upanishads*, Pythagoras held that the distinction between human and other kinds of being is not ultimate and that all souls are similar in kind. His biographer, Iamblichus, states that Pythagoras held that the sun and the moon were the islands of the blest; the moon is mentioned in the *Upanishads* as the abode of spirits. He also says that Pythagoras traveled widely, studying the teachings of the Brahmins, among others, and that he was also a mathematician and expressed his ideas of cosmogony in mathematical terms. He was "a rare combination of high intellectual power and profound spiritual insight" (Radhakrishnan). In later times his followers divided into a rationalist school and a religious school. Direct influence from India on the thought of Pythagoras has been generally accepted as a quite possible and necessary

postulate. Thus Gomperz writes: "It is not too much to assume that the curious Greek, who was a contemporary of Buddha, and it may be of Zoroaster too, would have acquired a more or less exact knowledge of the East in that age of intellectual fermentation, through the medium of Persia."¹⁶ And commenting on the suggestion of Herodotus that Pythagoras got the doctrine of rebirth from the Egyptians, H. G. Rawlinson says: "It is more likely that Pythagoras was influenced by India than Egypt. Almost all the theories, religious, philosophical, and mathematical, taught by the Pythagoreans, were known in India in the sixth century B.C., and the Pythagoreans, like the Jains and the Buddhists, refrained from the destruction of life and eating meat and regarded certain vegetables such as beans as taboo."¹⁷ He adds: "It seems also that the so-called Pythagorean theorem of the quadrature of the hypotenuse was already known to the Indians in the older Vedic times, and thus long before Pythagoras" (*sulbasūtras*). Many scholars are of the same view, though A. B. Keith differs from all of them and is somewhat hypercritical.¹⁸

The mystic tradition continues in Socrates (470-399 B.C.) and finds its full expression in Plato (427-347 B.C.). Socrates was a great advocate of rational self-discipline, but he was also a deeply religious man. Eusebius (A.D. 315) has preserved a tradition attributed to Aristoxenus, a writer on harmonies (*ca.* 330 B.C.), that some learned Indians actually visited Socrates in Athens, asking him to explain the aim of his philosophy. When he replied: "An enquiry into human affairs," one of his visitors burst out laughing. "How," he asked, "could a man grasp human things without first mastering the divine?" Rawlinson justly observes: "If Eusebius is to be believed, we must revise many of our preconceived notions about early intercourse between the two countries."¹⁹ Such stray references, vague and legendary as they sometimes are, seem, when studied carefully, to bear out on the whole that the contribution of distant India to Greek thought even in these early times was by no means negligible.

The echoes of Upanishadic thought in Plato's dialogues are too

16. *Greek Thinkers*, I, 117, cited by Radhakrishnan.

17. *Legacy of India* (1937), p. 5.

18. *JRAS*, 1909, pp. 569 ff.

19. *Indian Art and Letters*, X (1936), 57-58. Aristoxenus is confirmed by a fragment of Aristotle (Radhakrishnan, *op. cit.*, p. 151 and n.).

numerous to be detailed here, and the curious reader may gain some fair idea of it from the pages of Radhakrishnan's *Eastern Religions and Western Thought* (pp. 144-48). We may point out that the Orphic legend of the universe as formed in the body of Zeus after he had swallowed Phanes, the offspring of the great "World Egg," in whom all the seeds of things are present, is too close to the Indian account of creation for the similarity to be accidental. Attention may be called to the Hindu theory of *varnas* and the division of the classes in the ideal polity of Plato's *Republic* into Guardians, Auxiliaries, and Craftsmen. The story that Socrates proposes to tell of their divine origin, in order to perpetuate the system—"otherwise the state will certainly perish"—is clearly very close to the Vedic myth about the origin of the four castes found in the Purusha-Sūkta of the *Rig-Veda*. The contrast between the Greek spirit in general and the lines of Plato's thought has often been noted by reputed scholars. Sir Richard Livingstone has observed: "Plato is the most eminent representative of the heretics"; again, more explicitly, Stutfield says: "The mind of Plato was heavily charged with Orphic mysticism mainly derived from Asiatic sources. India, always the home of mystical devotion, probably contributed the major share."²⁰

Alexander had perhaps a vague idea of India's religious men and thought even before he started on his Indian adventure. While at Taxila he sent Onesicritus, a disciple of Diogenes, to the sages who were living in a neighboring forest, and he succeeded in persuading an ascetic called Kalanos (Kalyāna?) to join Alexander's entourage. Pyrrho, who accompanied Alexander to India, acquired a knowledge of Indian thought and to him has been traced the simile of the rope and the snake, celebrated in Indian philosophy, found in Sextus Empiricus and nowhere else in Greek or Latin literature. Pyrrho was the founder of the Sceptic system.²¹ Alexander was accompanied, indeed, by several scientists and men of action who, in the midst of their military preoccupations in a hostile country, succeeded in gathering a considerable knowledge of the Indian peoples, their habits and industries, and left writings which marked a decided advance of European knowledge of the East. Even more important in this respect were the ambassadors of

20. Both cited by Radhakrishnan, *op. cit.*, pp. 148-49, n. 1.

21. S. J. Warren, "Het Slang en Truw-Voorbeeld big 'Sextus Empiricus en in Inde,'" *Verl. en. Med. der Kon. Akad. van Wetenschappen, Amsterdam*, IV, ix, pp. 230-44.

the Hellenistic kings who came after Alexander and maintained friendly relations with the great Mauryan emperors of India. Megasthenes is the best known among these ambassadors, and the fragments that have survived of his work on India have been closely studied with notable results. Had Alexander lived to a normal old age, his dream of the marriage of Europe and Asia, to which he gave concrete expression by his own marriage with the Sogdian princess Roxana, and by the marriages to Asian brides of a hundred superior officers of his army and ten thousand of his humbler followers, might have borne some tangible results in the development of Eurasian culture. Even as it was, the old isolation of the city-state with its narrow loyalties began to give way to incipient oecumenical ideas of the individual's place in society and of the brotherhood of man, where there would be known neither Greek nor barbarian. Zeno, the founder of Stoic philosophy, adumbrated the vision of a world as one great city under one divine law. In this context it may be worth recalling that ideas of universal rule and a world empire ruled by a *chakravarti-sārvabhauma* had been cherished in India at least from the later Vedic times (*Aitareya Brāhmaṇa*), and in actual history the Mauryan Empire came very close to satisfying the legendary aspirations of its people for a united Bhāratavarsha.

The Mauryan Emperor Asoka diligently preached the gospel of the Buddha to the world. A council was held at Pātaliputra in the middle of the third century and resolved to send missionaries throughout the world to preach the new teaching. These missions, to judge from Asoka's own edicts, were evidently well received in the five Hellenistic states of Syria, Egypt, Macedon, Cyrene, and Epirus, and they must have focused the attention of these lands to some degree on the ideas they propounded. Stones bearing the Buddhist symbols of the wheel and trident have been found in Egypt, and Indian mold figurines dating about 200 B.C. have been discovered in Memphis. Petrie has accepted this as evidence of an Indian colony existing in Memphis at that date—one which seems to have had a more or less continuous existence from about the fifth century B.C., as Petrie himself came to think in the light of further evidence. He says: "There is no difficulty in regarding India as the source of the entirely new ideal of asceticism in the West."²² The

22. "Stones with Buddhist Symbols," *JRAS*, 1898, p. 875; W. M. Flinders Petrie on Indian colony at Memphis, *Man*, Vol. VIII, No. 71 (1908); *Memphis* (1908), chap. vii. Also *Egypt and Israel* (New York: E. S. Gorham, 1911, 1923), p. 134, cited by Radakrishnan, *op. cit.*, p. 150.

Ancient Indian Contacts with Western Lands

embassies from the Hellenistic states to India, to which brief reference has been made, must have been another factor which promoted the traffic in ideas.

In one way and another Indian religious ideas and legends seem to have been well known in the circles in which the accounts of the Gospels originated. The "Scrolls of the Dead Sea" discovered in 1947, which have been examined as yet only in part and whose study promises to occupy scholars for many years to come, seem to indicate that many of Christ's teachings, sometimes his very words, were current at least some fifty years before he was born.²³ The "Community of Covenanters" settled at Khirbet Qumran on the western shore of the Dead Sea between 100 B.C. and A.D. 70, from whose extensive library the scrolls come, were most probably Essenes or at any rate closely related to them and living in the same region. The doctrines and practices of the covenanters lead to an enlarged understanding of the Judaism of the Roman period. "The tree whose trunk was the Old Testament had then many branches which later were lopped off or withered away." Christ's teaching is seen more and more to be a blend of concepts derived both from Judaism and the East, particularly from Buddhism in one form or another. Earlier Judaism, even, was not quite free from Indian or more generally Eastern influences. The Book of Enoch is a remarkable Hebrew work of the first century B.C., full of non-Judaic speculations which anticipate some of the central features of Jesus' teachings. R. Otto, studying the analogies with Eastern thought, finds their source in the *Kaushītaki Upanishad*.²⁴ The Essenes and other allied sects are filled with the spirit of Buddhism. Though Jews by birth, the Essenes abjured marriage, practiced a form of communism in worldly goods, abstained from temple worship, and objected to animal sacrifices. They were strict vegetarians and drank no wine. They refrained from trade, owned no slaves, and made no weapons of war. Admission to the sect involved an elaborate initiation and solemn oaths. John the Baptist was an Essene, and his insistence on baptism was in accord with the practice of the Essenes. Jesus was influenced greatly by their tenets, even if he was not one of them for a time, as some are inclined to believe. His emphasis on non-resistance to evil may be due to the Essenes. Even in

23. Millar Burrows, *The Dead Sea Scrolls* (New York: Viking Press, 1955). Also Kingsley Martin, "New Light on Old Testament," *Hindu*, December 11, 1955.

24. Radhakrishnan, *op. cit.*, pp. 160-61.

the central conception of the Kingdom of Heaven two elements have been identified: one, a messianic conception belonging to the Palestinian tradition, and the other a mystic conception derived from the description of release in the *Upanishads*. "Though Jesus' teaching is historically continuous with Judaism, it did not develop from it in its essentials";²⁵ it took in much from the East.

The entire Gospel story, in fact, bears striking resemblance to the life and teachings of Gautama Buddha, for example, the Buddha's miraculous conception and birth; the star over his truth place; the prophecy of the aged Asita, the Buddhist Simeon; the temptation by Māra; the twelve disciples with "beloved disciple" Ānanda; and the miracles, together with the Buddha's disapproval of these as proofs of his Buddhahood. "More startling still," as Rawlinson observes, "are the points of similarity between the Buddhist and Christian parables and miracles." *Jātaka*, No. 190, mentions a pupil of the Buddha who walked on water when he was filled with faith in the Buddha, but who sank when the faith faded. As Max Müller pointed out, walking on water is not an uncommon story; but walking by faith and sinking for want of it can be accounted for only by some historical contact, and the *Jātakas* are centuries older than the Gospels. In another *Jātaka* (No. 78) the Buddha feeds his five hundred brethren with a single cake which has been put into his begging bowl, and there is much left over that has to be thrown away. Equally striking is the similarity of Roman Catholic service and ceremonial to the Buddhist. Sir Charles Eliot observes: "When all allowance is made for similar causes and coincidences, it is hard to believe that a collection of practices such as clerical celibacy, confession, the veneration of relics, the use of the rosary and bells can have originated independently in both religions."²⁶ Buddhism was a long-established religion with a tradition and institutions of its own when Christianity was still in its formative stage.

In India itself the Mauryan period of grandeur and unified culture was followed by one of problems and foreign intrusions. At first there was the invasion of the Northwest by the Greeks of Bactria, who established several Indo-Greek colonies and principalities. Then came successive waves of nomadic peoples displaced by a violent whirlpool

25. *Ibid.*, p. 176. The whole section from which the citation is taken seeks to demonstrate this conclusion in detail and must be read.

26. *Hinduism and Buddhism* (1921), III, 443.

of events in the Chinese borderland of Central Asia. These, however, soon raised themselves up and established, about the beginning of the Christian Era, "a great Indo-Scythian empire which united with West India the Afghanistan of to-day and a part of Central Asia in one extensive imperial state. Adopting in India (like the Greeks before them) the culture of the country and the Buddhist religion, they ensured the dissemination of both, not only in the rest of the empire, but also the High Asiatic routes which ran towards China" (Filliozat). This was the state of the Indian world at the time of the formation of the Roman Empire.

The Greeks who settled in India in considerable numbers after the Bactrian invasions rapidly became Indianized. The extent of the process is very well attested by a Brāhmī inscription of the second century B.C. found engraved on a stone pillar at Besnagar, near Bhilsa (railway station) in central India. The inscription reads: "This *garuda* column of Vāsudeva (Vishnu) was erected here by Heliodorus son of Dion, a worshipper of Vishnu (Bhāgvata) and an inhabitant of Taxila, who came as a Greek ambassador (*Yonadūta*) from the great king Antialcidas to king Kāsīputra Bhāgabhadra, the Savior, then reigning prosperously in the fourteenth year of his kingship."²⁷ We have a Kharoshthī inscription of the early part of the first century B.C. engraved on a vase from Swat by the Greek meridarch Theodorus, who was a Buddhist and enshrined some relics of Buddha.²⁸ In the Nāsik and Karla caves are many votive inscriptions in Brāhmī by Greek colonists settled in the neighborhood. Menander, in some ways the greatest of the Indo-Greek kings, was converted to Buddhism by Nāgasena (180–160 B.C.), and the Pāli work *Milindapanha* purports to be a record of the dialogues between the king and the teacher. The Indo-Greeks are thus seen to have embraced Hinduism or Buddhism as they desired.

How far did this second and more long-standing contact (as contrasted with the passing episode of Alexander's inroad) with the Greeks affect the civilization of northwestern India? Probably the effect was not great, and the adoption of Indian religions by the Greeks favors this view. The coins of Demetrius are purely Hellenic; but those of Menander are an interesting compromise between Greece and India. Menander's capital, Sāgala, has left no trace, and we cannot say how

27. *JRAS*, 1909, p. 1092; Radhakrishnan, *op. cit.*, p. 156.

28. Smith, *Early History of India* (1924), p. 255, n. 1.

far it followed the Greek style of town planning. Foucher has held that the idea of representing the Buddha as a man in sculpture originated with the Greeks; this may be correct, although several Indian scholars reject the view and hold that the idea was evolved independently at Mathurā and that the Yaksha primitives of this and other art centers were the forerunners of the later Buddha statues. Though they may be correct about the style of the Indian (non-Gandhāra) Buddha images, this does not seem to invalidate Foucher's view that the *idea* of representing Buddha (or, indeed, any deity) in human form originated with the Greeks. All early Buddhist sculpture indicated the presence of the Master only by symbols—the bodhi tree, footsteps, *stūpa*, etc. Once the idea started in the northwest, it could easily have traveled to Mathurā along the busy trade routes that connected Mathurā with Taxila, Peshawar, and other places in Gandhāra. W. W. Tarn's estimate of the question is worth citing: "Indian civilization was strong enough to hold its own against Greek civilization, but, except in the religious sphere, was seemingly not strong enough to influence it as Babylon did; nevertheless we may find reason for thinking that India was in certain respects the dominant partner."²⁹ Again: "Considered broadly, what the Asiatic took from the Greek was usually externals only, matters of form; he rarely took substance—civic institutions may be an exception—and never spirit. For in matters of the spirit Asia was quite confident that she could outstay the Greeks, and she did."³⁰ These remarks find striking confirmation in the Sitābanga and Jogimāra caves in the Rāmgarh Hills, 160 miles due south of Benares. They contain a curious open-air theater and another indoors, the plan of which has been thought to be of Greek inspiration, as well as inscriptions of the third or second century B.C. recording the name of Sutanukā, a hetaera, and the provision of a resthouse for actresses. But Indian drama is in its essentials Indian in origin and spirit, and its roots are to be sought in the age of the Vedas and Brāhmanas. Words like *yavanikā*, for "curtain," again are only evidence of Indians borrowing the external forms from elsewhere without in any way altering the spirit of their institutions. The exception which Tam has made with regard to civic institutions finds its justification in the celebrated *Arthasāstra*, its author

29. *The Greeks in Bactria and India* (Cambridge: Cambridge University Press, 1938), pp. 375–76.

30. *Ibid.*, p. 67.

Ancient Indian Contacts with Western Lands

Kautilya avowing that he consulted not only the ancient treatises of his own country but the current practice of contemporary (Hellenistic) states before composing his great work.³¹ And the high quality of Mauryan sculpture may have owed something to Hellenic, besides Iranian, factors.

The rise of the Roman Empire made for more frequent contacts between India and the West. We need not repeat the well-known historical details of these contacts—the embassies, the articles of trade, etc. But we must note that *Pax Romana* promoted the growth of a cosmopolitan culture in the Near and Middle East. In Antioch, Palmyra, and Alexandria, Indian and Greek merchants and men of letters met freely to exchange ideas. A coin of Menander with one of Vespasian found at Tenby in Pembrokeshire invoke the vision of a Greco-Roman merchant visiting both India and Britain in the pursuit of trade. Other North Indian coins and their imitations have been found in Scandinavia, and there are relics of Eastern trade along the Oxus-Caspian route.³²

Alexandria was the second city in the Empire.

The mercantile shipping of half of the ancient world tied up at her quay-sides, and scholars from the four quarters of the earth met and disputed in the Museum, and made use of the vast stores of literature in her great libraries. They had none of the contempt for the “barbarian” of the old Greek city states, and a large proportion of the population, like the Athenians, “spent their life in nothing else, but either to tell or hear some new things . . .”. The *Milinda Panta* mentions Alexandria as one of the places to which Indian mercants regularly resorted, and Dio-Chrysostom, lecturing to an Alexandrian audience in the reign of Trajan (A.D. 98–117) says: “I see among you, not only Greeks and Italians, Syrians, Libyans and Cilicians, and men who dwell still more remotely, Ethiopians and Arabs, but also Bactrians, Scythians, Persians and some of the Indians, who are among the spectators and are always residing there.”

As a result, Indian philosophy gained a growing recognition in the Hellenistic schools of Asia Minor and Egypt. Apollonius of Tyana (*ca.* A.D. 50), famous Gnostic and a miraclemonger, went to Taxila to study under Brahman preceptors. Bardesanes the Babylonian (b. A.D. 155), a well-known Gnostic teacher, learned many curious facts about India from an Indian embassy which came to Syria in the reign of Elagabalus

31. See M. Rostovtzeff, *Social and Economic History of the Hellenistic World* (Oxford: Clarendon Press, 1941), pp. 550–51.

32. E. H. Warmington, *The Commerce between the Roman Empire and India* (Cambridge: Cambridge University Press, 1928), p. 302. This book and Rawlinson's *Intercourse* are the best studies of the whole subject.

(A.D. 218–22). He learned much from the Indian gymnosophist Dandamis, who came with the embassy and knew a great deal about Brahmans and Buddhists and their discipline and way of life. He described accurately life in a Buddhist monastery and a visit to a cave temple in western India containing an image of *ardhanārīsvara*, Siva in his androgynous form. The work of Bardesenes on the Indian gymnosophists is lost; but two precious fragments of some length have been preserved by Porphyry (A.D. 233–305) and Stobaeus (ca. A.D. 500).³³

Buddhism was known to Clement of Alexandria (A.D. 150–218), who often refers to the presence of Buddhists in Alexandria and declares that “the Greeks stole their philosophy from the barbarians.” He is the first Greek writer to mention the Buddha by name. “There are some Indians,” he says, “who follow the precepts of Boudda whom by an excessive reverence they have exalted into a God.” He knows that the Buddhists believe in transmigration and “worship a kind of pyramid (*stūpa*) beneath which they think the bones of some divinity lie buried.” He distinguishes clearly between Buddhist and Brahman, unlike earlier writers who confuse them.

Archelaus of Garrah (A.D. 278) and St. Jerome (A.D. 340) both mentioned Buddha by name and narrate the tradition of his virgin birth. The Buddha story became gradually known in the West, until, by a coincidence hardly to be paralleled in literature, it was narrated in the eighth century A.D. by John of Damascus as the life of a Christian saint. Under the guise of Saint Josaphat, Guatama the Bodhisattva found his way into the Christian church, and was included in the Martyrology of Gregory XIII (1582).³⁴

The Therapeutae or the Contemplative monks of Egypt, who are mentioned with enthusiasm by Philo (A.D. 20), were definitely under the influence of Hindu and Buddhist thought in their ascetic life, in their mortification of the body, and in their devotion to pure contemplation. Their name resembles closely Theraputta, which may be a Pāli word meaning a “group of Theras”; the Theras or Sthaviras (Skt) were one of the celebrated schools of early Buddhism. Philo developed in Alexandria a new interpretation of Jewish scriptures with the doctrine of the Logos as its central and determining feature. The earlier and later affiliations of the doctrine have been mentioned above.

Gnosticism was a conscious effort to fuse Greek and Hindu elements

33. John Watson McCrindle, *Ancient India* (Westminster: A. Constable & Co., 1901), pp. 119–74.

34. Rawlinson, *Intercourse*, p. 142.

of thought, to which Christianity was added later. It is a syncretic system starting well before the Christian Era, though Christianity tended to consider it a heresy. It had much in common with the *Upanishads* and the mystic tradition of Greece. "Gnosis" does not mean intellectual understanding, but rather seeing God, mysterious wisdom, the beatific vision, illumination—call it what you will. Without going into the details of the system, we may cite the most concise and expressive estimate given by Kennedy of Gnosticism in its relation to Indian thought: "Gnosticism is not pure Hellenism as some say; it is rather pure orientalism in a Hellenic mask."³⁵ Basilides, the great Gnostic teacher and contemporary of Hadrian (A.D. 117–38), definitely worked Hindu and Buddhist thought into the framework of Christianity. Like the Buddha, he is a pessimist: "Pain and fear are inherent in human affairs." He was a firm believer in transmigration and in karma; his theory of personality has strong Buddhist affinities: "The soul is without qualities, but the passions, like the Buddhist *skandhas*, attach themselves to it as appendages or 'parasites.' God is unpredictable, almost non-existent, and the divine entity of Jesus at death alone passed into Nirvāna." Basilides believed that Christianity was the chief element in his system, but his interpretation is profoundly Buddhist. To quote Kennedy again: "All things have their law of being in themselves; suffering is the concomitant of existence, rebirth is the result of former acts and metempsychosis governs men with inflexible justice and with iron necessity. The Office of Jesus is the office of the Buddha; the elect alone are saved and the mass of mankind remains content to be born again. 'It is Buddhist pure and simple, Buddhist in its governing ideas, its psychology, its metaphysics.'"

Plotinus, founder of the Neo-Platonic school, was eager to be instructed in Indian philosophy and accompanied the expedition of Gordian against Sapor, king of Persia, in A.D. 242, hoping to come into personal contact with someone who could help him. Neo-Platonism closely resembles the Vedānta and Yoga systems of India. Plotinus, describing the absorption of the individual into the world-soul in a truly Indian way, said: "Souls which are pure and have lost their attraction to the corporeal will cease to be dependent on the body. So detached they will pass into the world of Being and Reality." Like Buddhism, Neo-Platonism also enjoins abstention from animal sacrifices and even animal food.

35. "Buddhist Gnosticism," *JRAS*, 1902, p. 383.

In Neo-Platonism may be said to have culminated the results of the syncretism of religions which arose from the conquests of Alexander and the establishment of the Roman Empire. Porphyry (A.D. 230–300) popularized the teachings of Plotinus. For him the central aim of philosophy, as for all Indian systems, is the salvation of the soul, and he enjoins strict asceticism for the attainment of this end. A few years before Plotinus established himself in Rome in A.D. 245, Hippolytus, bishop of Ostia (A.D. 230), in his work *Philosophumena*, or *Refutation of All Heresies*, gave a succinct account of the doctrines of the Brāhmanas who dwelt on the banks of the Tagabena (Tungabhadra) in the Daccan, which tallies very well with the doctrines of the *Upanishads*. This is striking proof of real contacts and precise knowledge in the third century A.D., the nature and occasion of which cannot yet be fully worked out from known data. Filliozat observes with truth: “The craze that one finds in the Roman Empire for oriental sages, and in particular Indians, is not pure snobbishness; it corresponds to a historic acquisition of varied information, by many, but quite fixed routes, which we also know were quite regular.” It is perhaps needless to follow the influences of Indian thought on other Neo-Platonists and on the early Christian writers like Dionysius the Areopagite, Clement, Origen, and even Augustine.³⁶

Athanasius (and the Council of Nicea) weaned the church from her traditions of tolerance and scholarship of Clement and Origen.

We may now revert for a moment to the effects of Western contacts on Indian civilization. In the general peace of the Roman Empire, nascent Christianity met full-grown Buddhism in the markets and academies of Asia and Egypt, and the ancient Zoroastrianism of Persia as well as the surrounding polytheistic paganism of the different countries affected both the religions and contributed to their transformation. The new ideas that came to the front in such an atmosphere had no small share in effecting the great changes that converted Hinayāna Buddhism into the Mahāyāna in which “the veneration for a dead Teacher passed into the worship of a living savior.” The Kushāna Empire, particularly of the time of Kanishka, when a great Buddhist Council was held, played a large part in the conversion, and the currency of Kanishka’s reign reflects the influences of all the forces at work in accelerating a

36. For Hippolytus see Filliozat, *op. cit.*, pp. 27–28; for the other writers, Radhakrishnan, *op. cit.*, p. 219.

Ancient Indian Contacts with Western Lands

process that had begun a long way back. The Buddhist sculpture of the Kushāna period belongs mostly to the Gandhāra school; we have already commented on the origin of the Buddha image in sculpture.

The eastward advance of the Roman frontier in the days of Trajan and Hadrian (A.D. 98–138) was favourable to the spread of Hellenistic ideas and artistic forms in India and other Asiatic countries. The Indo-Greek artists found their inspiration in the schools of Alexandria, and of Pergamon, Ephesus, and other places in Asia Minor rather than in the works of the earlier artists of Greece. In other words, the Gandhāra style is Graeco-Roman, based on the cosmopolitan art of Asia Minor and the Roman empire as practised in the first three centuries of the Christian era.³⁷

The relic casket of Agesilaus, the overseer of works at Kanishka's *vihāra* in Peshawar, is shaped like a Greek lady's jewel casket, though the figures in it are roughly and clumsily executed.³⁸

The Kushāna coinage corresponded closely to the Caesarian aurei in weight and in fineness and was minted for the most part from imported Roman coins melted down for the purpose. The Kushāna emperors took the title of Caesar among others. In Peninsular India, on the other hand, the Roman aurei circulated as currency, much as the British sovereign did in the last century. The exclusively Greek legends on the coins of Kanishka and his successors should not be taken to imply a popular knowledge of the Greek alphabet and may be due simply to the fact that the language was first reduced to writing in the Greek character. "The early medical knowledge as expounded by Charaka, Kanishka's physician, has been supposed to betray some acquaintance with the works of Hippocrates, but the proof does not seem to be convincing."³⁹

The maritime commerce between South India and Europe attained notable proportions in the first and second centuries A.D., Roman subjects lived at Muziris, Kāvēripattinam, and other port towns, and Roman soldiers or policemen were employed in the capitals of the Tamil states for guarding palaces and patrolling streets at night.⁴⁰ We may mention some interesting finds of recent years which establish the scope and nature of the contacts by tangible evidence of an irrefragable character. First, we have an elaborately carved ivory statuette of a nude

37. Smith, *The Oxford History of India* (3d ed., 1958), pp. 154–55.

38. Marshall, in *JRAS*, 1909, pp. 1060 ff.

39. Smith, *op. cit.*, p. 159.

40. See K. A. N. Sastri, *History of South India* (1957), for details.

woman with two attendants found in the ruins of Pompeii in the year 1938, which was perhaps the handle of a mirror. The workmanship, the features, and the ornamentation are unmistakably Indian, and the article must have reached Italy before A.D. 79, the date of the destruction of Pompeii by an eruption of Vesuvius.⁴¹ Next comes the excavation in 1945 of an Indo-Roman trading station on a site near Pondichery, the Poduke, of Ptolemy, which contained definitely datable Italian pottery of the first century B.C.–A.D., particularly two-handled jars or amphorae characteristic of the Mediterranean wine trade of the period, together with Roman lamps and glassware.⁴² Let us add that objects of Syrian provenance of about the same period have been found at Begram (Kāpisi) to the south of the Hindu Kush and that a gold coin of the Roman Emperor Antonius Pius (A.D. 138–61) has been found, together with a Buddha image of the contemporary Amarāvātī school in excavations at Oc Eo in Cambodia. What can be more striking confirmation of the Indo-Roman contacts by land and sea than these facts?

The next great epoch in the history of India is conventionally known as the age of the Guptas, although the Gupta empire at its broadest was confined to only a part of northern India. This period, which may be dated from the fourth to the seventh or eighth century A.D., was the classic age of Indian civilization, when literature and the arts attained their apogee and the external contacts of the country became both wider and more intensive in character on all sides. The overthrow of the Great Satraps (Muhākshatrāpa) of Gujarat by Chandragupta II at the close of the fourth century not only put an end to the last vestige of foreign rule on Indian soil but also opened the Gangetic provinces to intensive maritime contacts with the Western lands. Writing early in the eleventh century, Alberuni cited the great thinkers and writers of this epoch as the best representatives of the broad and humanistic culture of ancient India which, in his own day, had become somewhat exclusive and intolerant. He mentioned the readiness of these thinkers to recognize merit among the thinkers of the Yavanas (Greeks) as a sign of their true cultural superiority. Mathematics and astronomy made great progress and were ready to profit by the example of Greek writers in these fields. Most famous and original among the Indian writers of the time was Āryabhata (b. A.D. 476), who devised the decimal system for the

41. Vogel in *Annual Bibliography of Indian Archaeology, 1938*, pp. 1–5.

42. *Ancient India*, July, 1946, pp. 17–124.

notation of numerals expressing tens, hundreds, etc., by position, employing a special sign for zero—"perhaps India's greatest legacy to the world in the sphere of practical knowledge," according to Smith. The next great writer, Varāhamihira, was deeply learned in Greek science and introduced many new technical terms from Greek astronomy. "The Ajanta frescoes record intercourse between western India and Persia early in the seventh century. Three missions to Roman emperors in A.D. 336, 361, and 530 are mentioned. The coinage bears unmistakable testimony to the reality of Roman influence, and the word *dīnāra*, the Latin *denarius*, was commonly used to mean a gold coin" (Smith). Some scholars claim to discern the subtle influence of Greek taste and Greek stage forms on Indian sculpture and theater of the period, although others are inclined to doubt this. Kosmas Indilopleustes, a monk of the sixth century A.D., was the last voyager from the West to India in ancient times.

The presence of an Indian colony in the valley of the upper Euphrates and its destruction by Christians early in the fourth century A.D. is attested by the Syrian writer Zenob. He mentions the existence of Hindu temples built by Indians settled in the canton of Taron to the west of Lake Van as early as the second century B.C. About A.D. 304 St. Gregory appeared before these temples, where, despite heroic defense on the part of the Indians, he defeated them and broke the two images of gods, twelve and fifteen cubits high.⁴³ Severus Sebokht, a teacher and titular bishop in a Christian monastery on the Euphrates, defended the Syrians against Greek arrogance in A.D. 662 by citing the example of the Hindus, of whom he said:

Their subtle discoveries in this science of astronomy, discoveries that are more ingenious than those of the Greeks and the Babylonians, their valuable methods of calculation and their computing that surpasses description; I wish only to say that this computation is done by nine signs. If those who believe, because they speak Greek, that they have reached the limits of science should know these things they would be convinced that there are also others who know something.⁴⁴

43. *JRAS*, 1904, p. 369.

44. D. E. Smith, *History of Mathematics* (Boston and New York: Ginn & Co., 1923), I, 166–67.