

# Origin of spectacles in India

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The European records of the origin of spectacles are very controversial. The suggestion that spectacles were first invented during the 13th century in Italy by an unknown layman of Pisa is not convincing, because there are also references to spectacles in Hindu literature at about the same time.

In the life of Vyasaraya (1446–1539), written in Sanskrit by his contemporary, the poet Somnath, the 74-year-old Vyasaraya is described as using a pair of “spectacles”\* to read a book in 1520 A.D. at the Court of King Krishna Deva Raya, one of the rulers of the Vijaynagar Empire (1336–1646). The Portuguese traders, well known to Vyasaraya, arrived in India in 1498 and were established in Goa in 1510. Gode (1947) referred to by Pendse (1954) assumed that the Portuguese presented spectacles amongst other gifts to Vyasaraya, but this does not necessarily mean that the Portuguese introduced spectacles into India.

It is claimed that in Ceylon, during the reign of Bhuvanaikabahu IV (1344–1353), lenses and spectacles were made by Devanarayan, an Indian architect, who was originally commissioned from India to build a Buddhist monument at Gadaladeniya. Since this monument is in the Vijaynagar style of architecture, it would confirm that Devanarayan came to Ceylon from the Hindu Empire of Vijaynagar. He must have known the art of spectacle-making in India before he went to Ceylon, and this means that the Vijaynagar courtiers must have known the use of spectacles before the arrival of the Portuguese at the end of the 15th century.

Quartz crystals were used for manufacturing spectacle lenses in a South Indian town near Tanjore, which was taken by the British in 1771. It is interesting that Oppert (1907) also mentioned a South Indian Hindu caste which possessed polished crystal lenses. It is significant that in the South Indian languages the terms for spectacles are very different from those of North India. In the Kannada language of Mysore, South India, the term “Kannadak” is used for spectacles, and two other South Indian languages, *i.e.* Malayalam and Tamil, use similar words to describe spectacles.

The widespread use of spectacles for presbyopia can be inferred from the popular terminology for spectacles in certain parts of India: *e.g.* “Chaleesi” and “Chalesa” meaning “forty” in Maharashtra and Orissa, “Chatwar” meaning “fourth decade” in Andhra, and “Betalan” meaning “forty-two” in Gujarat. Ramdas (1608–82) used the word “Chalasi” to describe spectacles, and requested contemporary scribes to use middle-sized letters to write their manuscripts. This would imply that the use of spectacles was perhaps confined to certain classes, *e.g.* the Brahmins.

\* The term used is “upa-lochana” (substitute or secondary eyes), “upa” being a Sanskrit prefix loosely meaning substitute or secondary which was widely used in Sanskrit, *e.g.* the “Vedas” and the “upa-Vedas”. A Marathi poet Vamanpandita (1636–95) used the term “upa-netra” (netra meaning eyes) for spectacles. It would, therefore, be incorrect to assume that the term “upa-lochana” was specially coined to describe foreign spectacles.

The agents of the British East India Company (which received the Royal charter in 1600 A.D.) have been incorrectly credited by some writers with introducing spectacles into India. There is a reference (in a letter dated September 22, 1616, from an English firm "Kerridge, Barker, and Mittford") to the slow sale of English spectacles in Rajputana, the modern state of Rajasthan in North India. There are references to spectacles in the Hindu literature much earlier than this, and spectacles are also depicted in some of the Mughal miniatures. The ancient Indian spectacles generally had carvings of a deity, and perhaps Indians at that period did not want to use non-Indian spectacles, which may account for the slow sale of the English importations.

### Summary

The account of Devanarayan (between 1344-1353), the use of spectacles by Vyasaraaya (1520 A. D.), the indigenous manufacture of spectacle lenses in South India, the different terms used for spectacles in the North and South Indian languages, and other historical facts all indicate that spectacles were invented in India, in all probability by the Kannada-speaking Hindus. It is therefore most likely that the use of lenses reached Europe *via* the Arabs, as did Hindu mathematics and the ophthalmological works of the ancient Hindu surgeon Susruta.

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