International Academic Institute for Science and Technology

International Academic Journal of Science and Engineering
Vol. 6, No. 1, 2019, pp. 145-152.
ISSN 2454-3896

International Academic Journal of Science and Engineering

www.iaiest.com

Silk Route: The UNESCO World Heritage

Vitthalrao B. Khyade

Malegaon Sheti Farm, Agricultural Development Trust Baramati, Shardanagar, (Malegaon Khurd) Post Box No.- 35 ,Tal. Baramati, Dist. Pune 413 115 Maharashtra, India. Residence: Dr. APIS", Shrikrupa Residence, Teachers Society, Malegaon Colony (Baramati), Dist. Pune – 413115.

Abstract

The Silk Route or Silk Road refers to a network of ancient trade routes connecting Asia, Europe and Africa. Extending more than 6,500 kms, the Silk Route was majorly used to transport Chinese Silk to Europe through Central Asia from 2nd Century BC. However, many trade routes (both sea and land routes) existed in much earlier times that connected the main Silk Route and traded in different commodities ranging from salt to gold. Silk Route's greatest contribution to world history was not mere trading of few commodities but exchange of ideas, art and science between Asia, Europe and Africa. It was the world's first information superhighway. Greek art from Europe flowed into India whereas Buddhism from India reached out to the world through the Silk Route. Chinese travelers like Fa Hein (Faxian), Hiuen Tsang (Xuanxang) and others visited India through these ancient routes and Marco Polo witnessed the grandeur of the Chinese civilization while traveling through the silk route. The Arabs took the knowledge of mathematics and medicine from India and China and worked on it to bring up new sciences like Algebra, which were adopted by Europe in due course. New cities and empires grew along the Silk Route and world power shifted from hand to hand. History of the world was re-shaped along this route and world population for the first time started exchanging ideas on a scale that was unheard of. The habits, cultures and livelihoods of the world population were influenced by knowledge and ideas brought from different lands. Obscure cities like Lhasa became the seat of religious power and emerged as one of the finest cities in the remotest corners of the Himalayas. The advent of Silk Route is one the most remarkable events in world history. Almost all Ancient Trade routes across Asia and Europe merged with the Silk Route at some point and the whole network of trade routes became the world's first international cultural phenomenon.

Keywords: Ancient, Silk Trade, Silk Route, Textile

DOI:10.9756/IAJSE/V6I1/1910014
Received: 25 March 2019/Revised: 19 April 2019/Accepted: 24 May 2019/Published: 28 June 2019

Introduction

The human beings have always moved from place to place and traded with their neighbours, exchanging goods, skills and ideas. Throughout the history, Eurasia was criss-crossed with communication routes and paths of trade, which gradually linked up to form what are known today as the Silk Roads; routes across both land and sea, along which silk and many other goods were exchanged between people from across the world. Maritime routes were an important part of this network, linking East and West by sea, and were used for the trade of spices in particular, thus becoming known as the Spice Routes. These vast networks carried more than just merchandise and precious commodities however: the constant movement and mixing of populations also brought about the transmission of knowledge, ideas, cultures and beliefs, which had a profound impact on the history and civilizations of the Eurasian peoples. Travellers along the Silk Roads were attracted not only by trade but also by the intellectual and cultural exchange that was taking place in cities along the Silk Roads, many of which developed into hubs of culture and learning. Science, arts and literature, as well as crafts and technologies were thus shared and disseminated into societies along the lengths of these routes, and in this way, languages, religions and cultures developed and influenced each other.

'Silk Road' is in fact a relatively recent term, and for the majority of their long history, these ancient roads had no particular name. In the mid-nineteenth century, the German geologist, Baron Ferdinand von Richthofen, named the trade and communication network *Die Seidenstrasse* (the Silk Road), and the term, also used in the plural, continues to stir imaginations with its evocative mystery.

Silk Production and the Silk Trade

Silk is a textile of ancient Chinese origin, woven from the protein fibre produced by the silkworm to make its cocoon, and was developed, according to Chinese tradition, sometime around the year 2,700 BC. Regarded as an extremely high value product, it was reserved for the exclusive usage of the Chinese imperial court for the making of cloths, drapes, banners, and other items of prestige. Its production was kept a fiercely guarded secret within China for some 3,000 years, with imperial decrees sentencing to death anyone who revealed to a foreigner the process of its production. Tombs in the Hubei province dating from the 4th and 3rdcenturies BC contain outstanding examples of silk work, including brocade, gauze and embroidered silk, and the first complete silk garments.

The Chinese monopoly on silk production however did not mean that the product was restricted to the Chinese Empire – on the contrary, silk was used as a diplomatic gift, and was also traded extensively, first of all with China's immediate neighbours, and subsequently further afield, becoming one of China's chief exports under the Han dynasty (206 BC –220 AD). Indeed, Chinese cloths from this period have been found in Egypt, in northern Mongolia, and elsewhere.

At some point during the 1st century BC, silk was introduced to the Roman Empire, where it was considered an exotic luxury and became extremely popular, with imperial edicts being issued to control prices. Its popularity continued throughout the Middle Ages, with detailed Byzantine regulations for the manufacture of silk clothes, illustrating its importance as a quintessentially royal fabric and an important source of revenue for the crown. Additionally, the needs of the Byzantine Church for silk garments and hangings were substantial. This luxury item was thus one of the early impetuses in the development of trading routes from Europe to the Far East.

Knowledge about silk production was very valuable and, despite the efforts of the Chinese emperor to keep it a closely guarded secret, it did eventually spread beyond China, first to India and Japan, then to the Persian Empire and finally to the west in the 6thcentury AD. This was described by the historian Procopius, writing in the 6th century:

About the same time [ca. 550] there came from India certain monks; and when they had satisfied Justinian Augustus that the Romans no longer should buy silk from the Persians, they promised the emperor in an interview that they would provide the materials for making silk so that never should the Romans seek business of this kind from their enemy the Persians, or from any other people whatsoever. They said that they were formerly in Serinda, which they call the region frequented by the people of the Indies, and there they learned perfectly the art of making silk. Moreover, to the emperor who plied them with many questions as to whether he might have the secret, the monks replied that certain worms were manufacturers of silk, nature itself forcing them to keep always at work; the worms could certainly not be brought here alive, but they could be grown easily and without difficulty; the eggs of single hatchings are innumerable; as soon as they are laid men cover them with dung and keep them warm for as long as it is necessary so that they produce insects. When they had announced these tidings, led on by liberal promises of the emperor to prove the fact, they returned to India. When they had brought the eggs to Byzantium, the method having been learned, as I have said, they changed them by metamorphosis into worms which feed on the leaves of mulberry. Thus began the art of making silk from that time on in the Roman Empire.

Beyond Silk; a diversity of routes and cargos

However, whilst the silk trade was one of the earliest catalysts for the trade routes across Central Asia, it was only one of a wide range of products that was traded between east and west, and which included textiles, spices, grain, vegetables and fruit, animal hides, tools, wood work, metal work, religious objects, art work, precious stones and much more. Indeed, the Silk Roads became more popular and increasingly well-travelled over the course of the Middle Ages, and were still in use in the 19th century, a testimony not only to their usefulness but also to their flexibility and adaptability to the changing demands of society. Nor did these trading paths follow any one trail – merchants had a wide choice of different routes crossing a variety of regions of Eastern Europe, the Middle East, Central Asia and the Far East, as well as the maritime routes, which transported goods from China and South East Asia through the Indian Ocean to Africa, India and the Near East.

These routes developed over time and according to shifting geopolitical contexts throughout history. For example, merchants from the Roman Empire would try to avoid crossing the territory of the Parthians, Rome's enemies, and therefore took routes to the north, across the Caucasus region and over the Caspian Sea. Similarly, whilst extensive trade took place over the network of rivers that crossed the Central Asian steppes in the early Middle Ages, their water levels rose and fell, and sometimes dried up altogether, and trade routes shifted accordingly.

Maritime trade was another extremely important branch of this global trade network. Most famously used for the transportation of spices, the maritime trade routes have also been known as the Spice Roads, supplying markets across the world with cinnamon, pepper, ginger, cloves and nutmeg from the Moluccas islands in Indonesia (known as the Spice Islands), as well as a wide range of other goods. Textiles, woodwork, precious stones, metalwork, incense, timber, and saffron were all traded by the merchants travelling these routes, which stretched over 15,000 kilometres, from the west coast of Japan, past the

Chinese coast, through South East Asia, and past India to reach the Middle East and so to the Mediterranean.

The history of these maritime routes can be traced back thousands of years, to links between the Arabian Peninsula, Mesopotamia and the Indus Valley Civilization. The early Middle Ages saw an expansion of this network, as sailors from the Arabian Peninsula forged new trading routes across the Arabian Sea and into the Indian Ocean. Indeed, maritime trading links were established between Arabia and China from as early as the 8th century AD. Technological advances in the science of navigation, in astronomy, and also in the techniques of ship building combined to make long-distance sea travel increasingly practical. Lively coastal cities grew up around the most frequently visited ports along these routes, such as Zanzibar, Alexandria, Muscat, and Goa, and these cities became wealthy centres for the exchange of goods, ideas, languages and beliefs, with large markets and continually changing populations of merchants and sailors.

In the late 15th century, the Portuguese explorer, Vasco da Gama, navigated round the Cape of Good Hope, thereby connecting European sailors with these South East Asian maritime routes for the first time and initiating direct European involvement in this trade. By the 16th and 17th centuries, these routes and their lucrative trade had become subject of fierce rivalries between the Portuguese, Dutch, and British. The conquest of ports along the maritime routes brought both wealth and security, as they effectively governed the passage of maritime trade and also allowed ruling powers to claim monopolies on these exotic and highly sought-after goods, as well as gathering the substantial taxes levied on merchant vessels.

The map above illustrates the great variety of routes that were available to merchants bearing a wide range of goods and travelling from different parts of the world, by both land and sea. Most often, individual merchant caravans would cover specific sections of the routes, pausing to rest and replenish supplies, or stopping altogether and selling on their cargos at points throughout the length of the roads, leading to the growth of lively trading cities and ports. The Silk Roads were dynamic and porous; goods were traded with local populations throughout, and local products were added into merchants' cargos. This process enriched not only the merchants' material wealth and the variety of their cargos, but also allowed for exchanges of culture, language and ideas to take place along the Silk Roads.

Routes of Dialogue

Perhaps the most lasting legacy of the Silk Roads has been their role in bringing cultures and peoples in contact with each other, and facilitating exchange between them. On a practical level, merchants had to learn the languages and customs of the countries they travelled through, in order to negotiate successfully. Cultural interaction was a vital aspect of material exchange. Moreover, many travellers ventured onto the Silk Roads in order to partake in this process of intellectual and cultural exchange that was taking place in cities along the routes. Knowledge about science, arts and literature, as well as crafts and technologies was shared across the Silk Roads, and in this way, languages, religions and cultures developed and influenced each other. One of the most famous technical advances to have been propagated worldwide by the Silk Roads was the technique of making paper, as well as the development of printing press technology. Similarly, irrigation systems across Central Asia share features that were spread by travellers who not only carried their own cultural knowledge, but also absorbed that of the societies in which they found themselves.

Indeed, the man who is often credited with founding the Silk Roads by opening up the first route from China to the West in the 2nd century BC, General Zhang Qian, was on a diplomatic mission rather than a trading expedition. Sent to the West in 139 BC by the Han Emperor Wudi to ensure alliances against the Xiongnu, the hereditary enemies of the Chinese, Zhang Qian was captured and imprisoned by them. Thirteen years later he escaped and made his way back to China. Pleased with the wealth of detail and accuracy of his reports, the emperor sent Zhang Qian on another mission in 119 BC to visit several neighbouring peoples, establishing early routes from China to Central Asia.

Religion and a quest for knowledge were further inspirations to travel along these routes. Buddhist monks from China made pilgrimages to India to bring back sacred texts, and their travel diaries are an extraordinary source of information. The diary of Xuan Zang (whose 25-year journal lasted from 629 to 654 AD) not only has an enormous historical value, but also inspired a comic novel in the sixteenth century, the 'Pilgrimage to the West', which has become one of the great Chinese classics. During the Middle Ages, European monks undertook diplomatic and religious missions to the east, notably Giovanni da Pian del Carpini, sent by Pope Innocent IV on a mission to the Mongols from 1245 to 1247, and William of Rubruck, a Flemish Franciscan monk sent by King Louis IX of France again to the Mongol hordes from 1253 to 1255. Perhaps the most famous was the Venetian explorer, Marco Polo, whose travels lasted for more than 20 years between 1271 and 1292, and whose account of his experiences became extremely popular in Europe after his death.

The routes were also fundamental in the dissemination of religions throughout Eurasia. Buddhism is one example of a religion that travelled the Silk Roads, with Buddhist art and shrines being found as far apart as Bamiyan in Afghanistan, Mount Wutai in China, and Borobudur in Indonesia. Christianity, Islam, Hinduism, Zoroastrianism and Manicheism spread in the same way, as travellers absorbed the cultures they encountered and then carried them back to their homelands with them. Thus, for example, Hinduism and subsequently Islam were introduced into Indonesia and Malaysia by Silk Road merchants travelling the maritime trade routes from India and Arabia.

Travelling the Silk Roads

The process of travelling the Silk Roads developed along with the roads themselves. In the Middle Ages, caravans consisting of horses or camels were the standard means of transporting goods across land. Caravanserais, large guest houses or inns designed to welcome travelling merchants, played a vital role in facilitating the passage of people and goods along these routes. Found along the Silk Roads from Turkey to China, they provided not only a regular opportunity for merchants to eat well, rest and prepare themselves in safety for their onward journey, and also to exchange goods, trade with local markets and buy local products, and to meet other merchant travellers, and in doing so, to exchange cultures, languages and ideas.

As trade routes developed and became more lucrative, caravanserais became more of a necessity, and their construction intensified across Central Asia from the 10th century onwards, and continued until as late as the 19th century. This resulted in a network of caravanserais that stretched from China to the Indian subcontinent, Iran, the Caucasus, Turkey, and as far as North Africa, Russia and Eastern Europe, many of which still stand today.

Caravanserais were ideally positioned within a day's journey of each other, so as to prevent merchants (and more particularly, their precious cargos) from spending days or nights exposed to the dangers of the road. On average, this resulted in a caravanserai every 30 to 40 kilometres in well-maintained areas.

Maritime traders had different challenges to face on their lengthy journeys. The development of sailing technology, and in particular of ship-building knowledge, increased the safety of sea travel throughout the Middle Ages. Ports grew up on coasts along these maritime trading routes, providing vital opportunities for merchants not only to trade and disembark, but also to take on fresh water supplies, with one of the greatest threats to sailors in the Middle Ages being a lack of drinking water. Pirates were another risk faced by all merchant ships along the maritime Silk Roads, as their lucrative cargos made them attractive targets.

The legacy of the Silk Roads

In the nineteenth century, a new type of traveller ventured onto the Silk Roads: archaeologists and geographers, enthusiastic explorers looking for adventure. Coming from France, England, Germany, Russia and Japan, these researchers traversed the Taklamakan desert in western China, in what is now Xinjiang, to explore ancient sites along the Silk Roads, leading to many archaeological discoveries, numerous academic studies, and most of all, a renewed interest in the history of these routes.

Today, many historic buildings and monuments still stand, marking the passage of the Silk Roads through caravanserais, ports and cities. However, the long-standing and ongoing legacy of this remarkable network is reflected in the many distinct but interconnected cultures, languages, customs and religions that have developed over millennia along these routes. The passage of merchants and travellers of many different nationalities resulted not only in commercial exchange but in a continuous and widespread process of cultural interaction. As such, from their early, exploratory origins, the Silk Roads developed to become a driving force in the formation of diverse societies across Eurasia and far beyond.

ACKNOWLEDGEMENT
The research work is dedicated to the memories of Dr. D. G. Alias Appasaheb Pawar , who like a titan raised the "Global Agro-academic Culture". Authors would like to express their gratitude towards the dignitaries of International Journal of Social Sciences for kind co-operation and encouragement, which served a lot to orchestrate the progression of publication of study.

References

1. Khyade, V.B.(2004) Influence of juvenoids on silkworm, *Bombyx mori* (L). Ph.D. thesis, Shivaji University, Kolhapur.
2. Jagtap, S.G.(2007) Effect of plant juvenoids on consumption & utilization of mulberry leaves by silkworm, *Bombyx mori* (L). M.Phil. Thesis, Algappa University, Karaikudi, Tamil Nadu, (India).
3. Elisseeff, Vadime (2001). The Silk Roads: Highways of Culture and Commerce. UNESCO Publishing / Berghahn Books. ISBN 978-92-3-103652-1.

4. Boulnois, Luce (2005). Silk Road: Monks, Warriors & Merchants. Hong Kong: Odyssey Books. p. 66. ISBN 962-217-721-2.
5. Xinru, Liu, The Silk Road in World History (New York: Oxford University Press, 2010), 11.
6. Jerry Bentley, Old World Encounters: Cross-Cultural Contacts and Exchanges in Pre-Modern Times (New York: Oxford University Press, 1993), 32.
7. Jerry Bentley, Old World Encounters: Cross-Cultural Contacts and Exchanges in Pre-Modern Times (New York: Oxford University Press, 1993), 33.
8. Compare: Hansen, Valerie (2012). The Silk Road. OUP USA. p. 218. ISBN 9780195159318. Retrieved 2016-07-22. Jewish merchants have left only a few traces on the Silk Road.
9. "Approaches Old and New to the Silk Roads" Eliseeff in: The Silk Roads: Highways of Culture and Commerce. Paris (1998) UNESCO, Reprint: Berghahn Books (2009), pp. 1–2. ISBN 92-3-103652-1; ISBN 1-57181-221-0; ISBN 1-57181-222-9 (pbk)
10. "Approaches Old and New to the Silk Roads" Vadime Eliseeff in: The Silk Roads: Highways of Culture and Commerce. Paris (1998) UNESCO, Reprint: Berghahn Books (2000), pp. 1–2. ISBN 92-3-103652-1; ISBN 1-57181-221-0; ISBN 1-57181-222-9 (pbk)
11. Waugh, Daniel. (2007). "Richthofen's "Silk Roads": Toward the Archaeology of a Concept." The Silk Road. Volume 5, Number 1, Summer 2007, p. 4.
12. Warwick Ball (2016), Rome in the East: Transformation of an Empire, 2nd edition, London & New York: Routledge, ISBN 978-0-415-72078-6, p. 156.
13. Warwick Ball (2016), Rome in the East: Transformation of an Empire, 2nd edition, London & New York: Routledge, ISBN 978-0-415-72078-6, p. 155.
14. Warwick Ball (2016), Rome in the East: Transformation of an Empire, 2nd edition, London & New York: Routledge, ISBN 978-0-415-72078-6, pp 154-156.
15. Warwick Ball (2016), Rome in the East: Transformation of an Empire, 2nd edition, London & New York: Routledge, ISBN 978-0-415-72078-6, pp 155-156.
16. Pollard;Rosenberg;Tignor, Elizabeth;Clifford;Robert (2011). Worlds Together Worlds Apart. New York, New York: Norton. p. 278. ISBN 9780393918472.
17. Lubec, G.; J. Holauerghsrthbek; C. Feldl; B. Lubec; E. Strouhal (4 March 1993). "Use of silk in ancient Egypt". Nature. 362 (6415): 25. doi:10.1038/362025b0. (also available here [1])
18. Christopoulos, Lucas (August 2012), "Hellenes and Romans in Ancient China (240 BC – 1398 AD)," in Victor H. Mair (ed), Sino-Platonic Papers, No. 230, Chinese Academy of Social Sciences, University of Pennsylvania Department of East Asian Languages and Civilizations, p. 31 footnote #56, ISSN 2157-9687.
19. Christopoulos, Lucas (August 2012), "Hellenes and Romans in Ancient China (240 BC – 1398 AD)," in Victor H. Mair (ed), Sino-Platonic Papers, No. 230, Chinese Academy of Social Sciences, University of Pennsylvania Department of East Asian Languages and Civilizations, pp 15-16, ISSN 2157-9687.
20. Prevas, John. (2004). Envy of the Gods: Alexander the Great's Ill-Fated Journey across Asia, p. 121. De Capo Press, Cambridge, Mass. ISBN 0-306-81268-1.
21. Jerry H. Bentley, Old World Encounters: Cross-Cultural Contacts and Exchanges in Pre-Modern Times (New York: Oxford University Press, 1993), 54.

22. The Megalithic Portal & Megalith Map. "Silk Road, North China, C.M. Hogan, the Megalithic Portal, ed. A. Burnham". Megalithic.co.uk. Retrieved 2011-07-13.
23. Yiping Zhang (2005). Story of the Silk Road. **五洲**传播出版社. p. 22. ISBN 7-5085-0832-7. Retrieved 2011-04-17.
24. Julia Lovell (2007). The Great Wall: China Against the World, 1000 BC - AD 2000. Grove Press. p. 73. ISBN 0-8021-4297-4. Retrieved 2011-04-17.
25. https://en.wikipedia.org/wiki/Silk_Road_UNESCO_World_Heritage_Sites