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SILVER IN ANCIENT INDIAN LITERATURE – A STUDY

Rajesh Kumar, Extension Lecturer History Govt. College Matanhail(Jhajjar)

ABSTRACT: Discovery of the metals and the means of working them are the two major developments in the history of human civilization. The names generally given to the three prehistoric periods of man's life on the earth- the Stone, the Bronze and the iron age imply the vast importance of the progressive steps from the flint knife to the bronze celt and lastly to the keen-edged elastic iron weapon or tool.

Key words: The Taittiriya Samhita, The Atharvaveda, Upnisada, Epic, Smrits, Puranas.



LITERATURE

The history of silver is long and complex. The knowledge of the Indians in the past with specific regard to the use of minerals and metals based upon literary evidence. Here we will discuss only the literary evidence of the in ancient Indian literature as given in this chapter.

The term Rajata first occurs in the later Vedic texts.

The Taittiriya Samhita

The Yajurveda Samhitas are the prayer books for the adhvaryu priest. The Taittiriya Samhita is the representative of the "Block Yajurveda" which consists of four closely interrelated recessions. We find only one reference to silver in the Taittiriya Samhita.

"... The tear that was shed became Silver; therefore silver is not a suitable gift, for it is born of tears"(1.5.1.2).

The Vajasaneyi Samhita

It belongs to the white Yajurveda. Mention to lead has been made in two verses.

- (a) "... That noblest body which is thin, 0 Agni, laid in the lowest deep encased in silver, etc. Svaha!" (5.8). 10
- (b) "... They, made of silver, gold and lead, are used as helpers in the work ..." (23.37).

The Atharvaveda

We come across two references to Rajata.

- (a) "... For lengthened life, to last through hundred autumns, they equalize with nine the nine spirations. Three in gold, three in silver, three in iron by heat are stablished in their several places." (V. 28.1). 12
- (b) "... We pay thee reverence calling thee red power, thee silvery expanse." (XIII 4.51).

The Aitareya Brahmana

The Aitareya Brahmana belongs to the Regveda. It is supposed that the last ten sections are of later origin. This Brahmana deals chiefly with the soma sacrifice, besides which, with only the fire sacrifice (Agnihotra) and the feast of the consecration of a king (Rajasuya).

In the Aitareya Brahmana, Rajata is used alone as a substantive to denote 'silver'.

"... Seeing it shining, he takes out the fire. At morning time (after sunrise), he may take out the fire when he has put silver below it; for this (silver) is of the same nature with the night (representing the splendour of the moon and the stars). He shall take out (of the Garhapatya) the Ahavaniya before the shadows are cast together (before it has grown completely dark). For the shadow of darkness if death. By means of this light (the silver), he overcomes death, which is the shadow of darkness. This is the penance" (vii. 12.2).

The Satapatha Brahmana

There are several references to silver in the Satapatha Brahmana. A reference suggests the use of silver for the manufacture of dishes. "... He then throws down a gold and a silver plate (beneath his feet, the silver one beneath the right foot) with 'Protect (me) from death'! (The gold one beneath the right foot with) 'Protect (me) from lightning'! The Virag, doubtless, is the rain, and of this there are these two terrible forms, lightning and hail; of these the gold plate is of the form of lightning, and the silver one of that of hail; against these two deities he affords

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protection to him, whence he who has performed the Sautramani has no fear to these two deities, as he also who thus knows this." (XII, 8, 3.11).

Rajata has been used as an adjective with Hiranya to mean white gold i.e. silver.

- (a) "They also say, ... In such a case let him proceed thus:- having fastened a piece of white gold (silver) to a plant of darbha grass, let him order it to be taken towards the front: thus it is made of the form of the moon; and, the moon being the night, it is made of the night ..." (XII 44•7)
- (b) "Now Sand has been strewed on the north side of it: below that he previously) throws (a plate of) white gold (i.e., a silver plate weighing a hundred grains), with, 'Protect it from contact with the earth'! ..." (XIV. 1.3.14).
- (c) "... Silver is the priests' fee, for the sake of variety of colour, and also for going outside and not going away ..." (XIII.4.2.10).

There is not much that can be gleaned from the above references. They are mostly of a rather stereotyped nature. They suggest that silver figured in various rituals. Besides this, little specific evidence on silver is available.

Silver was also used for ornamentation as is evident from a reference in the Pancavimsa Brahmana

"... A turban, a good, a bow without arrow, a board-covered rough vehicle, a garment with black fringes, two goats-skins: one white, one black, a silver ornament (worn around the neck), (all) that is (the equipment) of the Grhapati" (XVIII. 1.14).

Brahmanas like Taittiriya Brahmana (II 2.9.7; III 9.6.5), Sadvimsa Brahmana (VI. 6.2) and Jaiminiya Upanisad Brahmana (III 4.3) also contain references to silver. Silver is also referred to as Rajata in the Kathaka Samhita (X-4) and as Rajas in the Maitrayani Smahita (I 2.7) and Kathaka Samhita (II 8).

Rajata also occurs in the Chandogya Upanisad: "... As gold is corrected by borax, and silver by gold, and tin by silver, and lead by tin and iron by lead, and wood by iron or leather; ..." (IV 17.7).

The Srauta Sutras

A reference from MANAVA SRAUTASUTRA indicates the use of silver in the form of vessels.

"...A copper vessel should be scrubbed; a wooden vessel should be heated; and an earthen or a golden o a silvery vessel should be washed by means of water ..." (Manava 3.1.1 5).

Silver figures in plenty of ceremonies.

- (a) "... He should give a piece of silver to the enemy of the sacrifice (after sitting at each of the sacred fires). If there is no such enemy, the pieces of silver should be thrown away ..." (Bharadvaja 5.3-6).
- (b) "... The adhvarya ... should take up (the pieces of) gold together with (the pieces of) silver ... With Uddhanyamanam ..., he should dig out nine times in each fire-place by means of a pin made either of gold or of silver ... " (Vaikhanasa I 7-10).
- (c) "Towards the north (within the fire-place) he should put a piece of gold And he should throw out the piece of silver to a Vrsala or to some unknown person ..." (Baudhayana 2.16-18).
- (d) "... Someone should carry a piece of silver in the front. A learned Brahrnana should draw out a portion of fire (from garhapatya fire), cany it after the piece of silver, ..." (Katyayana 25.3.20).26
- (e) "... Someone should carry, in the front, clarified butter taken (into the ladle) four times and a piece of silver ..." (Asvalayana 3.12.13).
- (f) "One should tie a piece of silver with a **Darbha** blade and hold it in from of the garhapatya fire ..." (Atharvaprayascittani 1.2).

The Dharma Sutras

These have been dated by one source to the period spanning c. 500 - 200 B.C. Silver figures in the description of the means of purification.

According to Vasishtha, like gold, silver is purified by water alone. (III 62). But Baudhayana gives a different way of cleansing silver.

"Copper, silver and gold (must be cleaned) with acids..." (1.5.8-33).

Not much that is directly relevant can be gleaned from the above references.

The Vinaya Pitaka

There are some references to Rajata which suggest the use of silver in the manufacture of bowls and also in the ornamentation.

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- (a) "... You are not, 0 Bhikkhus, to use bowls made of gold, or made of silver, whosoever does so, shall be guilty of a dukkata" (The Kullavagga V.9.1).
- (b) "... Shoes, O Bhukkus, made of tina-grass are not to be worn, or made of munga-grass, or of babbaga-grass, or of leaves of the date-palm, or of Kamala-grass, or of wool, nor (ornamented with) gold, or silver, or pearls ..." (The Mahavagga V. 8.3).

The Samyutta Nikaya

The "Collection of Grouped Discourses" contains only two references to silver.

(a) "...And I had eighty thousand couches of solid ivory, of solid wood, of solid gold and silver, furnished with wooden draperies, with white draperies, with

flower-worked coverlets and spread with choicest skins of antelopes, with canopies above and scarlet cushions at each end" (III. 1 44)•33

(b) "...Grain-store and hoarded wealth, silver and gold, or whatsoever property there be, ..." (I. 92).

In a verse in the SUTTA-NIPATA reference has been made to a silversmith, which suggests that the use of silver was popular.

"... What training undergo, so he intent, alert and apt, may purge the self, As silversmith the dross?" (962).

Rajata also occurs in a large number of other Buddist texts such as Digha Nikaya (I. 5), Jataka (V. 50; 416), Vimanavatthu (35), Dhammapada Commentary (II. 42), Vibhanga commentary (64), Pettavatthu (II. 6) and Peta-vatthu commentary (95).

Amongst precious metals, Panini makes a mention of silver (rajata, IV. 3.154). None of the above mentioned references contains any insight into silver metallurgy. Kautilya for the first time gives a comprehensive accounts of ores, minerals and metals with their extraction and working, as well as of alloys in the Arthasastra.

The Kautilya's Arthasastra

The characteristics of silver ores of different types are described at length (2.12.2- 6). The text also describes the process of refining gold and silver. (2.12.8-11).

"Silver ores have the colour of conch-shell, camphor, alum, butter, a pigeon, turtle-dove, or the neck of a peacock. They are resplendent as opal (Sasyaka), agate (Gomedaka), cane sugar and granulated sugar. They may have also the colour of the flower of Kovidara (Bauhinia Variegata), of lotus, of patali (Stereospermum suaveolens), of Kalaya (a kind of Phaseolus), of flax. These ores may occur in combination with lead or iron. When roasted they do not split but emit much foam and smoke. The heavier the ores the greater will be the quantity of metal in them" (82).

A rather detailed description of the properties of gold and silver, and of their working has been given by Kautilya.

"Silver, which is white, ductile and glossy, is the best; and that which is of the reverse quality is bad.

Impure silver should be heated with lead of one-fourth the quantity of the impurity.

That which became full of globules, white, glowing and of the colour of curd is pure". (86).

This indicates that the knowledge of the purification of silver by alloying with lead was known in Kautilya's time. This is complete to the modern process of cupellation.

Kautilya has also described the working of silver. "For silver articles, either solid or hollow, silver may be mixed with half of the amount of gold."

"Pure of impure silver may be heated four times with copper sulphate mixed with powered bone (asthituttha), again four times with an equal quantity of lead, again three times in skull and lastly twice in cowdung." (88).

Heating silver with lead in skull, which consists mainly of calcium phosphate, practically resembles the cupellation process for the purification of silver.

Chapter 2.14 describes the duties of the Sauvarnika the royal goldsmith, who manufactured gold and silver articles for the people in a special workshop in the market place.

Arthasastra, thus, provides the earliest and most authentic record of informations relating to the knowledge of chemistry, metallurgy and medicines of the early days.

Patanjali's Mahabhasya

PATANJALI has mentioned coins of different denominations and metals in the Mahabhasya. These include : niska, Satamana, Suvarna, Sana, Karaspana, with its lower denominations — ardha or half, pada — a quarter,

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masa with still lower denominations — ardhamasa, Kakini and ardhakakini; and rupa which may have been a coin or a figure or symbol on a coin.

The metal or value of the coin **Satamana** is not known but according to Manu (VIII. 137), it was a denomination of silver (Satamanas tu rajatah). The position of **Suvarna** is equally doubtful. It appears that **niksa** and **Suvarna** were gold coins while **Satamana** and **Sana** were probably of silver, as suggested by Manu.

Karsapana was the most popular coin of different values. It could be of copper, as mentioned by Manu; of silver (Majjhima Nikaya II. 163; Anguttara Nikaya I. 250), or black metal i.e. iron or lead (Dhammapada commentary III. 254).

The finds of silver and copper punch-marked coins have testified to the use of these coins, and the correctness of their weight as recorded in literature. These silver and copper coins are classified by Allan (Coins of Ancient India, p. clxi). He contended that the greater majority of silver coins of Ancient India were full **Karsapanas**, halves and quarters being much rarer.

AYURVEDIC TEXTS

The Sushruta Samhita

The Sushruta Samhita is a representative work of Ayurveda. It has dealt mostly with vegetable drugs. There is, however, one sloka in which the six metals, viz., tin, lead, copper, silver, Krishna loha (iron) and gold, and their calces are also reconimended for use as drugs.

"... Silver has an acid taste, is laxative and cooling (in its potency), presents a glossy or oily aspect, and destroys the Pittam and Vayu."

The Caraka Samhita

Gold, silver, copper, lead, tin and iron along with their calces are mentioned for use as drugs. A process has been described for treating thin sheets of iron, silver and gold with hot solutions of salts and alkali (Potash Carbonate) for use as drugs.

In a reference a disciple who approaches the preceptor with reverence for study, is advised to bring with him among other things ornaments of gold, silver, jewels, pearl, coral, etc. There is also reference to a silver vessel and a silver — instrument.

THE EPICS

The Mahabharta

Rajata occurs as a general term which is used for both gold as well as silver in the Mahabharata. However, we have a few references where Rajata is used exclusively for silver.

- (a) "The sum of gold is silver; of silver, tin; of tin, lead, and of lead, useless dross." (Udyoga Parva, Section XXXIX).
- (b) "... By performing the Sraddha on the twelfth day one always beholds, if one desires, diverse kinds of beautiful articles made of silver and gold ..." (Anusasana Parva, Sect. IXXXVII).

The Ramayana

It is probable that the original Ramayana was composed in the third-century B.C. by Valmiki on the basis of ancient ballads and that it acquired its present from and contents towards the end of the second century A.D. The later parts of the Ramayana, especially Books I and VII are separated from the genuine Ramayana of Books II and VI by a long interval of time.

Rajata figures in two slokas

- (a) "...Thus addressed by the learned Brahmins, the king bestowed on them a hundred million pieces of gold, and four hundred million silver coins..." (Bala Kanda, Chapter 14).
- (b) "O Best of well-born Men! Silver, gold and precious gems are shared amongst friends as belonging to either ..." (Kishkindha Kanda. Chapter 8).

The Smrtis

Being legal treatises, the amrits contain matter on civil and criminal law, penances for minor offences, duties of a king etc.

According to Manu the duty of liberality should be practiced both by sacrifices and by charitable works if a worthy recipient could be found.

"A giver of land obtains land, a giver of gold long life, a giver of a house most excellent mansions, a giver of silver (rupya) exquisite beauty (rupa)" (Manu. IV 230)."

Visnu has dealt separately with subject concerning pious gifts.

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- (a) "After having placed on its four sides (beginning with the eastern side) four metallic dishes (of copper, silver, white copper and gold respectively) ... he must give (the skin, seizing it by the tail), to a Brahmana, who is an Agnihotrin, decked with ornaments, and clad in two garments." (Vis. IXXXVII. 6).
- (b) "... By giving silver (rupya, he obtaines) beauty (rupa)" (Vis. XCII. 14).56 Manu, Vishnu and Narada have described the means of purification.
- (c) "A golden vessel which shows no stains becomes pure with water alone, likewise what is produced in water (as shells and corals), what is made of stone, and a silver (vessel) not enchased." (Manu. V. 112).
- (d) "Objects made of gold, silver, water-shells, or gems, when (they are only defiled by leavings of food and the like, and) not ameared (with greasy substances), are cleansed with water." (Vis. XXIII, 7)58
- (e) "The (Judge), after having cleansed himself, shall quickly pour clarified butter into a golden, silver, iron or earthen vessel, and shall place the vessel on the fire. He shall throw into it a shining coin, made of gold, silver, copper, or iron, after having washed it in water more than once." (Nar. I. 344-345).

Manu declared the technical names of (certain quantities of copper, silver and gold, which were generally used for the purpose of business transactions among men.

- (f) "Four suvarnas are one pala, and ten palas one dharana; two Krishnalas (of silver), weighed together, must be considered one mashaka of silver. Sixteen of those make a silver dharana, or purana; but know (that) a Karsha of copper is a Karshapana, or pana. Know (that) ten dharanas of silver make one satamana. ..." (Manu. VIII. 135_137).
 - Vishnu also stated that two Krishnapalas of equal weight were equal to one mashaka of silver (Vis. IV. II). Silver figures in the criminal and civil law besides in penances for minor offences.
- (g) "A stealer of gold, silver, or clotnes, at a value of more than fifty mashas, shall lose both hands." (Vis. V. 81).
- (h) "Two subsist during twelve days on (uncooked) grains (is the penance for stealing) gems, pearls, corals, copper, silver, iron, brass, or stone." (Manu. XI. 168).
- (i) "He must place (on the sacrificial ground) vessels made of the hair of the mountain-goat,... (silver and copper vessels and other) purificatory objects ..." (Vis. IXXIX. 16).64

The smertis are important for providing some new light in the use of silver.

Amarasimha' s Amarakosa

It mentions five names of silver viz. Puvarnam, Pajatam, Rupyam, Khajuram and Shvetam. (II. 9.96). Rajata as a noun has two meaning namely gold and silver but as an adjective it means 'white'. (1111. S. 79).

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