THE IMPERIAL TREASURY

OF

THE GREATER MUGHALS

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History of the reign of Shāh Jahān

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BOOK II : *(continued)*

CHAPTER III

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INTRODUCTORY :

THE IMPERIAL HOUSEHOLD

THE Imperial Household was a great miscellany of offices, factories, departments and institutions. It was a microcosm, a complete, independent unit, where the economic processes of production, consumption, and exchange went full circle. The standard of the articles and services consumed at court was so high and the amounts required were so large that no private agency or set of agencies could be relied upon to meet the demand with a reasonable degree of satisfaction.

Some of these, indeed, were of a kind usually managed by state, such as a mint or an arms factory. But it is proof of the fastidious tastes of the aristocracy in general and the Emperor in particular that every thing consumed by court was specially produced by its various offices.

These offices constituted the mainspring of life at court—like all mainsprings invisible to outside observers, but vitally necessary. To realize the significance of court life and ceremonial one should understand the inner working of the machinery that was behind it. This machinery was to the Imperial Court what anatomy is to the art of animal sculpture—foundation of its being.

We have a wish not only to see what passed on the stage, but also to watch the processes of preparation in the green-room and to study the appliances which controlled the shifting of scenes and the rest.

'The *kārkhānajāt*', says Abū'l-Fazl, 'were more than a hundred in number, and each was like a city, in fact like a kingdom.' (Ā'ín, Text, 9).

The Treasury stored valuables of all kinds: coins, gold and silver, precious stones, and useful and ornamental things made of these; as well as articles of virtu prized for rarity or workmanship.

Several departments were concerned with the royal table, such as Kitchen, *Nānbā-khāna* (Bakery), *Ḥawā'ÿ-khāna* (for pot-herbs, seasonings, sweets, etc.), *Mewa-khāna* (Fruitery), *Ābdār-khāna* (for water), *Rikāb-khāna* (Pantry), and *Āftābchí-khānā* (for ewers, etc.).

Not far removed in function were *Sharbat-khāna* (for sherbet and other beverages), and *Tambūl-khāna* (for betel-leaves).

Lighting-up was in charge of *Chirāgh-khāna* (lamps) and *Mash'al-khāna* (torches); while *Khwushbū-khāna* (Perfumery) supplied scents, *itrs*, essences and oils.

A large number of well-organized factories, where articles were manufactured and stored in proper order, also formed part of the Household. These were *Kārkhānas, i.e.*, factories, properly so called:

The Mint stamped its seal on the current coin of the realm; and the *Qūr-khāna* produced arms and equipments of war. Another department engraved royal seals.

The following *kārkhānas* were concerned with the weaving of textile fabrics and the needlework connected with them:— *Farrāsh-khāna* (for tents and carpets), *Kírakyarāg-Khāna* (or *Kírākyarāq-khāna*) *and Tūshak-khāna* (for dresses and stuffs of all kinds used for wearing-apparel, etc.), and the Shawl department.

In other workshops skilful artists and artisans worked in metal, stone, ivory and other substances; and the upper reaches of art were approached in the work of goldsmiths and painters. Each department was conducted and supervised by master workers of established reputation. [1]

[1] As an example, by no means isolated, may be cited Bebadal Khān, the *Dārogha* of Goldsmiths' workshop in Shāh Jahān's time, who was a celebrated lapidary, a great calligraphist, and also an author of some respectable verse. (*A.S.*, II, 89-90).

Akbar, says Father Monserrate, who was at the Mughal Court in 1580-82, 'is so devoted to building that he sometimes quarries stone himself, along with the other workmen. Nor does he shrink from watching and even himself practising, for the sake of amusement, the craft of an ordinary artisan. For this purpose he has built a workshop near the palace, where also are studios and workrooms for the finer and more reputable arts, such as painting, goldsmith-work, tapestry-making, carpet and curtain-making, and the manufacture of arms. Hither he very frequently comes and relaxes his mind with watching at their work those who practise these arts.' (Monserrate, *Commentary,* 201.)

Bernier, who came some eighty years later, is talking of the same factories in the following passage:—'Large halls are seen in many places, called *Kar-kanays* or workshops for the artisans. In one hall embroiderers are busily employed, superintended by a master. In another you see the goldsmiths; in a third painters; in a fourth, varnishers in lacquer-work; in a fifth, joiners, turners, tailors, and shoe makers; in a sixth, manufactures of silk, brocade, and those fine muslins of which are made turbans, girdles with golden flowers, and drawers worn by females, so delicately fine as frequently to wear out in one night. This article of dress, which lasts only a few hours, may cost ten or twelve crowns, and even more, when beautifully embroidered with needlework.—The artisans repair every morning to their respective *Karkanays,* where they remain employed the whole day; and in the evening return to their homes.' (Bernier, 258-59).

Every one knows the heights of excellence essayed by the building art in this period.

Music, both as an art and as a profession, was in high esteem, and a heavy establishment consisting of musicians and singers (both male and female) and of dancing girls (of all nationalities) was maintained at considerable expense.

Where art excelled knowledge did not lag behind. And it is one of the paradoxes of history that one of the finest manuscript libraries in the world was built up, in great part, during the reign of an illiterate monarch. The Imperial Library of the Mughals is a remarkably interesting phenomenon in many ways.

A large number of animals were kept and fed in the fort-palace: Some, like elephants, horses, camels, mules and cattle, were for use, and were lodged in stables. Others, such as leopards, deer, dogs, hawks and falcons, were for hunting. Others, again, were for amusement, almost all Mughal emperors being amateur naturalists. All sorts of animals and birds that influence and patronage could bring found their way into the royal menagerie.

Then there was an office of the *Naubat-khāna* or *Naqqār-khāna* (Music Gallery) which tuned up at stated times and during the imperial audiences; and informed the capital and the camp of the time of day and night, and of the functions at the court.

There seems to have been a department in charge of the insignia of royalty. Rigid rules were observed regarding the use of these; for symbolism played a great part in Mughal administration and etiquette.

A very important department stands by itself : the Haram.

In the conspectus which has preceded, and the detailed treatment which will form the subject-matter of this and the following chapters, we have practically confined ourselves to the reigns of the greater Mughals. We are unable, therefore, to make any use of Sir Jadunath Sarkar's Classified List of *Kārkhānajāt* in his *Mughal Administration* (Second Series), (Patna University, 1925). Lecture V, where, besides the *Āín* and *Zawābiṭ-i-'Alamgírí*, he draws upon 'Afíf's *Tārikh-i-Fírozshāhí* on the one hand, and on the Mahratta histories on the other. We are attempting a pen-picture of the Household as it was roughly from 1650 to 1700. The authorities relating to the periods anterior and posterior to this epoch are beside our purpose.

The account that follows is not meant to be exhaustive. All we can manage is a description, as material serves, of the chief offices and departments. The importance of each will naturally determine the space to be allotted to it; so that some will have a somewhat generous treatment at the expense of others, which may be crowded out.

Perhaps the reader is asking himself what would be the approximate cost of running such a gigantic establishment as the Imperial Household. Risking a guess is worse than useless. Luckily some material is available for arriving at a tolerably accurate estimate.

We may begin with Abū'l-Fazl. Writing in or before the year 1,597, he says: 'Although the majority of the officers of the Imperial Household get their salary from the army exchequer the expenditure for the year 39 *Ilāhí* [March 11, 1594—March 10, 1595] came to 30,91,86,795 *dāms*. The expenses of this Empire as well as the revenues are daily increasing.' (*Ā'ín*, Text, I, 9). At 40 *dāms* to the rupee this would be equivalent to Rs. 77,29,670.

These are no doubt the office figures for Akbar's period, and we have no hesitation in accepting them. But we see that this is not at all a high figure. Both the Household and its expenses,

we must remember, expanded considerably during the last ten years of Akbar's reign and under his descendants.

Hawkins' report, which refers to the years 1609-11, is as follows :

'His daily expences for his owne person, that is to say, for feeding of his Cattell of all sorts, and amongst them some few Elephants Royall, and all other expences particularly, as Apparell, Victuals, and other petty expences for his house, amounts to fiftie thousand Rupias a day.

The expences daily for his Women by the day, is thirtie thousand Rupias.' (Purchas, III, 34.)

We understand it to mean that according to Hawkins the daily expenses of the Imperial Household, exclusive of the Haram, amounted to Rs. 50,000, and those of the Haram to Rs. 30,000 *per diem*—total, Rs. 80,000, a day. The annual expenditure would then be Rs. 1,09,50,000 for the Haram, and Rs. 1,82,50,000 for the rest of the Household—total, Rs. 2,92,00,000, or nearly three crores.

The annual budget of the Household must have gone up with rapid strides between 1595 and 1610. And these figures are neither incredible nor unlikely, seeing that Akbar's careful husbandry contrasted with Jahāñgír's negligent ways, and that fifteen years of peaceful development intervened between these dates.

The historiographers of Shāh Jahān's reign give us no details on this point; and we have to fall back upon foreign travellers. Bernier had no access to the official records, and has no definite estimates to offer. Still from a man of his judgment and balance even general statements like the following are worth quoting. He is writing early in Aurangzeb's reign, and is discussing the Emperor's wealth :

'But I have not enumerated all the expenses incurred by the *Great Mogol*. He keeps in *Dehly* and *Agra* from two to three thousand fine horses, always at hand in case of emergency: eight or nine hundred elephants, and a large number of baggage horses, mules, and porters, intended to carry the numerous and capacious tents, with their fittings, his wives and women, furniture, kitchen apparatus, *Ganges'-water*, and all the other articles necessary for the camp, which the *Mogol* has always about him, as in his capital, things which are not considered necessary in our kingdoms in Europe.

Add to this, if you will, the enormous expenses of the *Seraglio*, where the consumption of fine cloths of gold, and brocades, silks, embroideries, pearls, musk, amber and sweet essences, is greater than can be conceived.

Thus, although the *Great Mogol* be in the receipt of an immense revenue, his expenditure being much in the same proportion, he cannot possess the vast surplus of wealth that most people seem to imagine. I admit that his income exceeds probably the joint revenues of the *Grand Seignior* and of the King of *Persia*; but if I were to call him a wealthy monarch, it would be in the sense that a treasurer is to be considered wealthy who pays with one hand the large sums which he receives with the other.' (P. 221-22).

It may be remarked in passing that the Princes and the greater nobles had a similar set of *Kārkhānajāt* attached to their household, of course on a descending scale of magnitude, according to the position and wealth of its owner.

TREASURIES.

The Imperial Treasury contained, as we have said, cash and precious metals, and jewels and jewelled articles. We shall take up the Cash and the Jewel Treasury separately, winding up with the miscellaneous articles of artistic and general interest—not jewels, nor forming part of Jewel treasury, yet more valuable than many gems.

Section i: Cash Treasury.

A monarch's resources in war and peace depend on wealth. Consequently the treasury which contains that wealth is a measure of his power. No wonder then that Treasury occupied the first place in the Imperial Household.

In history and tradition the Greater Mughals (from the middle of the sixteenth to the middle of the eighteenth century) have been famous for their wealth. The fame of the Golden Land of Ind had reached Milton as early as the middle of the seventeenth century. Sir Thomas Roe, a hostile and unsympathetic witness, writing to Prince Charles from Jahāñgír's court at Ajmer on the 30th. of October, 1616, speaks thus of the prosperity and wealth of Mughal India: 'Plentifull in corne and cattle for mans necessitye: aboundant in wealth and commodityes of trade for superfluitye. His revenew far above any easteren monarch knowne: farr above the Turke: incredible if I sawe not the issues and incomes and could not give a better reason of yt then report. In jewells (which is one of his felicityes) hee is the treasury of the world, buyeing all that comes, and heaping rich stones as if hee would rather build then weare them. [1]' (Roe, 270).

[1] An unconscious prophecy, since Shāh Jahān did build (the Peacock Throne) with some of these jewels

We have already heard Bernier's qualified praise.

Is it possible to arrive at a tolerably accurate valuation of the contents of the treasury during the various reigns?

We propose to attempt in this section a rapid survey of the Cash Treasury from Bābur to Shāh Jahān.

It is often, if somewhat vaguely, supposed that one of the causes of the immensity of the Great Mughal's wealth was the fact that unlimited treasures cumulated by the successive lines of Delhi Kings (Khaljís, Tughlaqs, and Lodís) fell to Bābur at Panipat, and that they went on steadily increasing in the hands of his descendants till Nādir Shāh fell on them in 1739 and carried them off at one fell swoop to his native land of Persia. Well, such sweeping statements are generally misleading. The reader is warned that whatever truth there may be in such a generalization, in the first place it can apply only to the Jewel treasury, since the Cash treasury, which Bābur inherited as the spoils of war, was completely squandered by him, as we shall see, in a short time; and while Humāyūn was mostly a fugitive, Jahāñgír's crapulous hands, it appears, were not strong enough to guard, or to spend properly, Akbar's hard-earned wealth, so that Shāh Jahān inherited, comparatively speaking, a depleted treasury. Secondly, even if we consider only the jewel treasury, the period from 1526 to 1739 was not one of steady growth and progress. Humāyūn's defeat and flight to Persia was a great set-back, and we have no means of telling how much of Ibrāhím Lodí's jewel treasury was actually inherited by Akbar.

We can now proceed to the details:

Boundless wealth seems to have fallen into the hands of Bābur at Panipat, though no appraisement of its value is possible from the data available. It is equally certain that heavy sums were bestowed on the princes and nobles and the rank and file of the victorious army, not omitting even the camp followers; and immense amounts were sent to princes, relations, officers and soldiers, in the Transoxiana and elsewhere, and to pious people and holy places. The story is best told by the imperial donor himself:

'On Saturday the 29th [X 30th.] of Rajab [= May 12th. 1526 *A. C.*?] the examination and distribution of the treasure were begun. To Humāyūn were given 70 laks from the Treasury, and, over and above this, a treasure house was bestowed on him just as it was, without ascertaining and writing down its contents. To some begs 10 laks were given, 8, 7, or 6 to others. Suitable money-gifts were bestowed from the Treasury on the whole army, to

every tribe there was, Afghān, Hazāra, 'Arab, Bílūch *etc.* to each according to its position. Every trader and student, indeed every man who had come with the army, took ample portion and share of bounteous gift and largess. To those not with the army went a mass of treasure in gift and largess, as for instance, 17 laks to Kāmrān, 15 laks to Muhammad-i-zamān Mírā, while to 'Askarí, Hindāl and indeed to the whole various train of relations and younger children went masses of red and white (gold and silver), of plenishing, jewels and slaves. Many gifts went to the begs and soldiery on that side (Tramontana). Valuable gifts (*saughāt*) were sent for the various relations in Samarkand, Khurāsān, Kāshghar and 'Irāq. To holy men belonging to Samarkand and Khurāsān went offerings vowed to God (*nuzūr*); so too to Makka and Madína. We gave one *shāhrukhi* for every soul in the country of Kābul and the valley-side of Varsak, man and woman, bond and free, of age or non-age.[1] (*B. N. E.*, 522-23.)

This passage incidentally illustrates the traditional wealth of India on the one hand and the munificence of the Mughal conquerors on the other—features, the combination of which was to lead to so much that is great in the art and annals of Mughal India.

The next item of news about the treasury in the Emperor's Diary is the following entry under April-May, 1527 :

'Meantime news came that Humāyūn had gone into Dihlí, there opened several treasure-houses and, without permission, taken possession of their contents. I had never looked for such a thing from him; it grieved me very much; I wrote and sent off to him very severe reproaches.' (*B. N. E.*, 583.).

Finally, by the 22nd. October, 1528, exactly 2½ years after Bābur's great victory, we learn that 'the treasure of Iskandar and Ibrāhím in Dihlí and Āgra was at an end. Royal orders were given therefore, on Thursday the 8th of Safar, that each stipendiary (*wajhdār*) should drop in to the Díwān, 30 in every 100 of his allowance, to be used for war-material and appliances, for equipment, for powder, and for the pay of gunners and matchlockmen.' (*B. N. E.*, 617)

So the Qalandar, after his reckless extravagance, finds himself straitened for military necessaries—life-blood for a conqueror whose power and safety in a foreign land rested solely on the strength of his arms.

[1] '*Circa* 10d. or 11d. Bābur left himself stripped so bare by his far-flung largess that he was nick-named Qalandar (Firishta).'
(P. 523, f. n. 2.)

Humāyūn's reign is uneventful for our present purpose. Nobody can tell how much of Humāyūn's failure was due to the pecuniary resourcelessness in which Bābur's 'generosity' must have left him. Whatever money he possessed must have been exhausted in his military operations; for he was not in a position to carry with him in his flight to Persia anything more than the crown jewels, as we shall know later. [1]

This brings us to the reign of the great Akbar. Thanks to his minister, Abū'l-Fazl, we possess interesting details about the administration of the treasury. It is probable that the lines here laid down were followed in the succeeding reigns.

A general treasurer with a *dārogha* and a clerk constituted the central establishment.

When a provincial treasurer had collected the sum of two lacs of *dāms* he had to send it to the Treasurer General at the Court, together with a memorandum specifying the quality of the sum. A separate treasurer was appointed for the *peshkash* receipts, another for receiving heirless property, another for *nazr* receipts, and another for the moneys expended in weighing the royal person, [2] and for charitable donations. These treasurers were assisted by superintendents, *dāroghas* and clerks.

The amount of the revenues was so great and the business so multifarious that twelve treasurers [3] were appointed to guard the treasures, nine for different kinds of coined money, and three for gems, gold and jewelled things.

[1] Next Section.

[2] It should be explained that the valuables and food-stuffs against which the Emperor was weighed every solar and lunar year, were not given away at once but were stored in treasury and disbursed slowly for charitable purposes throughout the year. These included also works of public utility; for Jahāñgír tells us that he once ordered five thousand rupees to be spent out of the *wazn* money on construction of a bridge at Baba Hasan Abdal and another building there. (*Tūzuk*, 76; R. & B., I, 160.)

[3] Blochmann has 'treasuries' for 'treasurers', and this mistake has been copied by Sir J. N. Sarkar in *Mughal Administration*, Second Series, Chapter v.

A separate treasurer was also appointed for each of the Imperial Workshops, the number of which was nearly one hundred.

'Again, by the order of His Majesty', continues Abū'l-Fazl, 'a person of known integrity keeps in the public audience hall some gold and silver for the needy, who have their wants relieved without delay. Moreover, a crore of *dāms* is kept in readiness in the courtyard of *Daulat-khāna*, every thousand of which is kept in bags made of a coarse material. Such a bag is called *sahsa*, and many of them put up in a heap, *ganj*. Besides, His Majesty entrusts to some of the nobility a large sum of money, that it may be ready at all times; and a part is put in a *bahla*, *i.e.* a purse, for immediate use—hence commonly known as *kharj-i-bahla*'.[1]

Bābur is certainly the founder of the Mughal dynasty in India, but then Akbar is equally truly the founder of the Mughal empire in India; for the effects of Bābur's victories had worn off during the unsuccessful reign of Humāyūn, and Akbar had to rough-hew from the beginning.

Akbar inherited practically nothing, and during a strenuous but successful reign of half a century he built up a body of resource which would do credit to a monarch under any circumstances.

The following estimate of his treasure is taken from V. A. Smith's article, 'The Treasure of Akbar' in *J. R. A. S.*, 1915, p. 231-43, which is based in turn on the accounts in De Laët's *De Imperio Magni Mogolis*, and Manrique's *Itinerario*, Ch. LXXVI (that in Mandelslo's *Voyages and Travels* being discredited as spurious). De Laët obtained his information prior to 1631, and Manrique got his about 1640. We have thought it safer to rely on Smith's collated account than on the English Translation of De Laët by Mr. Hoyland, edited by Mr. Banerjee.

[1] These paragraphs are from *Aín* (Text, I 10-11; Blochmann, 14-15). Blochmann's translation has several serious errors, as a comparison will show. I have freely adopted it where it is correct, and have equally freely amended it where I found it was not.

Cash Treasure left by Akbar.

Coins	Value in Rupees.
Gold coins weighing 100 *tolas* (or 1150 *māshas*), 50 *tolas*, and 25 *tolas* each: Total weight, 6,970,000 *māshas*. Value calculated at Rs. 14 a *māsha*[1]:	97,580,000¾
Silver coins of *Akbarí* Rupees.	100,000,000
Bronze *Paisa* or Pice, numbering 230,000,000[2] (Rate, 30 *takas per* rupee).	766,666
Total	198,346,666¾ (or nearly 20 crores).

It must be added that the above is the total value of the cash hoard kept at Agra alone at the time of Akbar's decease. From statements by Hawkins (Purchas, III, 31 and 34) it appears that treasure was also kept (in Jahāñgír's time) in the six fortresses of Gwalior, Narwar, Ranthambhor, Asír (Asírgarh), Rohtas (Rohtasgarh), and, specially, Lahore. We may presume that in Akbar's time too it was so. At a rough calculation there may be at most

1 *Māsha* in the last two places is obviously a mistake for *tola*, since Rs. 14 a *tola* is an infinitely more likely quotation for gold than Rs. 168 a *tola*. It is strange that the error is common to all the three original authors (including "Mandelslo"), and more strange that neither V. A. Smith nor the editor of De Laët's *Empire of the Great Mogol* has noted the absurdity. We are glad to find that Mr. Hodivala has noted this point (among others) in his able and scholarly review of the *Empire of the Great Mogol* (trans. by Mr. Hoyland, edit. by Mr. Banerjee), which appeared in the *Journal of Indian History*, VII, ii, 236-46.

We may, however, pass over it, as it is no more than a careless clerical error.

2. V. A. Smith notes that this should be 23 millions.

Mr. Hodivala challenges the equation of a rupee = 30 *takas*, and holds that De Laët here by *taka* means only a *dām*, of which 40 went to a rupee. The high price of a *dām* given here is, he says, due to the fact, that copper had risen in price about 1630, *i.e.*, about the time *De Imperio Magni Mogolis* was compiled.

The exchange value of the *taka*, does not, however, affect the total of the treasure appreciably.

another ten crores of rupees in these provincial fortresses. V. A. Smith's estimated total of twenty crores for the *mofussil* treasure (*Akbar*, 347) seems to be excessive. In fact the ten crores we have conceded is an outside valuation. Thus we arrive at a total of nearly thirty crores.

De Laët's list calls for some criticism. But for the purpose of that criticism it will be convenient to take up first another list given by an earlier writer, which refers, however, to a lower date.

We give below the 'cash' part of the inventory of the Imperial Treasury, apparently obtained from some official source, by Captain Hawkins, who visited Agra in 1609-11, and who possesses the credentials—unique for a European—of having been appointed a *manṣabdār* in the Emperor's army. Although this document falls properly into Jahāñgír's reign, in time De Laët's and Hawkins' lists stand only a quinquennium apart.

'His Treasure is as followeth, The first, is his severall Coine of Gold.

Inprimis, of Seraffins Ecberi, which be ten Rupias a piece, there are sixtie Leckes. Of another sort of Coyne, of a thousand Rupias a piece, there are twentie thousand pieces. Of another sort of halfe the value, there are ten thousand pieces. Of another sort of Gold of twenty Toles a piece, there are thirtie thousand pieces. Of another sort of tenne Toles a piece, there bee five and twenty thousand pieces. Of another sort of five Toles, which is this Kings stampe, of these there be fiftie thousand pieces.'

A Tole is a Rupia Chalany of Silver, and ten of these Toles are the value of one of gold.

'Of Silver, as followeth.

Inprimis, of Rupias Ecbery, thirteene Crou (every Crou is an hundred Leckes, and every Leck an hundred thousand Rupias) or one thousand three hundred Leckes. Of another sort of Coine of Selim Sha this King, of an hundred Toles a piece, there are fiftie thousand pieces. Of fiftie Toles a piece, there is one Lecke. Of thirtie Toles a piece, there are fortie thousand pieces. Of twentie Toles a piece, there are thirtie thousand pieces. Of ten Toles a piece, there are twentie thousand pieces. Of five Toles a piece, there are five and twentie thousand pieces. Of a certaine Money that is called Savoy, which is a Tole ¼ of these there are two Leckes. Of Jagaries, whereof five make sixe Toles, there is one Lecke. More should have beene coyned of this stampe, but the contrary was commanded.'

(Purchas, III, 31—32.)

This matter can be put in figures thus:—

Jahangir's Cash Treasure in 1610-11.

Gold Coins.

No.	Name of Coin.	Weight in Tolas.	Value in Rs.	Number.	Total Value in lacs of Rs.
1	*Akbarí Ashrafí*		10	60,00,000	600
2		(100)	100	20,000	200
3		(50)	500	10,000	50
4		20	(200)	30,000	60
5		10	(100)	25,000	25
6	*Jahāñgírí*	5	(50)	50,000	25
	Total ...				960

NOTE.—We have calculated the value of coins No. 4, 5 and 6 on the basis of ten rupees to a *tola*, which seems justified not only by the quaintly worded marginal note by Hawkins quoted above, but generally by the values of gold coins of Akbar's time given in *Ā'ín* (Text, I, 25; Blochmann, 29-30). Calculated weights and values are given within brackets to distinguish from those given by Hawkins himself. They are approximate, not exact. All total values are calculated by us.

Silver Coins.

No	Name of Coin	Weight in Tolas.	Number.	Total Value in lacs of Rs.
1	*Akbarí* Rupee		13,00,00,000	1,300
2	*Salím Shāhí* Rupee	100	50,000	50
3		50	100,000	50
4		30	40,000	12
5		20	30,000	6
6		10	20,000	2
7		5	25,000	$1\frac{1}{4}$
8	'Savoy'[1],	$1\frac{1}{4}$	200,000	$2\frac{1}{2}$
9	*Jahāñgírí*	1-1/5	100,000	1-1/5
	Total ...	Say, 1425 lacs or 14-1/4 crores		1424 - 19/20

NOTE.—In all cases except No. 1 the total values have been calculated on the rough basis of a *tola* weight being equal to a rupee. This is only a working assumption, since we know that both the *Akbarí* rupees and the square *jalāla* weighed only $11\frac{1}{2}$ *māshas*.

[1] This is *sawā'í* (one and a quarter)

Gold Coins	9,60,00,000
Silver Coins	14,25,00,000
Total	Rs. 23,85,00,000

It will be noted that no copper coins are given in this list, being presumably considered unimportant. Even if they were added the total would still be under 24 crores.

This was probably the value of the Agra treasure. Comparing this with the Agra treasure in 1605, we find that the amount of cash had increased by 4 crores during these five or six years.

With these two inventories of the Imperial Treasury before the reader, we can profitably devote a little space to their analysis and comparison.

Let us begin with the Gold Coins: Our first impression on comparing the two lists is that Hawkins' inventory dwarfs De Laët's into insignificance in every respect; in fact the latter seems to be no more than a hasty, fugitive sort of summary of the former, carelessly worded, and not without slips, and errors of a more reprehensible kind. The most serious omission seems to be the total absence of *ashrafís*, which in the other list number 60 lacs, are valued at 6 crores, and constitute the major portion of the gold treasure. Apart from Hawkins' list, a treasury without *ashrafís* would be inconceivable.

Judging from the fact that De Laët's and Hawkins' totals of the gold treasure tally very nearly, we can charitably assume that De Laët's total (and he gives only the total) represents the value of gold coins of all weights from 100 to 1 *tola*, although he mentions by name only the heaviest three.

Descending to details: We find that De Laët equates 100 *tolas* with 1150 *māshas*. This is of course not exact, since a *tola* = 12 *māshas*; but we don't consider it a serious error, as Mr. Hodivala does (*J. of I. H.*, VII, ii, 240)

We know from *Ā'ín* (Text, I 23-24) that the big pieces weighed respectively 101 *tolas*, 9 *māshas*, 7 *surkhs* (value = 100 *la'l-i-jalālí*) and 91 *tolas*, 8 *māshas* (value = 100 round mohurs of 11 *māshas* each); and the smaller ones were halves of these two, and a quarter of the one first mentioned.

It appears that De Laët (or whoever copied out the list) struck a rough-and-ready sort of average between the true weights of the big pieces, and having stated the weight to be 100 *tolas*, tried to be more correct by stating it as the equivalent of 1150 *māshas;* the true weights of the two pieces being nearly 1222 and 1100 *māshas* respectively.

The next point is the rate quoted for gold, *viz.*, Rs. 14 a *tola*. We agree with Mr. Hodivala that this is excessive. Judging from most authorities available the price of gold seems to have been about Rs. 10 a *tola* in Akbar's time and the early part of Jahāñgír's reign. We know, however, that soon after Shāh Jahān's accession gold was selling at Rs. 14 a *tola*. (*B. N.*, I, ii, 79).

The explanation of De Laët's error lies in the fact that the compilers, instead of stating the rate which obtained in 1605 (to which date the document refers), probably quoted the rate current at the time of the compilation of the book, *viz.*, about 1630.

If we correct Rs. 14 to Rs. 10, the obvious result will be that either we assume the weight to be correct and make the necessary alteration in the total value, or we accept the total value and work out the total weight from it. Either the weight or the value is taken from the State document—we don't know which; and the other is reckoned from it by the compilers.

Seeing that the total gold treasure in De Laët's list nearly equals the total gold treasure in Hawkins' list—assuming that no serious change took place in the short interval of five years (which is unlikely)—one would be inclined to think that the *value* given is the correct figure, and that the weight should be increased.

Now we come to the Silver Coins: De Laët's item is so brief that no detailed criticism is possible. Hawkins' total, even after deducting the *Salím-shahí* rupees of 100 *tolas* each and the *Jahāñgíris* 1-1|5 *tolas* each (which were coined subsequent to Akbar's death), is still far in excess of De Laët's. In fact the *Akbarí* rupees alone exceed De Laët's total amount by a great deal. Possibly there was an actual increase in the store during the period 1605-1610.

Jahāñgír, in his Autobiography, speaks in some detail of gold and silver coins, the striking of which he ordered in the first year of his reign (*Tūzuk*, 5; R. and B., 10-12). But the Emperor does not mention the quantities minted, nor does Hawkins specify in his list all the coins which bore the stamp of Jahāñgír. We are, therefore, unable to make any use of the entry in, the Emperor's Diary; and a possible way of reconciling Hawkins' list with De Laët's is lost to us.

Speaking generally, one may say that Hawkins' list has all the appearance of being a careful copy of an authentic document. As regards De Laët, we agree with most of the strictures passed on him and on the editor of the English Translation of his work by Mr. Hodivala. Apart from the points noticed above, a great fault of De Laët's seems to be a lack of co-ordination in his work. De Laët's list is immediately followed by a reproduction of Haw-

kins' list (which, by the way, is not free from errors); and the least that we should have expected from De Laët is a comparison and discussion, with consequent correction and explanation. And it is still more unfortunate that even the editor has not cared to collate the results or suggest corrections.

Our final opinion is that De Laët's list is a badly copied and ill-digested memorandum of what appears to be an authentic record, the exact copy of which perhaps never actually reached De Laët. But, ill supplied with reliable information as we are, we cannot afford to ignore completely even such a defective document. Even a bad record is better than no record, for it always has a corroborative value.

Further, we have also the details of the treasure left by Akbar in two Persian histories.

Both the *Tārík̲h-i-Firis̲hta* and *M. U.* give what purports to be details of Akbar's treasure.

I confess I can make no sense of the figures and values given by Muḥammed Qāsim in *Tārík̲h-i-Firis̲hta* (Bombay Edition, I, 517; Brigg's Translation, 1829, II, 281-2); and unless one can offer at least a working explanation, there is no point in quoting the passage.

Next comes Kh̲āfí Kh̲ān, the author of *Muntak̲hab-ul-Lubāb*. We have no admiration for him as a historian, nor any respect for his sense of accuracy or responsibility. Still we give below his account of Akbar's treasure for what it is worth. His wording is so obscure that we prefer to give his text in Persian, permitting the reader freedom of opinion in the matter of its interpretation :

بعد وفات او که عرض خزانه گرفتند ده کرور روپیه را اشرفی یازده ماشه وسیزده ماشه وچهارده ماشه سوائے اشرفیهائے کلان که از صد تولہ تا پانصد تولہ هزار اشرفی در خزانه موجود بود ودو صد وهفتاد و دو من طلاے غیر مسکوک وسه صد و هفتاد من نقره ویک من جواهر خاصه که قیمت آن از سه کرور روپیه تجاوز نموده بود برآمد۔

(*M. L.* I, 243).

Literal translation :

'After his [Akbar's] death when stock of the treasury was taken, ten crores of rupees' worth of *ash̲rafís* of 11, 13 and 14 *māsh̲as* besides the large *ash̲rafís* weighing 100 to 500 *tolas*, 1000 of which were present in the treasurey, and 272 *man* uncoined gold and 370 *man* silver, and one *man kh̲aṣṣa* jewels, valued at over 3 crores of rupees, were found.'

It is not clear whether 10 crores is the value of all *ashrafís* or only of those weighing 11, 13 and 14 *māshas* respectively. Assuming that it applies to all (which is by no means clear), we get the total value roughly equivalent to the total value in the tables previously discussed.

By the *ashrafís* of 11, 13, and 14 *māshas* Khāfí Khān means probably the following in the same order :

(1) The *'Adl-gutka,* the *Muhr-i-gird* (round mohur), and the *Miḥrabí.* Weight, 11 *māshas;* value, nine rupees.

(2) The *Ilāhí* and the square *La'l-i-jalālí.* Weight, 12 *māshas,* 1¾ *surkhs;* value, ten rupees.

(3) The *Aftābí* and the *Chahārgosha.* Weight of both, 1 *tola,* 2 *māshas,* 4¾ *surkhs.* Value of the former, twelve rupees; of the latter, not given.

(*Ā'ín,* Text, I, 25)

The weight of No. 2 can hardly be described as 13 *māshas,* as *Khāfí Khān* does.

Next there is the difficulty of 1000 *ashrafís* weighing from 100 to 500 *tolas.*

In the first place we know of no coins heavier than 100 *tolas.* Thus the 500 is either a myth or a misprint. Secondly, supposing it is a mistake for 5, and that the author means *ashrafís* weighing from 100 to 5 *tolas* each (which fits in with the weights given in Hawkins' list, if we except the 5-*tola* ones, which are *Jahāñgírí* coins), we have the further difficulty of their number being 1000; whereas in Hawkins the total number of these coins comes to 135,000, out of which 50,000 (the number of *Jahāñgírí* coins) being deducted, we have still 85,000 left.

Again, silver and copper coins given in the other lists are not given by Khāfí Khān, while gold and silver bullion in Khāfí Khān is not found in those.

In any case, the combined value of gold and silver bullion could not have exceeded 65 lacs.

Although Hawkins' list refers to a time when Jahāñgír's reign was well under way, we may look upon all the three documents so far discussed as practically a record of what Akbar bequeathed to Jahāñgír.

The increase that we find in Hawkins may or may not signify a real increase in resources. Even if it does, the rate of progress seems not to have been kept up. For, according to Mullā

'Abdu'l-Ḥamíd Lāhorí, Jahāñgír spent in his reign of 22 years the greater part of what Akbar had saved up during a reign of 51. (*B. N.*, II, 713).

Akbar's legacy ought to have been Jahāñgír's opportunity; but it does not seem to have been utilized as such. Else the enormous resources inherited by the latter, if properly husbanded and developed in a fairly peaceful reign of a quarter century, would have placed the key to unimaginable power and possibilities in the hands of the Mughal emperor, already the richest monarch in the world. Our information about Jahāñgír's reign in this respect is, it must be admitted, meagre. But all the signs point to a gradual dissipation of Akbar's hard-earned wealth.

V. A. Smith states that the treasure accumulated by Akbar was much increased during the comparatively peaceful reigns of Jahāñgír and Shāh Jahān (J. R. A. S., 1915, p. 240); and this seems to be the general belief to this day. Well, as regards Jahāñgír, we have reason to doubt the validity of such a proposition.

It will add a touch of reality to our picture if we may, before taking leave of Akbar's cash treasury, watch that emperor, for once, inspecting his coins. The following quotations from the Jesuit fathers are interesting: 'Zelaldinus [Jalāl' ud-Din, *i.e.*, Akbar] is sparing and tenacious of his wealth, and thus has become the richest Oriental king for at least 200 years. .. .. .. With the object of exhibiting his wealth four times every year he has sacks of minted copper money publicly piled up (I think in the palace courtyard) into a heap ten feet wide and thirty feet high. By the side of this pile sit the superintendents and tellers of the treasury. They supervise the counting of the money, which is paid out to those who are entitled to receive it, after deduction of the profit which an ordinary banker would have made if it had been deposited with him. Each sack holds about four thousand copper coins.'—(Monserrate, *Commentary*, 208). We must remark that from all that we know about the greater Mughal monarchs we cannot associate such vulgar ostentation with any of them. Monserrate seems to have witnessed a periodical disbursement of cash to officers. That Akbar always or sometimes personally supervised the payments is only another proof of his frugal and careful habits with which all historians credit him.

The members of the Third Jesuit Mission, which came in 1595, relate thus the Emperor's examination of newly coined money: They saw him once 'counting a large sum of gold coins of many different values which he had ordered to mint. Behind him were some hundred and fifty plates full of them, and a good

number of bags, with others that had already been examined or were still to be seen. He examines them by himself or by others and it is his chief distraction every day, when he has retired, that is during the leisure left him after he has shown himself three times to the people; and when the money has been counted and put in bags, he has it placed among his treasures, which are very great.' (Quoted by the editor of Monserrate's *Commentary*, p. 208, f. n., from the *Examiner*, Nov. 22, 1919, pp. 469—70).

We can now proceed to deal with the reign of Shāh Jahān. It is much to be regretted that here too the material is inadequate. The official histories are generally silent or evasive. 'Abdu'l Ḥamíd who winds up at the end of the twentieth regnal year, instead of giving us some useful totals of the contents of the treasury, stops short with facile but useless generalizations; and Muḥammad Wāriṣ, who closes on the thirtieth year, has nothing to say.

Shāh Jahān was, according to Bernier, 'a great economist'. But we must remember that the expenditure had increased considerably in his reign (witness the heavy *manṣabdārí* list besides other evidence), and he had always been lavish with his gifts. Further, that emperor has left more abiding monuments of architecture than any other king in ancient or modern times, in or outside India. According to the lists in *B. N.* (II, 714; III, f. 17*b*) Shāh Jahān must have spent something like 3 crores on palaces and gardens, mosques and mausoleums, castles and fortifications.

As for the treasure, where the authors of B. N. and Muḥammad Ṣāliḥ all fail us, we can only fall back upon less well-informed writers, even if they lead us nowhere.

Khāfí Khān has the following statement about the treasure left by Shāh Jahān. His ambiguous language is placed before the reader as it is :

بیست و چهار کرور روپیه و از جنس اشرفی سوائے طلا و نقرهٔ غیر مسکوک و ظروف طلائی و نقرئی و جواهر که تخمیناً تا پانزده شانزده کرور ان نیز می شد مانده بود۔

(*M. L.* I, 758).

24 crores.

Rupees

Ashrafís (except gold and silver bullion) and gold and silver vessels and jewels. 15 to 16 crores.

The above is our interpretation of the text. The benefit of doubt is given to the author.

As we shall see in the next section, the total value of jewels and jewelled articles at the end of the second decade was 5 crores. The last decade couldn't have added appreciably to it.

The gold and silver vessels are an incalculable quantity, since we don't know what they include. Judging by the De Laët-Manrique list of gold and silver articles, which will be placed before the reader in the next section, and assuming that Khāfí Khān means all articles made of precious metals, the total value of these should be placed at about 3 crores—which is the total for Akbar's reign in the De Laët-Manrique list.

Eight crores being thus deducted, we have only 7 to 8 crores left for the *ashrafís*. If these figures are worth anything, the *ashrafí* store has ebbed since Akbar's time, while the rupee treasure has swung forward.

Bernier, however, has quite a different story to tell. '*Chah-Jehan*', he says, 'who was a great economist, and reigned more than forty years without being involved in any great wars, never amassed six *kourours* of *roupies*.' (p. 223).—If the amount is as correct as the duration of Shāh Jahān's reign given here, this quotation is worse than useless. Besides, Bernier, we know, had no access to the official registers.

Where unreliable authors succeed only in contradicting each other, we can arrive at no really stable conclusions.

SOURCES OF REVENUE

When the contents of the Cash treasury have been surveyed one feels a natural curiosity about the sources from which all these accumulations were derived.

There is no doubt that in a country like India land revenue was by far the most important item in finance; but it was not by any means the only one.

Father Monserrate has the following interesting discourse on the subject:

'The King', he says, 'exacts enormous sums in tribute from the provinces of his empire, which is wonderfully rich and fertile both for cultivation and pasture, and has a great trade both in exports and imports. He also derives much revenue from the hoarded fortunes of the great nobles, which by law and custom all come to the King on their owners' death. In addition, there are the spoils of conquered kings and chieftains, whose treasure is seized, and the great levies exacted, and gifts received, from the inhabitants of newly subdued districts in every part of his dominions. These gifts and levies are apt to be so large as to ruin outright many of

his new subjects. He also engages in trading on his own account, and thus increases his wealth to no small degree; for he eagerly exploits every possible source of profit.

Moreover, he allows no bankers or money-changers in his empire except the superintendents and tellers of the royal treasuries. This enormous banking-business brings the King great profit; for at these royal treasuries alone may gold coin be changed for silver or copper, and vice versa. The government officers are paid in gold, silver or copper according to their rank. Thus it comes about that those who are paid in one type of coin need to change some of it into another type.

Such means of increasing the revenue may be thought base, but they have two distinct advantages; for the coinage cannot possibly be debased or adulterated; and the rate of internal exchange is kept constant, since it cannot be manipulated by fraudulent money-changers. Moreover, as all the money in circulation comes eventually to the royal treasuries, there can be no scarcity of money with consequent high prices'. (*The Commentary of Father Monserrate,* 207).

But the Father's list is not exhaustive; for presents received as a matter of custom from nobles and officers came to a considerable sum in the course of the year. And there must have been many miscellaneous heads of revenue.

Manucci, who has experience only of Aurangzeb's reign enumerates the sources of revenue other than land as follows. The reader should not expect precision or strict accuracy from him.

'In addition to this revenue obtained from grain, *et cetera* [he means land revenue], there are other considerable receipts. One is the tribute paid by the Hindūs, as I have stated in my Second Part (II. 182). This has no fixed total, being sometimes more and sometimes less. This variation is caused by deaths, and by travellers moving from one place to another. If carrying with them a receipt for what they have paid, the latter are allowed to pass free. But if they chance to lose this paper, or it be stolen, they are made to pay again either in the same or in another province. The officials embezzle their collections most terribly, to such an extent that the king gets more often than not less than half.

There is a second customs duty upon goods brought by Hindū merchants; it is five per cent; and though Aurangzeb had remitted it for Mahomedans, he has not failed all the same to take two and a half per cent. [from them]. He makes those whom he had exempted pay the rents and customs duty. He also draws large sums from the bathings which the Hindūs perform at various points in the empire. There is also another source of revenue, the diamond

mines in the kingdom of Gulkandah, over and above the largest and the best of the stones. Any which weigh above three-eighths of an ounce belong to the Crown. The seaports also yield him a large revenue; among them are those of Sindí, Bharoch, Sūrat, and Kambāya. Sūrat alone brings him in usually thirty *lakhs*, besides the eleven lakhs derived from the profit on new coin struck there.

In addition to all these items, he has the revenue from the whole coast of Choromandal, from Masulipatam (Machhlipatanam), from Narsāpur, and of the whole coast from Pundy (Pūndí), or from Ginzerly (Gingerli), as far as Ballasor (Bāleshwar); also from all the ports on the river Ganges. Over and above all these items, he seizes everything left by his generals, officers, and other officials at their death, in spite of having declared that he makes no claim on the goods of defunct persons. Nevertheless, under the pretext that they are his officers and are in debt to the Crown, he lays hold of everything. If they leave widows, he gives them a trifle every year and some land to furnish a subsistence. He also causes the goods of merchants to be seized if they die without heirs. Again, added to all that, he receives very considerable presents from the Hindū princes, *zamíndārs*, and their servants.

The rajahs, the generals of the army, and the commanders are made to contribute a certain sum, according to the number of Hindūs in their service. Usually this is taken as a deduction from the pay disbursed to them. The king's sons even are not exempted, and Shāh 'Ālam, my prince, paid in my day eighty thousand rupees a year. These revenues amount to something near the same total as the revenue from grain, of which I gave the figures above'.[1] (*Storia*, II, 415, 417-18).

I fully agree with the editor's remarks in the footnote. The land revenue was the chief revenue of the empire; so much so that the *Ā'in* has no space for the miscellaneous heads of revenue. As we shall see later, sea customs were included in the official land revenue returns.

1. 'The statement that the miscellaneous revenue equalled the land revenue can hardly be accepted; it must be a great exaggeration. In fact, many of the miscellaneous items, such as sea customs, collected by the *díwāns* were entered as *mahāls* (heads of receipt) in the *māl* (land revenue), and not in the *sā'ir* (miscellaneous) accounts, and thus are already included in Manucci's total of £ 38,725,900. Most of the *sā'ir* items (fines, market dues, ferry tolls) were collected by the police—that is, by the *kotwāls* and *faujdārs*.' (*Ibid.*, P. 418, f.n.1).

Substitute here the Correction-slip

LAND REVENUE

We now proceed to appraise the land revenue of the Mughal empire, taking each successive reign separtely.

Akbar.

One may begin with Abū'l-Fazl's figures. In the 'Account of the Twelve Provinces' in *Ā'ín,* he begins by telling us that in the 40th. regnal year (March, 1595—March, 1596) the *Jam'-i-dahsāla* (*i.e.*, the annual revenue calculated on ten years' average) for the empire, which consisted at this date of 105 *sarkārs* and 2737 *qaṣbas,*[2] was 3,62,97,55,246 *dāms* (or over 9 crores of rupees) and 12 lacs of betel leaves.

The historian-minister further informs us that the empire was at this time divided into twelve provinces; and that when Berar, Khandesh, and Ahmadnagar were conquered, the addition of these three provinces brought the total to fifteen (A'ĭn. I, 386).

On closer examination of the gazetteer and the statistics that follow (I, 387-596) we find that we have in fact an account not of twelve but of fourteen provinces. Khandesh and Berar are included, but not Ahmadnagar.

The *Ā'ín* was completed in the first quarter of 1598; and the three provinces of Khandesh, Berar, and Ahmadnagar were organized and incorporated into the empire early in 1601, *i.e.*, three years later. The statement about these provinces in the *Ā'ín* (quoted above) is, therefore, clearly an anachronism. We can only assume that this reference to later annexations and the details about Khandesh and Berar were incorporated after the *Ā'ín* had been completed; the title 'Account of Twelve *Ṣūbas*' being allowed to stand, as if by an oversight. Omission of Ahmadnagar from the gazetteer, however, remains unexplained.

The total revenue given by Abū'l-Fazl, we regret to say, does not tally with the aggregate of the totals given for the different provinces, even after eliminating those for Berar and Khandesh. Casting up the totals I arrive at 5,29,79,31,833½ *dāms* and 12 lacs of betel leaves for the fourteen provinces. This yields just under 13¼ crores of rupees. To this probably is yet to be added the revenue of the Ahmadnagar province.

2. This word seems to mean here a *mahal* or *pargana.*

23

Reprinted from "the Journal of Indian History", Vol. XI. Part II.

CORRECTION-SLIP.

Owing to certain difficulties and disabilities, Mr. Abdul Aziz's article on 'History of the Reign of Shāh Jahān' in the last issue (*Journal of Indian History*, XI, i, 86-113) could not be printed with the author's final corrections. As a result, the following correction-slip is issued. The reader is requested to make the necessary alterations in his copy.

23

1. Page ~~108 of J. of I. H., XI, i,~~ should be considered cancelled entire; and for it should be bodily substituted the following passage:

LAND REVENUE.

We now proceed to appraise the land revenue of the Mughal empire, taking each successive reign separately.

AKBAR.

One may begin with Abū'l-Faẓl. In the opening passage of the 'Account of the Twelve Provinces' in *Ā'ín*, we are told that when the *Jam'-i-dahsāla* (annual revenue calculated on ten years' average) was assessed, *viz.*, in the 25th. regnal year (1580-81 A.C.), the empire was divided into twelve provinces (which are named), the total revenue of which amounted to 3,62,97,55,246 *dāms* (or over 9 crores of rupees) and 12 lacs of betel leaves. (*Ā'ín, I*, 386).

Now we know that the so-called Kabul province (one of the twelve provinces) was only nominally under the emperor at that time, and did not fall in until the death of Mírzā Muḥammad Hakím in 1585. Kashmir was annexed in the following year, while Kandahar came under Mughal sway in 1595. All these territories were included in what afterwards became the Kabul province.—Again, Sind was conquered in 1590-91, and Baluchistan followed suit five years later—both territories being placed together under Multan as 'Tatta'.

So even in 1595, while the number of provinces remained the same, *viz.*, twelve, the revenue of the empire must have increased considerably. Abū'l-Faẓl tells us in the passage already referred

to that the empire in the 40th. regnal year (1595-96 A.C.) comprised 105 *sarkārs* and 2,737 *qaṣbas*,[1] though he gives no revenue total for that year.

Accretion to the empire, however, continued. Berar, Khandesh, and Ahmadnagar were conquered and organized into three additional provinces early in 1601, bringing the total number of provinces to fifteen.

Now *Ā'ín* was finished in the first quarter of 1598. If nothing was added to the *Ā'ín* gazetteer after that date it is obvious that there could be no mention of these three provinces in that work. But Abū'l-Faẓl not only mentions them in the passage already quoted from, but the statistics relating to the two provinces of Berar and Khandesh (called here Dāndes) are actually included in the gazetteer that follows (I, 387-596). The only possible explanation is that these details were entered and some necessary alterations made here and there some years after the *Ā'ín* was completed, the heading 'Account of the Twelve Provinces' being allowed to stand as if by an oversight. The figures for the Ahmadnagar province are not, however, included—which is inexplicable.

The total given by Abū'l-Faẓl refers, as we have said, to 1580-81. But his Gazetteer is brought down to 1601. Casting up the sums separately given for the various provinces in the body of the Gazetteer, I arrive at a figure close upon 13¼ crores of rupees,[2] to which is probably yet to be added the revenue of the Ahmadnagar province, which is unknown. It is to be assumed that the difference is accounted for by the addition of territory already noted.

1. This word seems to mean here a *maḥal* or *pargana*.

2. I confess the exact revenue of the Kabul province is not easy to ascertain from Abū'l-Faẓl's statistics.

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2. In Table on page ~~113~~ (end of the article) the second item in the list should have in the 'Date' column '1580-81' instead of '1595-96'; and this second entry should be placed at the top.

The reader will remember that this is all land revenue. But there is one exception. The figure for the Gujarat province (included in this total) comprises also the income from thirteen ports, which amounted to 1,62,028¾ *maḥmūdís*, say, Rs. 67,500.[3] This, however, is an insignificant amount.

Next comes an authority which is second in importance, though, chronologically, it ought to have preceded the *Ā'in*. Nizām'ud-Dín Aḥmad closes his *Ṭabaqāt-i-Akbarí* (finished presumably in the 38th regnal year (11 March, 1593—10 March, 1594) with the following remarks. After giving the length and breadth of the empire in *karohs*, he says: 'and all this land is good and cultivable. In each *karoh* several villages flourish. At present there are 3,200 towns (*qaṣbas*), each *qaṣba* having attached to it 100, 200, 500 or 1000 villages. The revenue of this country is to-day 640 crore *tanka-i-murādí*. Out of these towns 120 are large ones, which are to-day populous and prosperous'. (P.U.L. MS., f. 502 *b*.).[4]

The *tanka-i-murādí* means a copper coin of Sikandar Lodí's time, twenty of which went to an Akbarí rupee.[5] 640 crores of these *tankas* are, therefore, equal to 32 crores of rupees.

There is nothing in the context or the wording of this passage to show that this is the revenue *from all sources*, as Mr. Thomas assumes. On the contrary it seems obvious that the author is talking of nothing but land revenue. Mr. Thomas is apparently trying to reconcile Nizām'ud-Dín with other authors. Even making this unwarranted assumption, Nizām'ud-Dín Aḥmad's figure is considerably more than double the revenue total in *Ā'ín*. But this is not all. *Ā'ín* was finished in 1598, and includes, as we have seen, revenues of provinces annexed subsequently; so that Abū'l-Fazl's total practically represents the land revenue for the year 1601. If the total income of the Mughal empire was 32 crores in 1593, it would be approaching 40 crores in 1601. We know that the land revenue was 13¼ crores in that year. It is incredible

3. Twelve *mahmūdís* went to five *Akbarí* rupees. The results of Mr. Hodivala's inquiries (*Historical Studies in Mughal Numismatics* 115—30) are confirmed by a statement in Pelsaert (p. 42).

4. The printed edition (Nawalkishor, Lucknow) is defective.

5. On this point Mr. Thomas and Prof. Hodivala (*Historical Studies in Mughal Numismatics*, 51) agree.

that income from other sources amounted to double the land revenue. Edward Thomas's plea for *Ṭabaqāt-i-Akbarí* being an authoritative work fails rather badly in this particular. And of course Nizām'ud-Dín means land revenue only. In either case his statement is wild and irresponsible.

Our old friend, De Laët, tells us that the annual revenue of the fifteen provinces (which he names) was, 'according to the roll of king Achabar', 17,45,00,000 rupees (*Empire of the Great Mogol*, 172). The date to which this statement refers is the death of Akbār. De Laët's statistics, as we have said before, cannot stand the search-light of modern criticism, V. A. Smith's undeserved panegyrics on *De Imperio Magni Mogolis* notwithstanding. His list of provinces is badly bungled; and, as usual with him, he gives only the grand total, refraining scrupulously from giving the details that go to make it up, as if on purpose to foil our efforts to check the accuracy of his results by reference to other authorities. V. A. Smith found it easier to quote his total than to do the sums in the *Ā'ín* (*Akbar*, 379).

In comparison with Abū'l-Fazl's statements De Laët's have no value. We give the latter, however, for what they are worth.

We are not told by any authority for Akbar's reign how much of the total land revenue came from crown-lands (*Khāliṣa-i-sharífa*), which went to the emperor's privy purse.

Jahāñgír.

Hawkins' statement that the yearly income of the *Khāliṣa* lands in this reign was 50 crores of rupees (Purchas, III, 30) is wild and unworthy of an author who is generally well informed.

In Thomas Coryat's Letters we are told that the Emperor's revenues are 40 million crowns of six shillings' value, by the year (Purchas, IV, 474). At ten rupees to the pound this yields 12 crores of rupees.

But all such statements are nebulous and elusive. We are on solid ground when we come to *Bādshāhnāma*. According to that work the total land revenue of the Mughal empire at the time of Shāh Jahān's accession was 700 crore *dāms*, which comes to 17½ crores of rupees (II, 711).

If De Laët's figure, given above, be assumed to be correct, the annual revenue of the empire seems to have remained stationary

throughout Jahāñgír's reign. Or, is it that De Laët took the figures pertaining to the end of Jahāñgír's reign, and applied them wrongly to the beginning of it? We must not forget that *De Imperio Magni Mogolis* was compiled in 1631. This hypothesis is supported by a statement in Mandelslo given below.

Shāh Jahān.

Now we come to Shāh Jahān's reign. Mullā 'Abdu'l-Ḥamíd Lāhorí, in the passage cited above, where he is summing up at the end of the twentieth regnal year, goes on to tell us that the total revenue of the older province had gone up by one crore *dāms*, amounting to 800 crores; and that the revenue of the territory conquered since Shāh Jahān's accession totalled 80 crore *dāms*, bringing the aggregate to 880 crores or 22 crores of rupees. Out of this 120 crore *dāms* or 3 crores of rupees was the income from the crown lands or *Khāliṣa*.[6] We are further told that the *Khāliṣa* income had never reached this figure before. (*B.N.*, II, 711-13).

This is the revenue of 23 provinces.

Mandelslo, in a carelessly worded statement, gives 17,45,00,000 rupees as the annual revenue for this reign (*Voyages and Travels*, p. 38). It is probable that this figure and De Laët's estimate are derived from the same source; and possible that they both refer to the end of Jahāñgír's reign, as we have already hinted.

We notice that the land revenue of the Mughal empire rose steadily from the 40th year of Akbar's reign (1595-96) to the 20th year of Shāh Jahān's (1647), due partly of course to conquests, but also, presumably, to stabler conditions and settled administration.

In the last decade of Shāh Jahān's reign Balkh, Badakhshān and Kandahar, which here account for a revenue of 19 crore *dāms* (or nearly half a crore of rupees), were lost to the Mughals. The total for the end of the reign must abate to that extent, to take no notice of other (internal) changes of which there remains no record.

Aurangzeb.

Bernier (1660—65) has a list of 20 provinces, the revenue of which totals Rs. 22,59,35,500. The editor and Mr. Thomas rightly point out that a zero has been omitted by a clerical error in the revenue for Kashmir. So counting 35,00,000 in place of 3,50,000,

6. This has been misunderstood by Mr. Thomas, (Edward Thomas, *Revenue Resources of the Mughal Empire in India, from A.D. 1593 to A.D. 1707*, p. 29-30).

we have to add 31,50,000 to the grand total, which will then become 22,90,85,500 rupees—roughly nearly 23 crores.

Manucci gives Rs. 38,71,94,000 (which his editor corrects to Rs. 38, 72, 59, 000) as the land revenue for 24 provinces (*Storia*, II, 413-15).

Ma'lūmāt'ul-Āfāq (a sober and well-informed work, written some time between the death of Aurangzeb and 1127 *A.H.*) gives the land revenue of 19 provinces (comprising 4440 *parganas*) as 9,24,17,16,082 *dāms* (=23,10,42,902 rupees and 2 *dāms*). Of this 1,72,79,81,251 *dāms* (or about 4 1|3 crores) is stated to be the income of the *Khāliṣa-i-sharífa*, the rest going to the *Jāgírdārs* as salary.[7]

Only about ten or fifteen years separate *Storia* and *Mā'lūmāt'ul-Afāq*, and the discrepancy between their returns is monstrous.

When we see how the revenue total gradually mounted from 17½ crores (in 1627), through a period of prosperity and annexation, to 22 crores (in 1647), and stood at 23 (in 1660), and note further that as late as 1712 this last figure was only barely exceeded, the wild exaggeration of Manucci's estimate becomes apparent. It is true that Bijapur surrendered in 1686, and Golconda fell in 1687, and that the rear 1691, may be taken as marking the most distant advance of the Mogul power.'[8] Allowing for the consequent addition to the imperial revenue Manucci's return still remains fantastic.

Some of the discrepancies in the various writers are no doubt attributable to redistribution of territory.

The returns in Bernier and in *Ma'lūmāt'ul-Āfaq* have every appearance of being substantially correct for the respective periods to which they refer.

We fully endorse Mr. Irvine's remarks on all these revenue statistics. 'There remains the objection', he says, 'that applies to all similar tables—those of the "Ā'ín-i-Akbarí" included—that we do not know what the figures represent: whether (1) a standard assessment (*jam'a-i-kāmil*), (2) the demand of some particular year (*jam'a-i-wājib*), or (3) the actual collection (*jam'a-i-wasūlí*).' (*Storia* II, 413, fn.1.)

A single-glance summary of the results reached may be attempted in a table.

7. *Ma'lūmāt'ul-Āfāq* (P.U.L. MS.), f. 227 b—229 *a*. The two items are given, but the total does not tally. There seems to be a slight mistake in the P.U.L. MS. available to me.

8. V. A. Smith, *Oxford History of India*, 443.

Statement of Land Revenue of the Mughal Empire.

Reign	Date	Number of *ṣūbas, sarkārs, maḥals,* etc., in the Empire.	Approximate amount in rupees.	Authorities
Akbar	1593-94	3200 *qaṣbas* (120 large ones)	32 crores	*Ṭabaqāt-i-Akbarí* (P.U.L. MS.), f. 502 *b.*
Do.	1595-96	12 *ṣūbas*=105 *sarkārs*=2737 *qaṣbas*	9¼ crores (and 12 lacs of betel-leaves).	*Ā'ín*, I, 386
Do.	1601	14 *ṣūbas.*	13¼ crores (and 12 lacs of betel leaves)	*Ā'ín*, I, 387-596 (Calculated)
Akbar-Jahāñgír	1605		17,45,00,000	De Laët, 172.
Jahāñgír			12 crores	Thomas Coryat (Purchas, IV, 474).
Jahāñgír-Shāh Jahān	1627		17½ crores	*B.N.* II, 711.
Shāh Jahān			17,45,00,000	Mandelslo, 38
Do.	1647	23 provinces	22 crores (3 crores, crown lands)	*B.N.*, II, 711-13.
Shāh Jahān-Aurangzeb	1658	20 provinces	21½ crores	Calculated
Aurangzeb	1660-65	20 provinces	23 crores	Bernier
Do.	end of 17th century	24 provinces	38¾ crores	*Storia*, II, 413-15
After Aurangzeb's death		19 provinces= 4440 *maḥals*	23 crores (4 1|3 crores, crown lands)	*Ma'lūmāt'-ul-Āfāq* (P.U.L. MS.), f. 227 *b*—229 *a*

History of the Reign of Shāh Jahān

By

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PART II

INTRODUCTION: PRECIOUS STONES IN GENERAL

Wealth may have power and money may be wealth, but there is nothing essentially interesting or inspiring about a heap of gold and silver as such. A pearl or precious stone, however, is a different matter. Just as a beautiful manuscript is art wedded to knowledge, so a jewel is art wedded to wealth.

We have no respect for a man who loves gold or silver, except when it is used as a means to a moral or artistic end: we have nothing but admiration for a man who loves gems and jewels for their own sake; for love of beauty is itself beautiful.

The Jewel Treasury of the Mughals represents a very special institution which reflects their temperament and their tastes, their wealth and their power—the spirit of the age, in fact, as interpreted by them.

The subject-matter of this Part, therefore, is fascinating beyond words.

One's interest in life must precede one's interest in history; and things must make a real impression on our minds before stories about them can signify anything. We propose, therefore, to devote this Introduction to the general nature of precious stones, the qualities which they have been believed to possess, the uses to which they have been put, and the like.

SECTION I: FANCY

Weight for weight, precious stones have always been among the most valuable things of the world. Their use is mainly ornamental or artistic. It constitutes one of the facile paradoxes of

economists that while the most essentially useful things like air and water seldom have a price in the market, the utterly useless things like rubies or diamonds command incredibly high prices. But we are not all economists or dealers in paradox.

From a wider point of view a deep and subtle interest attaches to the appearance of gem-stones from the bowels of the earth. Whatever the mineralogists may have to say, the mysterious forces of nature, in producing a diamond or an emerald, seem to strike together by rare chance into a delicate balance. No one can deny that among the products of nature there is something noble and select and classic about precious stones. The Germans certainly need not apologize for calling a precious stone an *edel*-stein—a 'noble stone'.

The colouration of gem-stones has always made a powerful appeal to the poet. Metaphors from precious stones have constituted an ornament in the poetry of all countries since early times. Who has not heard of the 'Emerald Isle', 'sapphire seas', 'ruby lips', 'pearly teeth', 'amber hair', 'coral lips', and 'turquoise skies'; or read in Shelley of 'the emerald heaven of trees', 'the sapphire floods of interstellar air', and 'the chrysolite of sunrise'?

'The love of precious stones', says Dr. Kunz, 'is deeply implanted in the human heart, and the cause of this must be sought not only in their coloring and brilliancy but also in their durability. All the fair colors of flowers and foliage, and even the blue of the sky and the glory of the sunset clouds, only last for a short time, and are subject to continual change, but the sheen and coloration of precious stones are the same to-day as they were thousands of years ago and will be for thousands of years to come. In a world of change, this permanence has a charm of its own that was early appreciated!' (G. F. Kunz, *Curious Lore of Precious stones*, Preface, p. v.).

But this is not all. Fable and popular superstition have, from shadowy antiquity, invested these products of nature's mute alchemy with weird powers over man's destiny and his temperament. Who knows, some of the earliest intuitions of humanity may be a nearer approach to truth than a closely reasoned system of thought, which has its day and ceases to be? For, still there are more things in heaven and earth than are dreamt of in Horatio's philosophy. All we are concerned with is the fact that

from the earliest times the precious stones have filled the human observer with wonder, and sent his fancy travelling through a strange system of affinities and symbolism.

'The magi, the wise men, the seers, the astrologers of the ages gone by', continues the same writer, 'found much in the matter of gems that we have nearly come to forgetting. With them each gem possessed certain planetary attractions peculiar to itself, certain affinities with the various virtues, and a zodiacal concordance with the seasons of the year. Moreover, these early sages were firm believers in the influence of gems in one's nativity—that the evil in the world could be kept from contaminating a child properly protected by wearing the appropriate talismanic, natal, and zodiacal gems. Indeed, folklorists are wont to wonder whether the custom of wearing gems in jewelry did not originate in the talismanic idea instead of in the idea of mere additional adornment.' (Kunz, 1)

Colour went a long way to determine the influence of gemstones on the fortunes or health of the person who wore them; and affinities between temperaments and precious stones could possibly be traced through the colours with which the latter were associated.[1]

Primitive imagination has always revelled in a gorgeous display of gems. The Babylonian legends tell of trees on which grow precious stones (232).[2]

The reader is no doubt familiar with the description of the New Jerusalem in the vision of John (*Revelation* xxi, 18-21).[3] Nor is that the only example of the kind, for the idea of a gem-city has always fascinated the nations of antiquity. Lucian, in his *Vera Historia,* describes one under the name of the city of the Islands of the Blessed (237). Again, the *Puranas* contain a description of the wonderful city of Dwāraka which is 'a gorgeous mass of the most brilliant gems known in India' (236). 'Hindu mythology tells of a wonderful tank formed of crystal, the

1. On this subject see Kunz, 29-34.

2. This and all the figures within brackets that follow are references to the pages of Kunz.

3. See also *Isaiah,* liv, 11-12.

work of the god Maya' (237). A wonderful 'Diamond Throne' stood near the Tree of Knowledge beneath which Gautama Buddha received his supreme revelation of truth (238).

A few virtues of precious stones may be noticed here by way of curiosity (It is only a selection from a very large and miscellaneous catalogue):

Spirits lived in precious stones (27). Amulets were considered indispensable, by way of protection, for those who evoked dark spirits (39). The magician's art was powerless if an emerald was in his vicinity (77).

The opal rendered its wearer invisible (148). The serpent could not look upon an emerald without losing his sight (157-58).[4]

The true Oriental ruby announced coming misfortunes by change of colour and by growing obscurity (158-59). The red coral and the onyx had a similar ominous character (159-60). The emerald foreshowed future events (76). Again, by putting it under the tongue, one could predict future events (79).

A diamond worn on the breast of the high-priest showed the guilt or innocence of a person accused of any crime (71 and 278). The emerald 'revealed the truth or falsity of lover's oaths' (78). Yet this stone was an enemy of sexual passion; for the exceptionally valuable emerald worn in a ring by King Bela of Hungary broke into three parts when he embraced his wife. (Albertus Magnus) (78). A sapphire was used as a test of female virtue, the change of colour indicating unfaithfulness on the part of the wearer (105). Shakespeare considers the opal a fit emblem of inconstancy (*Twelfth Night*, II, iv).

A ruby of the King of Ceylon was 'believed to possess the virtues of an elixir of youth' (166). Diamond, emerald and sapphire were all antidotes against poison (376, 379 and 104 respectively). Diamond was said to grow dark in the presence of poison (379). The ruby, when thrown into water, caused it to boil (102).

4. 'Blinded like serpents when they gaze
Upon the emerlad's virgin blaze'.—Moore.

'Sleeping-stone' induced sleep, and 'Waking-stone' induced wakefulness (Pseudo-Aristotle) (163-64). In Sumero-Assyrian inscriptions we have 'Stone of Love' and 'Stone of Hate', which excited these passions respectively in the hearts of their wearers. There are similarly the stones of memory and forgetfulness in the *Gesta Romanorum* (35).

Precious stones could, under certain circumstances, lose their powers, 'If handled or even gazed upon by impure persons and sinners, some of the virtues of the stones departed from them. Indeed, there were those who held that precious stones, in common with all created things, were corrupted by the sin of Adam. Therefore, in order to restore their pristine virtue it might become necessary to sanctify and consecrate them, and a kind of ritual serving this purpose has been preserved in several old treatises' (44-45). Again, 'the talismanic power of a diamond was lost if the stone were acquired by purchase; only when received as a gift could its virtue be depended on. The same belief is noted regarding the turquoise. The spirit dwelling in the stone was thought to take offence at the idea of being bought and sold, and was supposed to depart from the stone, leaving it nothing more than a bit of senseless matter' (73).

The ancient Mexicans called blood "water of precious stones" (40). With some people 'the wearing of precious stones was believed to enrich the blood and thus to promote health and vigour, for "the blood is the life"' (40).

Extravagant tales are told of luminous stones, of how they lit up rooms, temples and palaces. Instances are reported where rubies, diamonds and emeralds shone by their own light. 'From the Lydian river Tmolus a marvellous stone was taken which was said to change color four times a day. This surpasses the properties of the "saphire merveilleux" which changed its hue at night. Only innocent young girls could find the Lydian stone, and while they wore it they were defended from outrage' (163).

Engraved Stones.—So far about the plain stones. From ancient times signs, figures and letters have been engraved on stones, which imparted certain special qualities of their own to them, independently of the inherent qualities of the latter. If these two reinforced each other the effect was stronger. Again, in order to attain special efficiency, the signs were engraved at a time

when the astrological influences were favourable. Further, 'in the production of engraved stones to serve as amulets, the influence of the respective planet was made to enter the stone by casting upon the latter, during the process of engraving, reflections from a mirror, which had been exposed to the planet's rays. In addition to this, the work was executed while the planet was in the ascendant, and the design was emblematic of it. With these combined influences the gem was believed to be thoroughly impregnated with the planetary virtue' (340).—Throughout the historical and the prehistoric periods we find gnostic signs and writings, astrological symbols, sacred texts and names, names and monograms, etc., of owners, engraved on gems for various purposes.

The Babylonian and Assyrian cylinder seals (from 4000 B.C. to 500 B.C.), Cretan seals (from 2500 B.C.), the Egyptian scarabs (funeral scarabs, or else used as gifts or as signets), Roman rings set with scarabs, Babylonian scaraboid seals introduced from Egypt (fifth or sixth century B.C.) and seal-rings (third century B.C. to third century A.C.) can only be mentioned here (117-22).

Engraving sacred texts on stones is an old practice. The ancient Egyptians engraved 'texts from a very ancient ritual composition, called the Book of the Dead, upon certain semi-precious stones which had been cut into various symbolical forms' (225).

A few of the most remarkable examples of engraved stones are given below:

'In the Cabinet du Roi, in Paris, there was an engraved carnelian, the design showing Jupiter enthroned, with thunderbolt and sceptre, and Mars and Mercury standing on either side of the central figure. Separated from the gods of the upper air by a bow, probably representing the arch of the sky, appears the bust of Neptune, emerging from the sea. The border of the design is formed by the twelve signs of the zodiac, Virgo being of an unusual type—the virgin and a unicorn—said to have been used only during the reign of Domitian (81-96 A.D.)' (341).

'The popularity of the carnelian as a talismanic stone among Mohammedan peoples is said to be due to the fact that the Prophet himself wore, on the little finger of his right hand, a silver ring set with a carnelian engraved for use as a seal.' Imām Ja'far

declared that all the desires of any man who wore this stone would be gratified. In Persia the name of one of the twelve *Imāms* is frequently engraved on this stone (63-64).

Again, 'there is in the Imperial Academy at Moscow a turquoise two inches in diameter, inscribed with a text from the Koran in letters of gold. This turquoise was formerly worn by the Shah of Persia as an amulet, and it was valued at 5000 rubles by the jeweller from whose hands it came' (quoted from Kluge, *Edelsteinkunde,* Leipsic, 1860, p. 366) (142).

At the other extremity of the moral scale are certain jewels said to have been pawned in Paris by the ex-Sultan 'Abdu'l-*H*amīd for 12,00,000 francs (about £47,500). The designs on these were an offence against public decency, so that they could not be offered at a public sale (139).

Religious Uses of Stones.—These, as we have seen, date from the ancient Egyptians.

Every one knows of the Breastplate on the ephod of the Hebrew High-priest, the twelve stones of which symbolized the twelve months of the year. This Breastplate, it should be noted, belongs 'to the time of the return from the Babylonian Captivity and the building of the second temple' (231).[5]

Instances could be added *ad libitum;* but space prohibits.

Among the Hindus there was the *Panchratna,* usually consisting of gold, diamond, sapphire, ruby, and pearl (241). And then we have the *nauratna,* the nine-gem jewel, 'one of the oldest and perhaps the most interesting talismanic jewel' (242). It was designed to combine all the powerful astrological influences, and comprised diamond, ruby, cat's-eye, zircon (hyacinth), pearl, coral, emerald, topaz, and sapphire.

The *Manī Mālā,* or Chain of Gems, in possession of the late Rāja Sir Surindro Mohun Tagore, of Calcutta, consisted of diamond, ruby, cat's-eye, pearl, zircon, coral, emerald, topaz, sapphire,

5. The "breastplate of Aaron", if it had any actual existence, and the one 'brought by Titus to Rome after the capture of Jerusalem in 70 A.D., are in all probability entirely distinct objects' (289).

chrysoberyl, garnet, carnelian, quartz, and rock-crystal, with a *nauratna* pendant, from which a pear-shaped pearl hung.

The so-called "phenomenal" gems, which exhibit a phenomenal quality—a moving line as in the chrysoberyl cat's-eye, or the quartz cat's-eye, or a star as in star-sapphire or star-ruby—are a great favourite with the Oriental peoples, being considered to bring good fortune to the wearer (333-34).

Jade talismans are very popular at the present day in the Muslim world, specially among the Turks (246).

Birth-stones.—These came into use comparatively late. The fashion of wearing them is traceable to the Jews (309).

A stone corresponded to each one of the twelve months of the year, and had influence over the destiny of the person born in that month. Again, a stone belonged to each of the seasons of the year, spring, summer, autumn and winter (323). A series of stones corresponded also to the twelve zodiacal signs—"astral" or "zodiacal" stones.

'When the zodiacal signs were engraved on gems to give them special virtues and render them of greater efficacy for those born under a given sign, the Hebrew characters designating the sign (or at least the initial character) were often cut upon the gem' (332).

Only a word need be added on the medicinal uses of precious stones. These cured not only talismanically by the patient wearing them but were ground to powder, dissolved and taken internally. Considering the therapeutic properties of gems noticed by various writers, we fancy a natty little parmacopoeia could be compiled out of the multitudinous variety of stones prescribed for the various ills and ailments.

We may wind up these odds and ends of curious lore by the following passage, where the birth of the diamond and the creation of the pearl are poetically narrated. Considering that imagination, after all, is of the essence of life, the following is delightful reading:

'When the God of the Mines called his courtiers to bring him all known gems, he found them to be of all colors and tints, and

of varying hardnesses, such as the ruby, emerald, sapphire, etc., etc. He took one of each; he crushed them; he compounded them, and said: "Let this be something that will combine the beauty of all; yet it must be pure, and it must be invincible." He spoke: and lo! the diamond was born, pure as the dew-drop and invincible in hardness; but when its ray is resolved in the spectrum, it displays all the colors of the gems from which it was made. "Mine," said the god, "must be the gem of the universe; for my queen I will create one that shall be the greatest gem of the sea," and for her he created the pearl' (325-26).

Rock-crystals.—The use of rock-crystal for purposes of divination, which dates from ancient times, is a fascinating subject. Instances of 'scrying' are to be found as early as classical Greece and Rome. The Achaians 'used a mirror to divine diseases or to learn whether there was danger of sudden death' (177). Pausanius tells us of a sacred well with its oracle of the magic mirror, in front of the Temple of Demeter, or Ceres, at Patras, which answered questions touching diseases. In Lucian's description of the palace of the Moon-King we have a similar well with a large mirror, where one could hear and see everything passing in the world (*ibid.*). A god of the ancient Mexicans saw in a magic mirror everything that happened in the world (178). Helenus, the Trojan soothsayer, foretold the downfall of Troy by a magic sphere of stone mentioned in the Orphic poem "Lithica" (*ibid.*). We learn from Joseph's story (*Genesis*, xliv, 1-5) that a silver cup was used for divination among the primitive Hebrews; and a golden ball was used by 'the Magi, followers of Zoroaster,' in their incantations (179). Roger Bacon made a marvellous 'glass' in which events happening at far-distant places were mirrored (182-83).

The *jām* (cup) of Jamshed, with which every student of Persian literature is familiar, and which, curiously enough, is not mentioned by Kunz, obviously belongs to this class.

It will be noticed that divination was not done by crystals alone. Besides cups or balls of gold and silver, polished spheres or cubes of stone such as beryl, surfaces of water, boys' finger-nails, etc., were often used for the purpose. Dr. Dee, the famous charlatan of Queen Elizabeth's time, used several articles for scrying, a polished slab of black stone, obsidian, among the number.

Among remarkable crystals may be mentioned the following:

(1) Crystal globe, 2¼ inches in diameter, surmounting the sceptre of the Scottish regalia (183).

(2) Dr. Dee's Crystal, of cairngorm, or 'smoky-quartz', now preserved in the British Museum (190).

(3) 'A crystal ball, one of the largest perfect spheres ever produced, has been made from rock-crystal of Madagascar. It is a very perfect sphere and of faultless material.' Diameter, 6⅛ inches; price, $ 20,000 (217).

(4-6) Three fine crystals in the collection of the American Museum of Natural History, New York: (*a*) Apparently perfect. Diameter, 5½ inches. (*b*) Not entirely perfect. Diameter, 6½ inches. (*c*) Fine crystal ball, of wonderful purity. An ideally perfect sphere on account of very precise cutting. Diameter, 4-11/16 inches (219).

(7) One of the largest and most perfect crystal balls is in the 'Grüne Gewolbe' (Dresden). Weight, 15 German pounds; diameter, 6-2/3 inches; price, $10,000 (in 1780). It was used for purposes of augury (223).

(8) The Currahmore Crystal. Slightly larger than an orange, with a silver ring encircling it at the middle. It cures cattle of all distempers. Supposed to have come from the Holy Land. (223).

(9) 'An exceptionally fine specimen of Aztec work is a skull carved out of rock-crystal. It weighs 475¼ ounces Troy, and measures 8¼ inches in width' (101). See illustration of this rock-crystal skull (Ancient Mexican) (now in British Museum, London) on p. 100 of Kunz.

SECTION II: FACT

We have no doubt the modern scientific instincts of the reader are scandalized by this incursion into the realm of fancy. We often forget how much of pure illusion goes to make up our real life. Besides unknown things and half-known things furnish a befitting background for knowledge, and give us a feeling of reality otherwise unattainable. Yet we will try to placate the reader by giving a brief characterization of the more important gemstones—after which we shall be qualified to deal with the jewels of the Mughal Treasury.

CHIEF CHARACTERISTICS OF STONES.

Scale of values.—Assuming the same size and quality, and when cut, the same perfection of form, different stones have been held in high esteem in different periods. Among the Romans and in the earlier times in India, diamond was most highly prized; while among the Persians it was placed after pearl, ruby, emerald and chrysolite. In the middle of the sixteenth century ruby and sapphire were placed above diamond which had only ⅛th value of ruby (Benvenuto Cellini); and about 1565 the order of value was: emerald, ruby (when clear), diamond (Garcias ab Horto). To-day diamond is far exceeded in price by ruby, and is often equalled by emerald (Dr. Max Bauer, *Precious Stones*, transl. L. J. Spencer, 1904, p. 103).

Some stones, like topaz, aquamarine, etc., occur often in large masses. Value in their case varies directly with weight; while in case of diamonds and rubies (where large specimens are uncommon) price increases in a higher ratio than weight (*Ibid.* 105).

The jewels at present in general request are: Diamond, ruby, emerald, sapphire, pearl, opal, turquoise, topaz and Amethyst.

'For the first five the demand is relatively steady, and varies absolutely only with the purchasing power of the world' (G. F. Herbert Smith, *Gem-stones and their Distinctive Characters*, 5). These five occupy the first rank, but 'it is impossible to form the gem-stones in any strict order' (*Ibid.*).

Among the transparent colourless stones diamond 'alone possesses that marvellous "fire", oscillating with every movement from heavenly blue to glowing red, which is so highly esteemed and so much besought.' No other stone glows with such mysterious gleams (*Ibid.*, 2). Among coloured stones, the colours most admired are: 'the fiery red of ruby, the royal blue of sapphire, the verdant green of emerald, and the golden yellow of topaz.' These retain the purity of their colour even in artificial light, though certain sapphires turn purple at night (*Ibid.*, 2-3). 'Of the small group of translucent stones which pass light, but are not clear enough to be seen through, the most important is opal' (*Ibid.*, 3). The opaque variety of precious stones is represented by the turquoise. 'The claims of turquoise are maintained by the blue variety' (*Ibid.*).

CUTTING, GRINDING AND POLISHING OF STONES.

Dr. Max Bauer has the following on the subject: 'Engraved precious stones are generally known as *gems*. The device engraved upon a gem is either sunk in the stone so as to lie below its surface, in which case the gem is known as an *intaglio;* or the device is in relief so as to lie above the surface of the stone, a gem so engraved being known as a *cameo*. Intaglios are frequently used for seals or signets to produce a raised cameo-like impression; for this purpose they are commonly engraved with a crest or monogram. Cameos, on the other hand, have no application of this kind, but are used merely as ornaments. The art of engraving intaglios is known as *sculpture*, while that of producing cameos is known as *tornature*. Of the two arts, the former is the more ancient, but the antiquity of the latter is well established by the number of cameos, in the shapes of a beetle—the so-called scarabs—found in Egyptian tombs' (*Precious Stones*, 86.).

For Diamond.—The discovery that two diamonds rubbed together ground each other was made as early as 1475 (Smith, *Gem-stones*, 90). But the Indian lapidaries 'were the first to realize that diamond could be ground with its own powder' (*Ibid.*, 128), and so first performed the

miracle of polishing a diamond. 'In India, the ancient home of the diamond,' says Dr. Bauer, 'the art of polishing the faces of natural crystals was practised in the remotest times; when or how the device of faceting stones was discovered or introduced in this country is not known, but it was practised in the seventeenth century, at the time of Tavernier's visit (1665)' (*Precious Stones*, 238). The Indian diamond cutters contented themselves with polishing the natural facets, if the stone were perfectly clear; but if it contained flaws or specks, they covered it with numerous small facets haphazardly placed. The stone was invariably left in almost its original shape, and no effort was made to improve the symmetry (Smith, *Gem-stones*, 91). In spite of this, various forms of cutting were common in India; the most general forms being the thick-stones, table-stones, and thin-stones; the first named form, on account of its generality in India, is often referred to as the 'Indian cut'. 'The Oriental diamond-cutter,' continues Dr. Bauer, 'follows the outlines of the rough stone as closely as may be, striving to reduce the loss of material to a minimum. The European diamond-cutter, on the contrary, aims at developing to their fullest extent the optical properties of the stone, and makes economy of material only a secondary consideration' (*Precious Stones*, 239).

Up to 1562 the only regular patterns known were the diamond-point and the diamond-table (Smith, *Gem-stones*, 91).

The *rose pattern* was introduced a century later.

At close of the seventeenth century the brilliant form of cutting was introduced, which revealed for the first time its amazing fire'. This form remains to this day the standard style for the shape of diamond. The perfect brilliant has 58 facets, 33 above, and 25 below, the girdle. In case of large stones, the number of facets may be increased. The largest stone cut from the Cullinan[6] has the exceptional number of 74 (*Ibid.*, 92-94).

For Coloured Stones.—'A popular style of cutting which is much in vogue for coloured stones is the step- or trap-cut, consisting of a table and a series of facets with parallel horizontal edges above and below the girdle (p. 98).

For Sapphire and Ruby.—The front of these stones 'is usually brilliant-cut and the back step-cut, but Indian lapidaries often prefer to cover the stone with a large number of triangular facets,

6. See Chapter II below.

especially if the stone be flawed; star-stones are cut more or less steeply *en cabochon*' (p. 173).

Mr. Goodchild in the same strain, but fuller: 'The colour of a Ruby varies with the direction in which it is viewed; the richest colour is seen on looking along the principal axis of the crystal, hence, in cutting, the gem should be so fashioned that this axis is presented to the eye of the observer, the table thus being parallel to the basal face of the crystal. The gem is usually cut as a brilliant. Some few Rubies show asterism, and are cut *en cabochon*, but this is not nearly so frequently seen in Ruby as in Sapphire. More rarely step cut stones are seen, or those in which the form of the crown is that of a brilliant, while the culasse is cut in steps. Since the dispersive power is small there is no marked play of colour, and hence there is not the same importance in giving the gem an exact form as in the case of the Diamond. Hence, too, rose cut Rubies are relatively more effective than rose cut Diamonds' (*Precious Stones*, 190-191).

'What has been said of the cutting of the Ruby,' continues Mr. Goodchild, 'applies to Sapphire also. The fact that the colour is of a richer hue when viewed along the principal axis of the mineral should guide the lapidary in cutting the stone. Sapphires are particularly prone to be patchy in colour, and bad parts may have to be removed by slitting before grinding commences. Sapphires usually show a change of colour in artificial light: some few specimens change to violet, thus, and they are highly prized. Most Sapphires have their colour destroyed by heat, some very much more easily than others' (*Ibid.*, 194).

For Emerald and Aquamarine.—'Fine varieties of Beryl are sometimes brilliant cut, the deeper coloured specimens requiring a rather shallow form, while the paler shades must be given a good depth to ensure a fine colour effect. More often a mixed cut is used, or a pure step cut. Good stones with fine colour may be mounted *à jour*, but stones of poorer colour are often improved by being mounted with foil in a closed setting' (*Ibid.*, 236).

For Topaz.—'Topaz, when of large size, is often cut with a large table of generally elliptical form, and with numerous triangular facets between the table and the girdle, the lower part of the stone being cut in shallow steps. The ordinary step and table forms of cutting are also used, and for the colourless crystals (*gouttes d'eau*) the brilliant cut may be used. Most Topaz is mounted in a closed setting, often with foil at the back' (*Ibid.*, 267).

15

Diamond.

'The diamond,' says Dr. Bauer, 'although not the most valuable of precious stones, yet unquestionably exceeds all others in interest, importance and general noteworthiness . . . . In hardness, in the perfection of its clearness and transparency, in its unique constants of optical refraction and dispersion, and finally in the marvellous perfection of its lustre, the diamond surpasses all other minerals. For these reasons, and despite the fact that it is not of very great rarity even in faultless specimens of fair size—nine-tenths of the yearly trade in precious stones being concerned with diamonds alone—it is very greatly valued as a gem; moreover, on account of its extreme hardness, it has several technical applications' (*Precious Stones*, 113).

'Diamond,' continues the same writer elsewhere, 'is often regarded as the type of what a perfectly clear, colourless, and transparent stone should be. It can by no means, however, be always so regarded, since cloudy and opaque diamonds are actually more common than those which are clear and transparent, while very great variety in colour is found in this mineral. A great number of diamonds are indeed perfectly colourless, and correspond strictly to the popular conception of the stone; this number is, however, only one-fourth of the total number of diamonds found; another quarter show a very light shade of colour, while the remainder, at least one-half of the total, are more or less deeply coloured.

Perfectly colourless diamonds are, at the same time, most free from impurity' (*Ibid.*, 133).

'The colouring of diamonds is seldom intense, pale colours being much more usual than deeper shades. Diamonds which combine great depth and beauty of colour with perfect transparency, are objects of unsurpassable beauty; for, in addition to their fine colour, they possess the wonderful lustre and brilliant play of prismatic colours peculiar to the diamond, so that other finely-coloured stones, such as ruby and sapphire, are not to be compared with them. Only a few stones of this description are in existence; they are among the most highly-prized of costly gems' (p. 134).

Cleavability of diamond was known to Indian lapidaries at the time of Tavernier's visit. It was not unknown in Europe in the sixteenth century; but it was not credited at the time and was soon forgotten. As late as the early nineteenth century it was

so little known in Europe that it was practised as a secret art (Smith, *Gem-stones,* 132-33).

The value of diamond was long determined by an old rule; rate per carat to be multiplied by the square of the weight in carats; so that if the rate was £4 a carat, a stone weighing two carats would cost £16, and one weighing three carats £36. Owing to economic changes in the modern world, however, this rule holds good no longer.

Ruby and Sapphire

These should be treated together as they fall under the mineral species Corundum. The blue crystalline variety is the sapphire, and the red the ruby, while other colours are known as Oriental Topaz, Oriental Amethyst, Oriental Emerald, etc. (W. Goodchild, *Precious Stones,* 183). 'Oriental Topaz includes several yellow shades of Corundum, and when of fine reddish yellow colour is of about the same value as Sapphire' (*Ibid.*, p. 196). 'Oriental Amethyst, also called the Purple—or Amethyst—Sapphire, is very close in colour to the common Amethyst, but it shows a much greater range of colour than Amethyst does, and in fact may vary from a slightly purple red to a blue with a slight tint of red in it' (*Ibid.*). 'Oriental Emerald is an emerald-green form of Corundum, and is extremely rare' (*Ibid.*).

This leaves the sapphire and the ruby to be dealt with. These two are pre-eminent among coloured gem-stones and are second only to diamond in hardness (Smith, *Gem-stones,* 172).

'The red of the Ruby', says Mr. Goodchild, 'varies a good deal, the "masculine" Ruby showing the deeper tints of carmine or blood-red (often referred to as "pigeon's blood"-red, from a Burmese simile), while the "feminine" Ruby is paler, and more of a rose-red; in this, as in other varieties of Corundum, a transition is seen, and the feminine Ruby may pass gradually to colourless Corundum. The masculine Ruby, in its most admired shades, has a slight blue tone in the red, which thus tends to magenta. The colour is usually evenly distributed in the Ruby, but in the Sapphire it is quite usual to find much variation in depth of colour. All shades of blue are found and of all depths. Perhaps the most characteristic colours are a smalt-blue and a corn-flower blue. Deep-coloured stones are known as Lynx- or Cat- Sapphires, and the paler ones as feminine stones or Water-Sapphires, though the latter term is more often applied to the blue Iolite (Cordierite).

Pale Sapphires merge insensibly into the next colour variety, Leuco-Sapphire, which is really devoid of colour—simply colourless crystallised Corundum. It also passes into the blue-green variety, known as Oriental Aquamarine. In fact, in many crystals of Corundum a gem might be cut from one end which would be a Sapphire, while from the other end of the crystal a Leuco-Sapphire might be obtained. The yellow-green variety of the colour of Chrysolite (Olivine) is called Oriental Chrysolite. The intense green stones are Oriental Emerald; the pure amber, or honey-yellow stones, are Oriental Topaz; while those of a rich brownish-red are known as Oriental Hyacinth, and the violet specimens as Oriental Amethyst' (*Ibid.*, 184).

Large rubies are far from common (Smith, *Gem-stones*, 179). 'Ruby ranks above Diamond in point of value for good stones; while the price of a pale Ruby of one carat may only be £ 1, a stone of rich deep colour, weighing when cut one carat, may fetch £ 25 or more. Mr. Streeter states that £ 20,000 has been paid for a very fine Ruby of 38 9/16 carats. While Rubies up to 2,000 carats [6a] have been found, most of the larger ones show considerable imperfect areas, and of large flawless Rubies very few are known compared to Diamonds of similar quality and size' (Goodchild, 191).

'The value of Sapphire of good quality, and in carat size,' continues the same writer , 'is about two-fifths that of Ruby. Moreover, since Sapphires of large size are more plentiful than in the case of the Ruby, there is not the same rapid increase with size. Small stones may be said to be very much the same in value as Diamonds, and larger stones only increase in about direct proportion to their weight' (*Ibid.*, 194).

Emerald

Beryl includes Emerald, Aquamarine, and Morganite. Emerald has the bright green shade—the famous "emerald-green"; while aquamarine covers the pale-blue, bluish-green, and greenish-blue shades of beryl (Goodchild, 229).

Compared with other stones, perfect specimens of emerald are very rare, and proportionately costly. 'The disparity between the value of a perfect and of an imperfect emerald is enormous. A

6a. No definite specimen approaching that size is heard of in the other authorities.

faultless emerald is worth as much, or nearly as much, as a ruby, and certainly more than a diamond' (Bauer, 309). And the price increases very rapidly with size, so that for a flawless stone of four carats and more almost any price could be asked. A perfect emerald of four carats, for instance, may easily fetch £ 1600 to £ 2000 (Smith, 193).

Beryl 'occurs from transparent to subtranslucent, but the modern gem varieties are confined to the transparent kinds. The lustre is characteristically vitreous' (Goodchild, 229). The emerald retains its purity of colour in artificial light.

Topaz

'Topaz occurs colourless and more frequently of a straw or amber colour, or pale green or blue; more rarely pink.—The lustre is vitreous and especially bright on the prism faces; the cleavage plane shows a pearly lustre. The mineral in the kinds used as gems is transparent, though less clear forms are also found' (Goodchild, 262). 'Topaz is not worth nearly so much now [1907] as it was at one time, largely on account of change of fashion. A fine stone of 2 carats would now only be worth about £ 1' (*Ibid.*, 267).

Pearl.

The pearl makes up in beauty what it lacks in durability.

'A pearl may assume any and every variety of shape from the regular to the fantastic. It may be truly spherical, egg- or pear-shaped—pear-drops or pear-eyes, as they are termed—or it may be quite irregular—the so-called baroque or barrok pearls. The first is the most prized, but a well-shaped drop-pearl is in great demand for pendants or ear-rings. The colour is ordinarily white, or faintly tinged yellowish or bluish, and somewhat rarely, salmon-pink, reddish, or blackish grey. Perfect black pearls are valuable, but not as costly as the finest of the white' (Smith, 292).

The unit of weight is the pearl grain (= ¼ carat). The rate of price depends on the square of the weight in grains. Apart from quality, the value varies with shape: spherical pearls, pear-drops, and buttons (in descending order of desirability). But without 'orient' a pearl is valueless (Smith, 294-5).

Abnormally large specimens.

We have space here to talk only of the highest class of precious stones; but exceptionally large pieces even of semi-precious stones constitute phenomena in the world of things.

The appearance of the giant 'Cullinan', which will be mentioned in its place, was an event of the first magnitude in all respects. On a lower plane considering value, but a remarkable stone none the less, is an aquamarine crystal, largest and finest ever seen, found at Marambaya (Brazil) in 1910: Greenish blue in colour; measurement: length, 19 inches; diameter, 16 inches; weight, 243 lb. Perfectly transparent: could be seen through from end to end. Price paid, £ 5133. For illustration, see Smith, Pl. xxvi.

Jade is cheaper material still; but such huge masses of this material exist as would justify their mention here:

(1) An enormous mass of New Zealand jade (Statue of a Maori Warrior on a big base), weighing 7000 lb., found in South Island in 1902. Now in the Museum of Natural History, New York. 'Largest mass of jade known, or of which we have any record' (Kunz, *Curious Lore of Precious Stones*, 254). See Illustration on Pl. facing p. 254.

(2) The largest mass of prehistoric jade (nephrite and jadeite) 'that has been taken from a European deposit is that found by the writer at Jordansmühl in Silesia, in April, 1899, and which weighed 4704 pounds.' Now in the American Museum of Natural History, New York (Kunz, 250 and f. n. 42).

(3) Sculptured jade mountain from the Summer Palace, west of Peking (Collection of T. D. Walker, of Minneapolis, Minn.). Design on it commemorates meetings of a literary club of the fourth century. Chinese characters on it (engraved directly from the autograph of the Emperor Ch'ien-lung, written by him in 1784) used by the Chinese ever since as model of elegant calligraphy. Largest mass of sculptured jade in existence. Height, 23 inches; width, 38½ inches and 18½ inches; weight, 640 pounds. See Illustration and letterpress on Pl. facing p. 244, *Ibid.*

CHAPTER I: JEWELLERS' WEIGHTS

Before we begin to talk of individual precious stones it will be convenient to give some necessary details about the way in which the weight of stones is denoted; for much important discussion will often turn on the precise weight of a stone. So our labour in gaining as much precision as is possible will not be wasted. If the reader has patience with these dry details he will be amply rewarded when we come to their practical application. We shall be as brief as is consistent with clearness and precision.

In the Mughal period there were three kinds of weights current: (1) *Jauharī, i.e.,* Jewellers'; (2) *Ṣairafī, i.e.,* Bankers', or Money-changers'; and (3) those used by other dealers *Miṣqāl, Tānk,*[7] and *Ratī* (or *Surkh*) are the units in jewellers' weights; while *Tola, Māsha,* and *Ratī* (or *Surkh*) are the units in money-changers' weights. We are not concerned with No. 3; nor are we directly concerned here with the bankers' weights. These latter will, therefore, be referred to only when it is necessary to do so for distinguishing jewellers' weights from them. It should be remembered that in all that follows we are talking of jewellers' weights, unless the contrary is indicated.

Some of the weight equivalents seem to have varied from period to period; so that instead of one table of weights, corrected and verified, we shall have to give several, chronologically arranged.

Bābur's reign. The following table of equivalents is taken from the *Bāburnāma*:

8 *ratīs* = 1 *māsha.*
32 *ratīs* = 4 *māshas* = 1 *tānk.*
40 *ratīs* = 5 *māshas* = 1 *miṣqāl.*
96 *ratīs* = 12 *māshas* = 1 *tola.* (*Bāburnāma in English* 517).

Akbar's reign.—*Ā'īn-i-Akbarī* has the following:—

Jewellers' Weights

10 *birinjs* (grains of rice) = 1 *surkh,* (or *ratī*).
24 *surkhs* = 1 *tānk.*
26 *surkhs* = 1 *miṣqāl.*

Money-changers' Weights

7½ *birinjs* = 1 *surkh* (or *ratī*).
8 *surkhs* = 1 *māsha.*
12 *māshas* = 1 *tolcha* **(or** *tola*). (*Ā'īn,* Text, II. 60; B. and J., III, 125).

The author of *Tārīkh-i-Firishta,* in talking of Bābur's diamond,[8] gives 8 *miṣqāls* as its weight, without saying how many *ratīs* went to the 8 *miṣqāls* (*Tārīkh-i-Firishta,* ed. John Briggs, Bombay, 1831-32, I, 381; Navalkishor edition, 205). Alexander Dow, who translated that work in 1768, in an endeavour to make his translation more intelligible, omitted the 8 *miṣqāls* altogether,

7. The *tānk* is the indigenous unit of weight; but the *miṣqāl* is foreign, being imported from Persia and Turkestan.
8. See next Chapter.

and gave 244 *ratīs* instead (*History of Hindostan, London*, 1768, II, 112). John Briggs, whose translation was published in 1829, in rendering the same passage, gives both 8 *miṣqāls* and 224 *ratīs* in the text, without making clear that the author gives only 8 *miṣqāls* as the weight, and that 224 *ratīs* is only added by him as an explanatory equivalent (*History of the Rise of the Mahomedan Power in India*, London, 1829, II. 46).

This simple and well-intentioned procedure of these translators has caused no end of mischief; since writers (like Ball and others) who had not the time or the inclination to consult the original, were led to suppose that they had Muḥammad Qāsim Firishta's authority for the statement that 8 *miṣqāls* equalled 224 *ratīs* in his day. It is only fair to the author of *Tārīkh-i-Firishta* to point out that he makes no such statement, and that a *miṣqāl* did not weigh 28, but 26, *ratīs* in Akbar's reign—which Firishta probably knew very well.

Presumably *at the time of these translations* the *miṣqāl* did weigh 28 *ratīs*. We shall learn below that in the seventies of the seventeenth century a *miṣqāl* was just 28 *ratīs*.

Jahāñgīr's reign.—As there is no authoritative statement for this period, we can only depend on stray bits in *Tūzuk*.

In one place Jahāñgīr equates 19 (R. and B. give 19½) *tānks* with 17 *miṣqāls* and 5½ *surkhs* (*Tūzuk*, 198; R. and B., I, 399-400). Assuming that a *tānk* is 24 *ratīs*, which is the value given to it both by the *Ā'īn* and the *Bādshāhnāma* (see below), and granting that the text reading of 19 *tānks*[9] is correct, the *miṣqal* works out to 26½ *ratīs*—a likely value.

This value is beautifully corroborated by another equation given a few lines lower: A pearl weighed 64 *surkhs* or 2 *miṣqāls* and 11 *surkhs* (*Tūzuk*, 198; R. and B., I, 400).

In another place the emperor makes 1½ *tānks* and 1 *surkh* = 1 *miṣqāl* and 15 *surkhs* (*Tūzuk*, 63; R. and B., I, 132). Here a *miṣqāl* would come to something like 22 *ratīs*—which is a patent absurdity. Either the MSS. are at fault, or else the emperor was nodding. Prof. Hodivala reads 11 for 15 *surkhs*, and deduces the

9. The fine MS. of the first volume of *Tūzuk* in the Punjab University Library (f. 209b, bottom) also has 19 *tānks*. *Iqbālnāma-i-Jahāñgīrī* (p. 105) corroborates this reading of 19 *tānks*, although it carelessly gives its equivalent as 17 *miṣqāls* only.

values 24 and 26 *ratīs* for the *tānk* and the *miṣqāl* respectively—which are correct enough.[10]

In the last place may be noted an entry which occurs very early in the *Tūzuk*. The weight of a *tola*, says the emperor, equals 2½ *miṣqāls* current in Persia and Turan (*Tūzuk*, 5; R. and B., I, 12). Now a *tola* is again a variable quantity, if we aim at mathematical exactitude. Considering the authorities cited by Professor Hodivala in his exhaustive treatment,[11] and omitting such mentions as are either casual or obviously unreliable, the consensus of opinion would seem to place the *tola* somewhere very close to 185 grains; and what is more, the value of the *tola* seems to have remained fairly constant throughout the period from Akbar to Aurangzeb, notwithstanding occasional statements by various writers to the contrary. Now if a *tola* was 185 grains, a *miṣqāl*, according to Jahāñgīr, would come to 74 grains. Considering the value for the *miṣqāl* given by the imperial diarist in other places, we must say that this equation is not to be accepted with mathematical precision. Probably a rough equalization alone was attempted.

SHāh Jahān's reign.—Here we have something more definite. From a statement in *B. N.*, II, 391, we learn clearly that

1 *tānk* = 24 jewellers' *ratīs*.

1 *miṣqāl* = 27 jewellers' *ratīs*.

Aurangzeb's reign.—John Fryer, who travelled in India in 1672-81, in the course of an elaborate table, gives the following equivalents:

1 *tānk* = 24 jewellers' *ratīs*.

1 *miṣqāl* = 28 jewellers' *ratīs*.

(*A New Account of East India and Persia*, London, 1909-1915, II, 127-28).

The English equivalents given by him do not seem to be reliable. I have not thought it safe to consider them in the discussion that follows.

10. *Historical Studies in Mughal Numismatics*, 108-9. But Prof. Hodivala's amendment is not supported by *Iqbālnāma-i-Jahāñgīrī* (p. 31), which gives 1 *miṣqāl* and 15 *surkhs* just the same.

11. S. H. Hodivala, *Historical Studies in Mughal Numismatics*, Chapter on 'The Weight of the Mughal Tola', pp. 224-234.

At the end of *Ma'lūmāt-ul-Āfāq* we have a list of weight equivalents, the relevant portion of which is given below:

4 *rā'īs* (mustard seeds) = 1 *birinj* (grain of rice).
8 *birinjs* = 1 *surkh*.
8 *surkhs* = 1 *māsha*.
12 *māshas* = 1 *tolcha*
4 *māshas* = 1 *tānk*.
(P. U. L. MS., f. 232*b*).

Before entering on a discussion of these tables it will be advisable to follow them up with equivalents in English weights.

Dr. Ball, after a patient consideration of all the data available, has valued the two *ratīs* as follows:

Ordinary or money-changers' *ratī* = 1·842 grains troy.

Jewellers' *ratī* (or the pearl *ratī*, as Tavernier calls it) = 2·66 grains troy. (Final appraisement) (Tavernier, I, 333; II, 333 and 347).

The two *ratīs* weigh, according to Abū'l-Faẓl, 7½ and 10 rice grains respectively. He further tells us that early in Akbar's reign they weighed 6 and 8 rice grains respectively, and that the former values were fixed by Akbar. This regulation made no change in the respective *ratīs*, only the *birinj* became smaller. It will be noticed that the ratio of the jewellers' to money-changers' *ratī* remained constant, *viz.*, 4 : 3.

If we assume 10 *birinjs* to be = 2·66 grains, 7½ *birinjs* yield 1·995 grains, and not 1·84, or anything near it. It is a pity that Dr. Ball did not consider this important source in arriving at his values. Nevertheless, so much patient work has gone before Dr. Ball's formulation of results that we are loth to disturb his conclusions.

It may be added that 1 English carat = 3·1682 grains troy.[11a]

11a. This is the old carat. The metric carat (= 200·0 milligrams or 3·08 grains) was adopted by most of the more progressive countries in Europe and America in the second decade of the twentieth century (Frank Wade, *Text-book of Precious Stones*, 289); though, strangely enough, the *Encyclopaedia Britannica*, Article 'Diamond' (New Edition, VII, 320) gives only the older value. But as the elaborate calculations of Prof. Maskelyne and Dr. Ball are based on the old carat, we will not disturb them by introducing this new factor.

It must, further, be remembered, that Tavernier calculates always by the light Florentine carat, which is exactly 4 p. c. lighter than the English carat.

English carat = 205·4 milligrams. Light Florentine carat = 197·2 milligrams.

It is time now to review the tables. We see that from the beginning of Akbar's reign to well within Aurangzeb's the *tānk* seems to have remained steady at 24 *ratīs* of 2·66 grains each; while the *miṣqāl* appears to have slowly risen from 26 to 28 *ratīs* of the same value, being probably 26½ *ratīs* in Jahāñgīr's reign. This much is tolerably clear. We take no account here of the tables in *Bāburnāma* and *Ma'lūmāt-ul-Āfāq*, which are not covered by this generalization, and require a separate treatment. With these we are now in a position to deal.

Bābur's table of Indian weights is, at first sight, somewhat perplexing. The explanation of it, however, is not at all difficult. The only fault that the founder of the Mughal dynasty of India is guilty of is that instead of giving two mutually exclusive tables, one of jewellers', and the other of money-changers', weights, he mixes them up in a single scale of values. This procedure would be justifiable if the *ratī*, which (in name) is common to the two systems, had been of the same value in both systems; as the grain is common to the avoirdupois, troy, and apothecaries' systems of weights, and has the same value throughout.[12] As we have seen, this is not the case. The question remains which of the two *ratīs* Bābur has chosen for this composite table of weights. The answer is that he has chosen *not* the jewellers', but the money-changers', *ratī*. That Bābur's *ratī* weighs approximately 1·84 grs. tr. (and not 2·66 grs.) is the key to his whole scale of values.

Assuming this value of the *ratī* (which is Dr. Ball's) to be true, Bābur's *tānk* = 32 × 1·84 grs. = 58·88 grs. tr. This is equivalent to just over 22 jewellers' *ratīs*. So Bābur's *tānk* is slightly more than 22 jewellers' *ratīs*.

Again, Bābur's *miṣqāl* = 40 × 1·84 grs. = 73·6 grs. troy. This works out to about 27½ jewellers' *ratīs* of 2·66 grs. each.

Thus Bābur's *miṣqāl* is too large by 1½ *ratīs*, and his *tānk* too small by 2 *ratīs*.

12. The reader will have noticed that the *birinj* is the denominator common to all the ponderary systems current in India.

We have no reason to think that Bābur was ill informed. The explanation is not far to seek. We notice that his money-changers' weights are exact and accurate. He apparently took these as the base, so that the equivalents in jewellers' weights had to be modified slightly to avoid fractions. The errors in jewellers' weights are probably due to this rough and ready method of equalizing weights belonging to different systems. It is not likely that weights differed so materially between 1526 and 1556.

The table in *Ma'lūmāt-ul-Āfāq* goes one better, and amalgamates *all the three scales* mentioned at the beginning of this chapter, trying to reduce them to a common denominator—as might be expected, with disastrous results. What has been said of Bābur's list is true, and more true, of the list in *Ma'lūmāt-ul-Āfāq*, which is possibly copied in part from *Bāburnāma*. No comment is called for, except that it is strange that Amīn-ud-Dīn Khān should have taken the emperor Bābur as his model and ignored the authorities of the intervening period. It will be noticed that he gives only the *tānk*, and omits the *miṣqāl*.

Whenever an attempt is made to express the jewellers' in the terms of money-changers' weights, mathematical accuracy is not to be expected. We have already noticed two examples. A third is furnished by the *Tūzuk*, where *Jahāñgīr* equates a *tola* with 2½ *miṣqāls* current in Persia and Tūrān (*Tūzuk*, 5; R. & B., 1, 12). Such equations are not meant to be taken mathematically.

Equivalents of the *tānk* and the *mīṣqāl* in *jauharī ratīs* as well as in English grains may now be given in a table arranged chronologically—for each successive reign. Before doing so, however, a short note may be added about the value of the *miṣqāl* current in Persia and Tūrān.

Tavernier equates 6 Persian *miṣqāls* with 1 French oz., which is=482·312 grs. tr. (Tavernier, I, 399 and 418). This yields 80·4 grs. for the *miṣqāl*. This is far in excess of the value otherwise obtained; though Prof. Hodivala points out that Tavernier's value is corroborated by the weight of the earlier type of the heavy muhur (*Hist. Studies in Mughal Numismatics*, 144-45). Prof. Maskelyne, however, contends that Tavernier is wrong, and that 6½ *miṣqāls* should equate 1 French ounce (*Nature*, Oct. 8, 1891, p. 557). This gives us 74·2 grs. for the *mīṣqāl*—a value very close to that given by Fryer. It may be added that Tavernier, as we shall learn in the next chapter, is a very careless and unreliable writer.

TABLE SHOWING VALUES OF THE *TĀNK* AND THE *MIṢQĀL* IN THE VARIOUS REIGNS.

Reign.	*Tānk.*		*Miṣqāl*		Authorities.
	Value in jewellers' *ratīs* of 2·66 grains each.	Value in grains.	Value in jewellers' *ratīs* of 2·66 grains each.	Value in grains.	
Bābur	22	58·88	27½	73·6	*B.N.E.*, 517. These values are not exact.
Akbar	24	63·84	26	69·16	*Ā'īn*, Text, II, 60; B. & J., III, 125.
Jahāñgīr	24	63·84	26 26½	69·16 70·49	*Tūzuk*, 63; R. & B., I, 132. *Tūzuk*, 198; R. & B., I, 399–400
SHāh Jahān	24	63·84	27	71·82	*B.N.* II, 391.
Aurangzeb	24	63·84	28	74·48 80·4	Fryer, II, 127–28. Tavernier, I, 399 and 418.

CHAPTER II.

BIOGRAPHICAL NOTICES OF GEMS AND GEM-STONES.

Famous jewels, like famous men, have biographies. They pass through countries and ruling dynasties, making history—a symbol of victory and triumph.

It will not be devoid of interest if we take a short survey of a few of the precious stones and pearls, notices of which lie scattered up and down the pages of Mughal history, taking note, as we go, of their qualities and peculiarities, and of the general run of prices. It need hardly be added that the collection offered here is not meant to be exhaustive.

DIAMONDS

THE *KOH-I-NŪR* DISPUTE: BĀBUR'S DIAMOND, MĪR JUMLA'S STONE, AND THE *KOH-I-NŪR*.

The place of honour in this region belongs to what is known as the *Koh-i-Nūr* dispute. It ranges over the whole period from Bābur to Aurangzeb, on to Nādir SHāh and Queen Victoria. Three of the most famous stones are involved in this controversy, though one of them only by mistake—as will appear in the sequel.

We will begin with Bābur's celebrated diamond, and let a quotation from *Bāburnama* lead off:

'In Sultan Ibrāhīm's defeat the Rāja of Gūālīār Bikramājīt the Hindū had gone to hell.

Bikramājīt's children and family were in Āgra at the time of Ibrāhīm's defeat. When Humāyūn reached Āgra, they must have been planning to flee, but his postings of men (to watch the roads) prevented this and guard was kept over them. Humāyūn himself did not let them go. They made him a voluntary offering of a mass of jewels and valuables amongst which was the famous diamond which 'Alā'ud-dīn must have brought.[13] Its reputation is that every appraiser has estimated its value at two and a half days'

13. '*i.e.* from the Deccan of which 'Alā'ud-dīn is said to have been the first Muhammadan invader.'—f.n. 5.

food for the whole world.[14] Apparently[15] it weighs 8 *miṣqāls*. Humāyūn offered it to me when I arrived at Āgra; I just gave it him back.' (*B.N.E.*, 477).

The earlier history of this stone, based on tradition and conjecture, loses itself in the mists of time. Legends, says Prof. Maskelyne, had gathered round it, and tradition had linked the legends with authentic history in the dawn of the fourteenth century. This great diamond, continues the learned professor, 'emerges in history in the first years of the fourteenth century. It was in 1300 A. D. in the hands of the Rajahs of Malwa, an ancient Rāj that had at one time spread over Hindostan, and in all the vicissitudes of a thousand years had never bent to a Muhammadan conqueror, until the generals of the Delhi Emperor Alā-ud-dīn Muhammad Shah[16] overran its rich territory, and carried away the accumulated treasure of Ujjein in the first decade of the fourteenth century.

The date of 1304 is that given by Ferishta for this conquest, and then it was that the great diamond takes its place in history.' (N. Story-Maskelyne's article, 'The Koh-i-Nur—A Criticism,' in *Nature*, October 8, 1891, p. 556).

History does not record how the diamond passed from 'Alā'ud-Dīn KHaljī to the rājas of Gwalior.

Next, we have it in *Akbarnāma* and other histories that when Humāyūn was down with an illness which was believed to be fatal, and the court physicians had despaired of the prince's life, Mīr Abū'l-Baqā, a reputed savant, said that it had come from the sages of old that where the secular wisdom of physicians failed to effect a cure, the only remedy was to sacrifice the best of things

14. Other texts and translations, and Abū'l-Faẓl give it a different value. 'Abdu'r-Raḥīm KHān khānān's Persian translation, which is followed by Leyden, Erskine and King, places it at half the daily expenses of the whole world; and Abū'l-Faẓl (*A. N.*, I, 99) and Firishta (John Briggs' ed., Bombay, 1831-32, I, 381,) accept it as correct. Pavet de Courteille, however, who is translating from the Turkish original, has the following rendering: 'Il est tellement estimé, qu'un connaisseur disait que son prix équivalai à la dépense d'un jour du monde entier.' (Pavet de Courteille, *Mémoires de Baber*, Paris, 1871, II, 172). But one translation gives no more information about the market value of the diamond than another. The hyperbolic way of describing it means no more than that nothing like the stone was heard of in the known world.

15. 'Abdu'r- Raḥīm has 'probably'.

16. 'Alā'ud-Dīn was not emperor at this time. Prince 'Alā'ud-Dīn invaded Mālwa in the reign of his uncle, Jalāl'ud-Dīn KHaljī (1294).

(*or* one's possessions) and then to supplicate the Almighty for recovery. Bābur declared his intention of sacrificing himself, since Humāyūn, he said, possessed nothing nobler or worthier than his father. The courtiers protested that the meaning of what had been reported from the ancients was that the best of one's wordly possessions should be offered, and suggested that the precious diamond which had come to hand in the battle against Ibrāhīm Lodī and had been bestowed on Humāyūn, should be given away as charity[17] (*Akbarnāma*, Text, I, 116). Bābur did not agree; but the rest of the story does not concern us. We see that this stone was in the Imperial Treasury in 1530, and remained there.

The next link in the history of this stone is furnished by an anecdote related by Abū'l-Faẓl: Humāyūn, defeated by SHer SHāh and wandering about, passed near Mārwār, Rāja Māldev's territory. Sanka of Nagaur, one of the trusted agents of Rāja Māldev, entered his camp pretending to be a merchant, and offered to buy the great diamond. Humāyūn suspected his design, and directed that the purchaser should be made clearly to understand that such precious gems cannot be obtained by purchase: either they fall to one by the arbitrament of the flashing sword, which is an expression of the Divine Will, or else they come through the grace of mighty monarchs (*A.N.*, I, 180).[18]

Later, when Humāyūn reached Persia—a refugee, suing for help—he offered this diamond along with 250 rubies of Badakhshān to SHāh Ṭahmāsp of Persia as a return for the magnificent reception he received in the latter's dominions. Abū'l-Faẓl assures us that the value of these presents repaid the total expenditure of the reception and hospitality accorded him from beginning to end more than four times over (*A.N.*, Text, I, 217).

This was in the summer of 1544.

Further, we have it on the authority of Mr. Beveridge[19] that Khur Shāh, the ambassador of Ibrāhīm Quṭb SHāh, the King of Golconda, at the Persian Court, says in B.M. MS. Or. 53, that

17. It is strange that Gulbadan Begam, who was an eye-witness of the scene, does not mention the stone in her account of the incident (*Humāyūn-Nāma*, Text, 21; Transl., 105).

18. The story is also found in Major Charles Stewart, *Private Memoirs of the Moghul Emperor Humāyūn*, p. 38.

19. Article, 'Bābar's Diamond: Was it the Koh-i-Nur?' in *Asiatic Quarterly Review* for January—April, 1899, pp. 370-389.

Humāyūn presented to SHāh Ṭahmāsp the diamond which Bābur had got from Sulṭān Ibrāhīm's treasury, and it weighed 6½ *miṣqāls;* that SHāh Ṭahmāsp did not think so much of it, and afterwards sent it to India as a present to Niẓām SHāh, the ruler of the Deccan [*i.e.*, Burhān Niẓām SHāh of Ahmadnagar] through Āqā Islām "Mihtar Jamāl" (f. 58 *b* of MS.)

This report of the return of Bābur's diamond to South India is corroborated by *Tārīkh-i-Firishta,* which says in its account of Burhān Niẓām SHāh of Ahmadnagar that SHāh Ismā'īl [wrong for SHāh Ṭahmāsp] sent a large diamond, which had been Humāyūn's, as a present by the hands of Āqā Sulaimān (?) commonly known as Mihtar Jamāl. Despite the slips about the names, the restoration of the diamond to India in 1547, which is the year of "Mihtar Jamāl's" embassy, seems fairly established.

It is possible that when Akbar conquered and annexed Ahmadnagar in 1600 this stone passed with other valuables into the Imperial Treasury. Yet it is not likely, since if a diamond of such historic antecedents had been acquired contemporary historians would be sure to record the event; and if such a gem was in the Imperial Treasury from this date on, throughout the reigns of Jahāñgīr and SHāh Jahān, it would come up for a mention among the elaborate notices of gem-stones which abound in *Tūzuk,* and in Mulla 'Abdu'l-*H*amīd's review of the contents of the jewel treasury at the end of the twentieth regnal year (*B.N.*, II, 391).

This is all the authentic information we possess about this stone.

Before taking leave of Bābur's diamond we may state the equivalents of its weight for facility of comparison. Granting Bābur's statement to be exact, the stone weighed 8 *miṣqāls* of 40 *ratīs* each, or 320 ordinary *ratīs* of 1·842 grs. each. The weight in grains, according to my calculation, comes to 589·44. Prof. Maskelyne, taking the weight of the *miṣqāl* as the basis, arrives at 589·088 grs.; which Dr. Ball accepts. The weight in carats, as stated by them, is 186·06.

Next comes a stone which has been wrongly mixed up in this controversy—leading to no end of absolutely unnecessary confusion. Yet it is necessary to bring it in, partly to show its irrelevancy to the present dispute, partly because we are talking of all great gems, and we might as well talk of this one here as elsewhere.

Muḥammad Wāriṣ, the author of the third volume of *Bādsh̲āhnāma*, and the prime authority for the third decade of S̲Hāh Jahān's reign, has the following:—

On the 18th of *Ṣafar*, 1066 *A.H.* [= Dec. 17, 1655 *A.C.*] Mīr Muḥammad Sa'īd Mīr Jumla "Jumlat-ul-Mulkī" "Mu'aẓẓam K̲Hān", the newly appointed Prime Minister, offered to S̲Hāh Jahān as *pesh̲kash̲* precious jewels including a large diamond weighing 9 *tānks* or 216 *surkh̲s*, the price of which was fixed by the royal order at Rs. 2,16,000.[20]

This account of this stone is authentic. *B.N.* is the court history, which we know to be thoroughly reliable. It is corroborated in this particular not only by *Qarniya* and *Ma'āṣir-ul-Umarā* (see last footnote) but also by *'Amal-i-Ṣāliḥ* (P.U.L. MS., f. 609 *a*) and *Muntak̲hab-ul-Lubāb*, I, 753. Further, the weight is given in all places not only in *tānks* but also in *ratīs*. Every possibility of error of transcription is thus satisfactorily eliminated, and we have no doubt in our mind that this diamond weighed neither more nor less than 216 jewellers' *ratīs*, or 574·56 grains troy.

Bernier is speaking of this stone when he says that 'he [Mīr Jumla] presented *Chah-Jehan* with that celebrated diamond which has been generally deemed unparalleled in size and beauty.' (Bernier, 22).

Presumably this was a cut stone; for an uncut stone weighing 216 *ratīs* would hardly deserve such distinguished mention. The price given also favours this assumption.

According to Tavernier this diamond was excavated from the mine of Kollūr on the Kistna river (Tavernier, II, 58).

This stone we will call, for brevity, Mīr Jumla's diamond.

Now we proceed to examine the full account of Tavernier, which has been the main cause of the mystification and error, and has led to a bright display of dialectics on the part of a number of writers of undoubted ability and judgment.

20. Muḥammad Wāriṣ, *B.N.*, III, (P.U.L. MS.), f. 119 *a* (where 3 *tānks* is wrongly given for 9 *tānks*). My MS. of the same (f. 289 *b*.) and Muḥammad Ṭāhir "'Ināyat K̲Hān" Āsh̲nā's *Qarniya* (my MS., III, f. 67 *b*.) give correct weight. So does *Ma'āṣir-ul-Umarā* (III, 535), which probably copies from these authorities.

We give the whole passage with all its embroidery of minute and life-like detail, which throws welcome side-light on the arrangement and procedure observed in the Imperial Jewel Treasury.

'On the first day of November 1665 I went to the palace to take leave of the Emperor, but he said that he did not wish me to depart without having seen his jewels, and witnessing the splendour of his fête.

Early in the morning of the next day five or six of the Emperor's officers and others on behalf of Nawāb Ja'far Khān, announced that the Emperor wished to see me. Immediately on my arrival at the Court the two custodians of the royal jewels, of whom I have elsewhere spoken, accompanied me into the presence of His Majesty; and after I had made him the customary salutation, they conducted me into a small apartment, which is at one of the ends of the hall where the Emperor was seated on his throne, and whence he was able to see us. I found in this apartment 'Ākil Khān, chief of the jewel treasury, who, when he saw us, commanded four of the imperial eunuchs to bring the jewels, which were carried in two large wooden trays lacquered with gold leaf, and covered with small cloths made expressly for the purpose—one of red and the other of green brocaded velvet. After these trays were uncovered, and all the pieces had been counted three times over, a list was prepared by three scribes who were present. For the Indians do everything with great circumspection and patience, and when they see any one who acts with precipitation, or becomes angry, they gaze at him without saying anything, and smile as if he were a madman.

The first piece which 'Ākil Khān placed in my hands was the great diamond, which is a round rose, very high at one side. At the basal margin it has a small notch and flaw inside. Its water is beautiful, and it weighs 319½ ratis, which are equal to 280 of our carats—the rati being 7/8th of our carat. When Mīr Jumla, who betrayed the King of Golkonda, his master, presented this stone to Shāhjahān, to whose side he attached himself, it was then in the rough, and weighed 900 ratis, which are equivalent to 787½ carats; and it had several flaws.

If this stone had been in Europe it would have been treated in a different manner, for some good pieces would have been taken from it, and it would have weighed more than it does, instead of which it has been all ground down. It was the Sieur Hortensio Borgio, a Venetian, who cut it, for which he was badly

rewarded; for when it was cut he was reproached with having spoilt the stone, which ought to have retained a greater weight; and instead of paying him for his work, the Emperor fined him 10,000 rupees, and would have taken more if he had possessed it. If the Sieur Hortensio had understood his trade, he would have been able to take a large piece from this stone without doing injury to the Emperor's jewel, and without having had so much trouble in grinding it; but he was not a very accomplished diamond cutter. (Tavernier, I, 314-16).

In another place Tavernier speaks of 'the great diamond which weighed 900 carats before cutting, which Mīr Jumla presented to Aurangzeb' (II, 58). According to himself it weighed 900 *ratīs*, not carats, and it was presented to SHāh Jahān, not to Aurangzeb. This is only to show Tavernier's gross carelessness.

Again, on Pl. II facing p. 97 of vol. II, Tavernier gives the figure of this diamond among others, and says, 'You see represented here its form after having been cut, and, as I was allowed to weigh it, I ascertained that it weighed 319½ ratis, which are equal to 279 9/16 of our carats. When in the rough it weighed, as I have elsewhere said, 907 ratis, or 793 5/8 carats. This stone is of the same form as if one cut an egg through the middle.' (II, 97).

Further, on p. 75 (vol. II), Tavernier speaks of 'the two largest among the cut stones in the world—one of them in Asia belonging to the Great Mogul [Mīr Jumla's diamond], the other in Europe belonging to the Grand Duke of Tuscany.' 'The Great Mogul's diamond,' he continues, 'weighs 279 9/16 carats, is of perfect water, good form, and has only a small flaw which is in the edge of the basal circumference of the stone.' Allowing for this flaw, and calculating according to the rule formulated by the author, he values the stone at 11,723,278 livres, 14 sols, and 3 liards, which the editor says is equivalent to £ 879,245—18s.—1½ d. (Tavernier, II, 75).

What is Tavernier talking of? Surely not of the diamond presented by Mīr Jumla, of which we have authoritative record in *B.N.*?[21] And yet he can be talking of no other. The discrepancy between the weights given by Muḥammad Wāriṣ and Tavernier is irreconcilable; and yet the way in which each gives parallel weights precludes the possibility of a slip of the pen or an error of transcription, and what is more, Tavernier also claims the

21. See p. 386 above.

highest credentials of not only seeing but actually weighing the diamond himself. Muḥammad Wāriṣ undoubtedly means 216 *ratīs* of 2·66 grains tr. each, and Tavernier likewise means 319½ *ratīs* of exactly the same value.

I am afraid we must reject Tavernier's account with all its show of direct evidence and circumstantial detail.

His estimate of its value (nearly 88 lacs of rupees) is wild, and deserves no more credit than the rest of his evidence. Even if we allow for the exaggeration in weight, and for the fact that a stone would probably fetch in the open market a higher price than the value assigned it in the imperial registers, Tavernier's valuation still remains outrageously extravagant, specially when we remember that the purchasing power of money in those days was some five times what it is to-day.

And then there is the whole story of the cutting of it by Hortensio Borgio, to which the Persian histories give no countenance. We view it with grave suspicion. Manucci's account (quoted below) is of no corroborative value, since he is only copying Tavernier—and Bernier.

The apparent approximation between Bābur's 320 *ratīs* and Tavernier's 319½ *ratīs* has led some of the earlier writers on the subject to suppose that Tavernier's Mīr Jumla diamond was really the same as Bābur's, Mīr Jumla having obtained that stone somewhere in the Deccan. The reader will see at once that this was a mistake; for Bābur's *ratī* was 1·842 grs., while Tavernier's 2·66. So the similarity of weights was only verbal.

For clearness and future reference we may state that the weight ascribed by Tavernier to this stone is 319½ jewellers' *ratīs*=279 9/16 Tavernier's (*i.e.*, Florentine) carats=268 19/50 English carats.

And as if Tavernier's account was not sufficiently confused and misleading we have the following from the pen of Manucci:

'Mīr Jumlah, or the newly-made Mu'aẓẓam K̲h̲ān, gave a present to Shāhjahān of a large uncut diamond which weighed three hundred and sixty carats. He added that if Qandahār produced such precious stones, his majesty might undertake the labour of going there, or could despatch some loyal vassal to take it. But to

his mind, his majesty had better send some trusty person to conquer the lands where, of a verity, such stones were to be found. These were the kingdoms of Bizapur (Bījāpur) and Golconda (Gulkandah), and the island of Ceilaō (Ceylon). Having spoken thus, he once more held forth his hand full of diamonds, already cut, of considerable size, though not so large as the first one' (*Storia*, I, 237-38).

'The large diamond', continues the same writer, 'was returned to him to have it cut by an expert, and for this purpose they sent to him a Venetian lapidary named Ortençio Bronzoni. I saw this diamond many a time; it was as large as a nut' (*Ibid.*, p. 238).

Another eye-witness! But an eye-witness whose weight bears no resemblance to the weight of the uncut stone, as given by the first 'eye-witness'. According to Manucci the weight of the uncut stone was 360 carats (=411 jewellers' *ratīs*); while according to Tavernier it was either 787½ carats (=900 *ratīs*) or 793 5/8 carats (=907 *ratīs*). The weight of the cut diamond is not given by Manucci; so no comparison with the figures given in the Persian histories is possible.

We have no hesitation in rejecting all this talk as idle gossip.

The true weight of Mīr Jumla's diamond was 216, and that of Bābur's stone, about 221½, jewellers' *ratīs*—important land-marks in the history of jewels in those days. In view of this such high figures as 900 *ratīs* or 411 *ratīs* for the uncut stone, and 319½ *ratīs* for the cut stone can only be described as cheap sensation-mongering—quite unworthy, at least, of a professional jeweller like Tavernier.

Now we come to the stone called *Koh-i-Nūr*.[22] We can only give here a skeleton history of the stone now among crown jewels of England. The following summary is based on Dr. Ball's well-informed account (Tavernier, II, 343-46), where his sources and authorities are cited in full.

22. When we are discussing the question of the identity of Bābur's diamond or of Mīr Jumla's diamond with *Koh-i-Nūr*, we should be careful to confine the latter designation to the stone, the history of which is sketched here. In applying that term in our discussion to Bābur's diamond (as Prof. Maskelyne does), or to Mīr Jumla's diamond (as Dr. Ball does. Tavernier, II, 343) is begging the entire question at issue.

Nādir SHāh took away this stone among the spoils of Delhi from Muḥammad SHāh (1739). 'On first beholding it he is reported to have conferred upon it the title of Koh-i-Nūr or Mountain of Light.'

Nādir SHāh being murdered at Kalāt (1747), *Koh-i-Nūr* passed with the throne to his grandson, SHāh Rukh, who resided at Mashhad. 'Shāh Rukh gave it, as a reward for his assistance, to Ahmad Shāh, the founder of the Durrānī dynasty at Kābul, and by him it was bequeathed to his son Taimūr, who went to reside at Kābul. From him, in 1793, it passed by descent to his eldest son Shāh Zamān.' 'Two years afterwards it passed into the hands of his third brother Sultān Shujā'.'

After SHāh SHujā''s accession to the throne of Kābul, Elphinstone, who visited him at Peshawar (1809), saw it in a bracelet worn by him.

SHujā' was dethroned by his eldest brother Muḥammad. He ran to Lahore for refuge, and offered the Koh-i-Nūr to Ranjīt Singh in a friendly way in return for a *jāgīr* in the Punjab and promise of help in recovering Kābul (1813).[23]

Ranjīt Singh died (1839); and the stone was placed in the jewel chamber, till Dalīp Singh was acknowledged as his successor.

When the Punjab was annexed by the British (1849), the diamond was formally handed to the new Board of Government; and later sent to Queen Victoria.

The *Koh-i-Nūr* was exhibited in the first great Exhibition (1851).

23. So Dr. Ball. Sayyid 'Abdu'l-Laṭīf, in his well-informed article on 'The History of the Koh-i-Nur Diamond' (*Lahore*, 376-83) says that Ranjīt Singh compelled SHah SHujā', his guest-prisoner, 'to surrender the *Koh-i-Nur*, on a promise to pay three lakhs of rupees in cash and grant of a *jagir* of Rs. 50,000 per annum, with a promise of aid in recovering Cabul' (p. 379); and that these promises were never fulfilled (p. 380). He adds, on the authority of Captain's Murray's *Life of Mahārāja Ranjit Singh*, Calcutta, 1834, pp. 96-97, that for two days the SHāh's family were deprived of all nourishment, and His Majesty, with his wife and children, suffered absolute deprivation (*Lahore*, p. 379, f.n.). This hospitality towards a prince refugee who came suing for help and was received as a guest requires no comment.

Recutting of the stone was entrusted (1852) by Queen Victoria to Messrs. Garrards, who employed Voorsanger, the diamond cutter. The actual cutting, which lasted 38 days, reduced the weight to 106-1/16 carats, and cost £ 8,000.

We may add that in the Exhibition of 1851 this stone weighed 589·52 grs. troy (= 186·06 English carats).

We can now take up for consideration the views held by various writers on the subject. Some, like Prof. Maskelyne and others, have held that the *Koh-i-Nūr* is Bābur's diamond; others, like Dr. Ball and the rest, are of opinion that Mīr Jumla's diamond and the *Koh-i-Nūr* are one; a third school contends that all three stones are identical.[24]

The last view may be taken up first.

From the vague wording in *Bāburnāma* it is certainly possible to think that Bābur's diamond weighed a little less or a little more than 320 ordinary *ratīs* or about 589 grains, and if we were in the mood for it we could perhaps even stretch it down to 216 jewellers' *ratīs* or 574½ grains, counting the *miṣqāl* at 27 *jauharī ratīs*. Thus it would seem possible to hold, as Beveridge does,[25] that the diamonds of Bābur and Mīr Jumla are identical, and that Mīr Jumla obtained the stone of old fame in the market some where in South India and presented it to SHāh Jahān. This supposition has the merit of establishing the return of Bābur's diamond into the Mughal Treasury—a point where every other theory fails.

But before we grant it we should realize that in that case Mīr Jumla, instead of concealing the fact, would have loudly claimed the credit of restoring the world-famous diamond, after a century and a quarter of adventure, to the Mughal Treasury, and would have taken good care to announce the fact by beat of drum. Nor are the court-chroniclers likely, when speaking of Mīr Jumla's presentation, to omit mention of the noble pedigree of the stone. This is not all: There is the monstrous discrepancy in the values of the two stones, which militates against the hypothesis of their

24. See Dr. Ball's classified list of these authorities in Tavernier, II, 331, f. n. 1.

25 Article in *Asiatic Quarterly Review*, already referred to.

identity. A stone which was worth (making allowance for the conservative estimates at the Mughal Court) at most 3 lacs of rupees, could not be the stone valued at an inconceivable sum 130 years earlier, and again at about 3 crores of rupees in Ranjīt Singh's time (1838).[26]

Finally, granting all this and ignoring all difficulties, even if both stones weighed 216 jewellers' *ratīs*, and were one, this stone cannot be the *Koh-i-Nūr*, since the *Koh-i-Nūr* weighed over 589 grains, *i.e.*, 15 grains more.

My own opinion is that Bābur's estimate of weight is more accurate than his loose language would imply.

We are now in a position to deal with Dr. Ball's opinion. It is believed in many quarters to-day that the conclusions of Dr. Ball, who has comprehensively reviewed all previous literature on the subject,[27] constitute the final position, and contain as much of the truth as can be known at this distance. After an exhaustive survey of facts and figures, and a searching criticism of opinions held he arrives at the conclusion that although Bābur's diamond and *Koh-i-Nūr* happen to agree in weight, 'there is no direct evidence that any diamond of that weight was in the possession of the Mogul emperors at any subsequent period [subsequent to 1526], up to the time of Nādir Shāh's invasion. We know nothing as to the weight of the Koh-i-Nūr, as such, till about the time it was brought to England, namely, the year 1850; and then, although its weight was 186 1/6 carats, the trustworthy evidence, as to its condition at that time, as will be seen, is to the effect that it was not identical with Bābur's diamond' (Tavernier, II, 338).

In view of the new sources available to us it is unnecessary to go further into the details of 'the trustworthy evidence'. Dr. Ball admits, however, that 'it is possible, that Bābur's diamond may have been in Shāhjahān's possession when Tavernier saw Aurangzeb's jewels, and that the latter obtained possession of it when Shāhjahān died, and so ultimately it passed to Persia with other jewels taken by Nādir Shāh' (*Ibid.*, p. 338—39). But this is only concession of a possibility.

26. Latif, *Lahore*, p. 380, f.n. (quoted from H. W. G. Osborne, *Court and Camp of Ranjit Singh*, p. 202).

27. Tavernier, II, 331-48.

The positive side of Dr. Ball's finding is that the *Koh-i-Nūr* is Mīr Jumla's diamond, the difference between the weight given by Tavernier and the actual weight of *Koh-i-Nūr* in 1851 (82 1/3 carats) being accounted for by supposing that 'the Mogul's stone, while in the hands of one or other of its necessitous owners, after it was taken to Persia by Nādir, had pieces removed from it by cleavage, which altogether (there were at least three of them) amounted to the difference between its weight and that of the Koh-i-Nūr as it was when brought from India' (*Ibid.*, 341).

All this argument and speculation and the inferences drawn from the actual appearance of the *Koh-i-Nūr*, which follow (p. 342), would have been unnecessary and impossible if Dr. Ball had had before him the account of the acquisition of Mīr Jumla's diamond in *B.N.* As the reader knows, the stone weighed only 216 *ratīs*, *i.e.*, 574·56 grs. troy; while the *Koh-i-Nūr* scaled 589·52 grs. In no number of centuries can a stone put on weight; and here is an actual increase of 15 grains troy. Woe to the historian who builds his edifice on the shifting sands of Tavernier's figures!

This leaves Prof. Maskelyne and his school to be dealt with. His position briefly is that the *Koh-i-Nūr* is really Bābur's diamond, that this was the stone which Tavernier actually saw and handled; and that he mixed it up in his mind with Mīr Jumla's diamond, and wrongly appended to it the story of the latter diamond, which was probably current at the time. He adduces the parity of weights and his own observation of the stone in 1851 in proof of his contention.

Prof. Maskelyne's explanation of Tavernier's error is ingenious; it is undoubtedly the only possible one if we are bent on extricating Tavernier from the hopeless muddle in which he has involved himself. We must suppose, he says, that 'Āqil KHān gave Tavernier the traditional weight of the Bābur diamond which he had placed in his hand, and that Tavernier translated this weight into carats, not as from the old *ratīs* of Bābur or even of Akbar, but from the pearl *ratīs* with which he had become acquainted in the bazaars of India (p. 558-59). So all that story about his being allowed to weigh it is only a jeweller's embroidery.

Prof. Maskelyne further holds that Mīr Jumla's diamond was, at the time, probably with SHāh Jahān in the Agra palace-prison.

Both Dr. Ball and Prof. Maskelyne agree that Tavernier saw and described the stone which afterwards came to be called *Koh-i-Nūr;* only according to the former this was Mīr Jumla's diamond (which was in later times clipped and pared till it became *Koh-i-Nūr*), and according to the latter it was Bābur's stone (which remained unimpaired and entire till 1851).

Prof. Maskelyne, who carefully observed the *Koh-i-Nūr* personally in 1851, thinks that Tavernier's rude sketch was probably made from memory some four or five years after he saw the stone. And this drawing, he continues, is 'so absolutely unlike the Koh-i-Nur as to be hardly recognizable as representing the Queen's diamond, and even less the diamond that he himself described, as he saw it, among the treasures of Aurangzebe' (p. 558). Again, 'except for the trace of a small undercut face in his projection, it has not any resemblance to the Koh-i-Nur' (p. 557).

Dr. Ball adduces much evidence for his clipping theory but is not able to point to any distinct features which are common to Tavernier's sketch and description on the one hand and the *Koh-i-Nūr* on the other.

Dr. Ball finds in the authentic sketches and models of the *Koh-i-Nūr* a great deal of 'evidence' in favour of his clipping theory, and also 'defects similar to some of those described by Tavernier as having been in the Mogul's diamond' (Tavernier, II, 342).

He admits that there are discrepancies between Tavernier's description and the figure, 'which, as it represents the whole stone, does not, at first sight, seem to resemble the Koh-i Nūr'. But he holds that these discrepancies can be satisfactorily explained on his hypothesis.

Indeed the appearance of the *Koh-i-Nūr* in 1851 and of its models and drawings seems to be so tricky that widely differing authors find in it strong support each for his own view.

Fortunately it is not necessary for us to take sides in this fight; since our position is clear: The passage in *B.N.* knocks the bottom out of the whole discussion about the identity of the Mīr Jumla diamond with either the Bābur diamond or the *Koh-i-Nūr*. Things are simplified for us, and our choice is narrowed down to this: either the *Koh-i-Nūr* is Bābur's diamond, or all three are distinct. Evidence seems to point to Bābur's diamond being the same as *Koh-i-Nūr*. The exact degree of the probability, however,

it may be left to the experts to determine. It is risky to build on Tavernier's statements; but the almost exact equality of weights seems a strong reason in favour of the identity. Perhaps this is the only sure evidence.

When all is said and done we must not lose sight of the fact that the re-entry of Bābur's diamond into the Mughal Treasury stands unproved to this day; and unless that is proved even the identity of Bābur's stone with the *Koh-i-Nūr* is not possible. This is just what makes the advancing of any hypothesis with any degree of confidence impossible.

Further, granting that Tavernier saw Bābur's stone, where was Mīr Jumla's diamond at the time of his inspection, and what happened to it afterwards? Tavernier does not mention it among the other gems he saw at court; and it was not a thing to be omitted or forgotten. It would be reasonable to suppose with Prof. Maskelyne that it was with SHāh Jahān in the Agra palace. Later history of this gem cannot be traced.

But the two stones must have come together in the royal treasury after SHāh Jahān's death, and both of them must have been there when Nādir SHāh inspected the contents of the Jewel Treasury and appropriated them.

Prof. Maskelyne says it is probable that Mīr Jumla's diamond is the same as the 'large diamond, standing high upon an elliptic base,' which Sir John Malcolm saw in the treasury of Teheran (p. 559).

As for Tavernier it is no part of our business to save him or his reputation. The more closely one studies him the more deeply is one convinced that he is a negligent and inconsistent writer, and does not care even to compare or adjust the various statements made by himself in different parts of his work. Therefore no reliance is to be placed on his uncorroborated statements. On this particular point we can only say that possibly Prof. Maskelyne has made a remarkably shrewd guess, and Tavernier really saw Bābur's diamond, and wrongly connected it with the story of Mīr Jumla's stone which he had heard; and when 'Āqil KHān told him that it weighed 320 (ordinary) *ratīs*, he understood him to mean that it weighed 320 (*jauharī*) *ratīs* (which Tavernier, as jeweller, knew so well). This works out with such astonishing precision to the 280 carats given by Tavernier that we are more than half inclined to fall in with his position; for $320 \times 2{\cdot}66$ grains make nearly 269 English carats; and Tavernier's (Florentine) carats

being 4 p.c. lighter, we get a figure very near 280 Florentine carats, which Tavernier equates with 319½ *ratīs*.

It should be noted that if Prof. Maskelyne's conjecture is correct, Tavernier's estimate of the value of the stone, given above, will have to be revised. The weight is now about 194, and not 280, Florentine carats. Following Tavernier's own method of valuation, his estimate of about 88 lacs of rupees will have to be reduced to less than half that amount.

Two other statements of Tavernier still require an explanation: First, in the passage already given, Tavernier speaks of a great diamond which weighed 900 carats before cutting being presented by Mīr Jumla to Aurangzeb (II, 58). Next, there is the whole story of the cutting by Hortensio Borgio.

Now, on the last day of *Jumāda* II, 1066 *A.H.*, Mīr Jumla offered to Prince Aurangzeb, when the latter went to his house in the Deccan, an uncut diamond among other jewels (*B.N.*, III, P.U.L. MS., f. 113 b; *Muntakhab-ul-Lubāb*, I, 749, which, by the way, gives wrong month). The weight of this diamond is not recorded.

It is true that Tavernier nowhere distinctly speaks of another diamond presented to Aurangzeb by Mīr Jumla. But, says Mr. Beveridge,[28] the fact that he speaks in one place of a diamond being presented by Mīr Jumla to SHāh Jahān, and in another of its being presented by Mīr Jumla to Aurangzeb may possibly be due to the unconscious confusion in his mind caused by the story about this other diamond which he had also heard. The weight he gives, however, still remains his creation.

Similarly the story of Hortensio Borgio may be really connected with the cutting of this diamond.

Possibly we are giving the French traveller more credit than he deserves.

The diamonds mentioned by Garcia da Orta (discussed by certain writers) seem to have no bearing on the subject. Nor has the large diamond obtained by a Portuguese at the Wajrā Karūr mine in the Bellary District about the beginning of the seventeenth century. (Tavernier, II, 42, f. n. 1; 334-35).

(To be continued)

28. Article in *Asiatic Quarterly Review*.

Reprinted from the 'Journal of Indian History,' Vol. XIII, Part I.

The Imperial Treasury of the Greater Mughals

By

Abdul Aziz, Bar-at-Law.

Chapter II: Jewel Treasury (Continued)

OTHER DIAMONDS

The other diamonds may be taken chronologically.

Akbar.

For this long reign, unfortunately, no notices of individual diamonds are available. We will content ourselves with Abū'l-Faẓl's brief mention of prices in the *Ā'īn*. His quotation for diamonds, which is apparently suggested as a standard, is one lakh of rupees for a stone of 136 *ratīs*[1]—a much lower price, as the reader will notice, than those recorded for later reigns. We are not told how prices were calculated; whether the well-known rule of the square of the number of weight units multiplied by the rate per unit being equal to the price was accepted. Nor can any such rule be deduced from the run of prices, the details of which are available.

For the rest, we will not anticipate here what Abū'l-Faẓl has to say about the classification of precious stones and pearls in the Imperial Treasury, which falls more properly under Administration of the Jewel Treasury, and will be given at length in the chapter of that name.

1. Ā'in, Text, I, . . . (Blochmann, I, 16) has a slip here.

It may be noted that "Akbar Shah" or "Jahangir Shah" (No. 6 of 'Famous Diamonds,' p. 69 below) ought to come in here; but we find no record of this stone in the Persian histories.

Jahāñgīr.

For Jahāñgīr's reign the following bits of information are available:

The emperor, while relating (at the end of the 10th regnal year) the acquisition of the Khokhara diamond mines (in the Bihar and Patna province) informs us that a large diamond worth Rs. 50,000 had lately been brought from there (*Tūzuk*, 155; R. & B., I, 316).

Ibrāhīm KHān "Fatḥ-jang," when governor of Bihar, sent to court nine diamonds, which were laid before Jahāñgīr on the 15th of *Tīr*, 12th regnal year (1026 *A.H.* = 1617 *A.C.*). One of these weighed 14½ *tānks* or 348 *ratīs*, and was valued at Rs. 100,000 (*Tūzuk*, 188; R. & B., I, 379). This would be the largest diamond in Mughal history, and the price ridiculously low, if it was a cut stone. But we are told in the annals of the next year that 'some of the diamonds that Ibrāhīm Fatḥ-jang had sent to Court after the taking of the mine had been given to the Government lapidaries to cut.' Bahrām, son of Jahāñgīr Qulī KHān (governor of Bihar), happening at this time to pass through Agra to join the royal court (in Gujarāt), KHwāja Jahān, governor of Agra, sent along with him some of the diamonds that were ready. 'One of them,' continues the royal diarist, 'is of a violet colour [*banafsha*], and cannot be outwardly distinguished from a sapphire. Up to this time I had not seen a diamond of this colour. It weighed several *surkh* [according to another manuscript "thirty *surkh*"], and jewellers estimated its value at Rs. 3,000, and represented that if it had been white (*safīḍ*) and had had perfect marks, it would have been worth Rs. 20,000.' (*Tūzuk*, 244-45; R. & B., II, 38).

Whether the large diamond was or was not among the stones sent by the Governor of Agra on this date (and possibly it was not, since it is not specifically mentioned here), it is reasonable to assume that the large diamond which weighed 348 *ratīs* in the rough, was among the stones entrusted to the lapidaries. We meet with no mention of this gem-stone in later history; presumably it was so reduced in the cutting that it deserved none.

Again, in the 12th regnal year, Jahāñgīr received from Ibrāhīm ʻĀdil SHāh II, King of Bījāpur, the so-called "chamkora" diamond,[2] weighing 30 *ratīs*, valued at Rs. 40,000, and another diamond (weight, 24 *ratīs*; price, Rs. 30,000) from Quṭbu'l-mulk of Golconda (*Tūzuk*, 198; R. & B., I, 400). Judging from the prices these two diamonds must have been of a very high quality.

Early in the 13th regnal year (1027 *A.H.* = 1618 *A.C.*) a diamond ring was presented to Prince KHurram 'as part of the offering of Quṭbu'l-mulk. It was of the value of 1,000 muhars,' says Jahāñgīr, 'and on it there appeared three letters of equal size and of good form, such that they made the word Lillahi (for God). This diamond had been sent, as it was reckoned one of the marvels of the world. In fact, veins and scratches are flaws in precious stones, but it was generally thought that the marks on this one were fabricated.[3] Moreover, the diamond did not come from any celebrated mine. As my son, SHāh-Jahān, wished that it should be sent to my brother, SHāh 'Abbās, as a souvenir of the conquest of the Deccan it was sent to the SHāh along with other gifts.' (*Tūzuk*, 229; R. & B., II, 8-9).

2. 'The name of Chamkoṛa is derived from this, that there is in the Deccan a plant called *sāg-i-chamkoṛa*. At the time when Murtaẓā Niẓāmu-l-mulk conquered Berar he had gone one day with his ladies round to look at the garden, when one of the women found the diamond in a chamkora vegetable, and took it to Niẓāmu-l-mulk. From that day it became known as the Chamkora diamond, and came into the possession of the present Ibrāhīm 'Ādil KHān during the interregnum (*fatarāt*) of Ahmadnagar.' (*Tūzuk*, *ibid*).

3. So the translator. The text has:

لیکن بظاهر عام فریب بود

which means: but apparently it was such as to mislead the common people (into thinking that the marks were miraculous writing). One is reminded of the so-called 'natural gems,' *i.e.*, gems with 'natural pictures' or figures of Jesus, Mary, etc., and of staurolite crystals or fairy-stones showing a representation of the cross—really due to twinning of two crystals. See Kunz, pp. 266-67 and 270-71. Graphic granite and other minerals present a somewhat similar phenomenon.

On the New Year's Feast of the 14th regnal year (4, *Rabī'* II, 1028 *A.H.* = 10 March ' 1619 *A.C.*) SHāh Jahān, offered to his royal father a diamond worth Rs. 18,000 (*Tūzuk*, 265 ; R. & B., II, 78).

SHāh Jahān

For SHāh Jahān's reign, unfortunately, mentions of individual diamonds, which would yield some information of interest, are rare. This sounds somewhat paradoxical, considering that emperor's passionate fondness for gems. The reason, presumably, is to be found in the fact that SHāh Jahān, unlike his father, wrote no memoirs, and his tastes and preferences are not fully reflected in the histories which were written to his order.

We have the following in the *Bādshāhnāma* : SHāh Jahān, returning from Kabul, crossed the Indus near Sarāi KHairābād on 3 *Ramaẓān*, 1057 *A.H.* Prince Dārā SHukoh, with his son, Sulaimān SHukoh, came from Lahore to receive him. Sa'dulla KHān, the Prime Minister, was ordered to go out to meet the Prince. Dārā SHukoh, being presented, offered 1000 muhurs as *naẓr*, and the Emperor bestowed on him a diamond used as turban ornament (*almās-i-sarāwez*) weighing 100 *ratīs* and valued at one lakh of rupees. (*B. N.*, III, P. U. L. MS., f. 5 *a-b*.).

The following passage from the third volume of *Bādshāhnāma* relates SHāh Jahān's sending of a jewelled candle to Madīna. It occurs in the records of the 21st regnal year :

'Some time earlier it had reached the royal ears that a large and rare diamond had come into the possession of Quṭbu'l-Mulk from the mine in his territory. Orders were issued that it should be sent to the royal court, the price of it to be credited to him in the account of the yearly tribute (*peshkash*) of two lakhs of *hūns* due from Quṭbu'l-mulk.

Before the issue of these directions, however, Quṭbu'l-mulk had handed over the stone, which weighed uncut 180 *ratīs*, to his lapidaries. Only a little cutting had been done when the imperial demand arrived. Quṭbu'l-mulk sent it half-finished as it was to the royal court. When the Emperor's diamond cutters, under his orders, had cut away some 70 *ratīs*, an exceedingly rare piece weighing 100 *ratīs* was left. The price was fixed at Rs. 1,50,000, which yields an average of Rs. 1,500 per *ratī*. As from the beginning of this reign no jewel of such value had yet come into the

royal jewel treasury as *peshkash*, the Emperor decided to make an offering of it at the holy sepulchre of the Great Prophet at Madīna ; and selecting from among the ambergris-scented pastiles [*shamā'im-i-'ambarīn*] in the royal stores, the largest weighing 700 *tolas* [say, 18½ lbs.] and priced at Rs. 10,000 (which by a lucky chance was shaped like a candle), he ordered that it should be worked in a gold lattice. The whole was to be artistically decorated, and the great diamond along with the other smaller stones was to be set in. The total cost of this unparalleled candle came to 2½ lakhs of rupees—1½ lakhs, price of the diamond, the remaining 1 lakh, the cost of jewels, gold, and ambergris.' (*B. N.*, III, P. U. L. MS., f. 11 *a*). This candle was sent with cash presents through Sayyid Aḥmad Sa'īd, who left Agra on 23 Muḥarram, 1058 *A.H.*

Aurangzeb.

Tavernier saw in Aurangzeb's Treasury some diamonds and diamond jewels besides the one discussed under the *Koh-i-Nūr* dispute. They are of minor importance ; but first-hand evidence is always welcome. The following is in continuation of Tavernier's account of his inspection of Aurangzeb's jewels already quoted (*J. of I. H.*, XII, i, 68-69) :—

After I had fully examined this splendid stone, and returned it into the hands of 'Ākil KHān, he showed me another stone, pear-shaped, of good form and fine water, and also three other table diamonds, two clear, and the other with some little black spots. Each weighed 55 to 60 *ratīs*, and the pear 62½. Subsequently he showed me a jewel set with twelve diamonds, each stone of 15 to 16 ratīs, and all roses. In the middle a heart-shaped rose of good water, but with three small flaws, and this rose weighed about 35 or 40 ratīs. Also a jewel set with seventeen diamonds, half of them table and half rose, the largest of which could not weigh more than 7 or 8 ratīs, with the exception of the one in the middle, which weighed about 16. All these stones are of first-class water, clean and of good form, and the most beautiful ever found.' (Tavernier, I, 316.).

The information so far obtained may be summed up in a tabular form for easy reference. Only important stones are included in the tables that follow :

INDIAN DIAMONDS WHICH ENTERED THE MUGHAL TREASURY

BĀBUR'S REIGN.

No.	Name or description.	Weight.		Price.	Authorities.
		When uncut.	When cut.		
1.	Bābur's Diamond.		589.088 grs. = 186.06 carats.	The costliest jewel in Bābur's Treasury.	*B. N. E.*, 477.

JAHĀÑGĪR'S REIGN.

1.	Large diamond from the Khokhara mines.			Rs. 50,000.	*Tūzuk*, 155; R. & B., I, 316.
2.	Diamond sent by Ibrāhīm KHān "Fatḥ-jang," governor of Bihar.	348 *ratīs*.		Rs. 100,000.	„ 188; R. & B., I, 379.
3.	The "chamkora" diamond.		30 *ratīs*.	Rs. 40,000.	„ 198; R. & B., I, 400.
4.	Diamond from Quṭbu'l-Mulk.		24 *ratīs*.	Rs. 30,000.	„ „ „
5.	Diamond ring, which came from Quṭbu'l-Mulk, and was finally sent to the SHāh of Persia.			1,000 muhurs.	„ 229; „ , II, 8-9.
6.	Diamond of violet colour (*banafsha*).		30 (?) *ratīs*.	Rs. 3,000.	„ 244-45, R. & B., II, 38.

7.	Diamond offered by Prince SHāh Jahān on the New Year's Day of the 14th regnal year.			Rs. 18,000.	*Tūzuk*, 265; R. & B., II, 78.
8	Diamond which Hīrānand bought and presented to Jahāñgīr.[1]		3 miṣqāls =78 or 79½ *ratīs.*	Rs. 100,000.	Hawkins (Purchas, III, 41-42)
		SHĀH JAHĀN'S REIGN.			
1.	Diamond bestowed by SHāh Jahān on Dārā SHukoh.		100 *ratīs.*	Rs. 100,000.	*B. N.*, III, P.U.L. MS., f. 5 *b.*
2.	Diamond acquired by SHāh Jahān from Quṭbu'l-Mulk, set in a chandelier, and sent to the shrine at Madīna.	180 *ratīs.*	100 *ratīs.*	Rs. 150,000.	„ „ „ f. 11 *a.*
3.	Mīr Jumla's Diamond.		216 *ratīs.*	Rs. 216,000.	„ „ „ f. 119 *a.*

(1) See the story related from Hawkins in a later chapter, 'Administration of the Imperial Treasury and Rules for purchase and acquisition of gem-stones.'

We know also something about certain diamonds which never found their way into the Mughal Imperial Treasury, but were seen by merchants and others in different parts of India. These are not strictly relevant to our inquiry. The information about them, however, is condensed in the table next following under the impression that it will help in fixing the relative values of stones which are the proper subject of our study.

INDIAN DIAMONDS WHICH NEVER ENTERED THE MUGHAL TREASURY

No.	Name or description.	Weight.		Price.	Authorities.
		When uncut.	When cut.		
1.	A large diamond, the size of a small hen's egg, reported by Garcia da Orta (1563) as having been seen at Vijayanagar.				Garcia da Orta, *Colloquies on the Simples and Drugs of India*, trans. Sir C. Markham, London, 1913, p. 347. (Tavernier, II, 333).
2.	Also mentioned by Garcia da Orta.		250 mangelins = 416 2|3 *ratīs* = 312½ Eng. car.		" " " "
3.	" " " "		140 mangelins = 233 1|3 *ratīs* = 175 Eng. car.		" " " "
4.	" " " "		120 mangelins = 200 *ratīs* = 150 Eng. car.		" " " "
5.	Diamond seen by Tavernier at Golconda (1642). Largest Diamond Tavernier saw in India in the possession of merchants. "The Great Table" of Streeter. Prof. Maskelyne suggests it is "Daryā-i-nūr."		232 43|50 Eng. car.	Rs. 450,000.	Tavernier offered Rs. 400,000 on behalf of two friends, but could not purchase it. Tavernier thinks it could have been purchased for Rs. 450,000. (Tavernier, II, 98; illustr. No. 3 on pl. fac. p. 97).
6.	Streeter's "Ahmadābād Diamond." Bought by Tavernier for a friend.	178 *ratīs* = 150 24|25 Eng. car.	90 18|25 Eng. car.		*Ibid.*, II, 98-99 and 348.

The standard of all stones, specially of diamonds, seems to have been so high in Mughal India that there was no room for inferior specimens. Hawkins relates how difficult it was, on one occasion, for the government lapidary to find a foul diamond wherewith to make powder for cutting and polishing other diamonds. 'There was,' he says, 'a Diamant cutter of my acquaintance, that was sent for to cut a Diamant of three Mettegals [*Misqāls*] and a halfe, who demanded a small foule Diamant to make powder, wherewith to cut the other Diamant. They brought him a Chest, as he said, of three spannes long, and a spanne and halfe broad, and a spanne and halfe deepe, full of Diamants of all sizes and sorts: yet could he find never any one for his purpose, but one of five Rotties [*ratīs*], which was not very foule neither.' (Purchas, III, 42). The reason was that there was an abundance of good diamonds.

The above passage no doubt applies primarily to the conditions in the Imperial Treasury. But when we see that the Imperial Court was the chief buyer of this commodity, we are inclined to think that diamonds of smaller size and inferior water were in cold request in the country at large; so that it was hardly worth while working mines which produced only these. The following passage may be cited in corroboration [Tavernier is relating a meeting with Mīr Jumla, the Commander-in-Chief of the King of Golconda, which took place at Gandikota (Cuddapah District in the Carnatic) in September, 1652]:

'On the morning of the 10th [September, 1652] he [Mīr Jumla] sent to summon us, and as soon as we were seated in his tent, close to him, the attendants brought him five small bags full of diamonds, and each bag contained about as many as one could hold in the hand. They were all lasques,[4] but of very dark water and very small, and most of them were only 1 carat or half a carat in weight, but otherwise very clear. There were very few of them

4. 'Lasques, a term applied by jewellers to flat and oval stones, such as are used in Indian jewellery, and derived from Pers. *lashk*, "a bit, piece." The "table" was the original form in which diamonds were cut. The technical name of this is "lasque," and small slabs in this form are still used for covering miniatures, and are then called portrait stones (Streeter, *The Great Diamonds of the World*, 283).' (p. 230, f.n. 1).

which weighed 2 carats. The Nawāb, showing us these stones, asked if such goods were saleable in our country. We replied that they might be sold provided the water was white, because in Europe we do not esteem diamonds if they are not clear and white, and we make no account of other kinds of water. When he first began to contemplate the conquest of this Kingdom for the King of Golkonda, he was told that it contained diamond mines, and he sent 12,000 men to work them, but in the space of a year they found only those which he had in the five bags. The Nawāb, seeing that they found only stones of very brown water, tending much more to black than white, rightly considered that it was loss of trouble, and, forbidding further mining, sent all these poor people back to tillage.[5] (Tavernier I, 230).

Now that the reader knows as much about diamonds in Indian history as can be known from the fragments available, perhaps he is sufficiently interested in diamonds at large to ask questions about the famous diamonds in the world. This, again, we are fully conscious, is not pertinent to the subject in hand. But a few striking facts about these, will, it is believed, give the reader his bearings in the world of diamonds; so that he will be able to judge for himself where the Mughal emperors' collection of gem-stones exactly stood as compared with similar collections in other countries and in more recent times. The information has been boiled down to facts and figures, so as to stand in proper proportion to the rest.

5. 'The exact position of these mines (or washings?) is unknown, but they were probably situated in the neighbourhood of the Penner river. The nearest of the Kadapa (Cuddapah) sites known in modern times was at Jammalamadugu, which is only 5 or 6 miles E. of Gandikota. There are a number of mines near Kadapa (See *Economic Gealogy of India*, p. 9). In vol. ii. 67, Tavernier says there were six of them. The mine at Wajrā-Karūr, in Anantapur, was also taken by Mīr Jumla.' (p. 230, f. n. 2).

SOME FAMOUS DIAMONDS

No.	Name of Stone.	Weight.		Price.	
		When uncut.	When cut.		
1.	"Pitt" or "Regent." Measures 30 by 25 by 19 millimetres.	410 car.	Brilliant weighing 163⅞ car.	£20,400 (in the rough). £1,35,000 (present value, £4,80,000.)	Purchased by Pitt for £20,400 in India. The cutting cost £5,000. Sold to Duc d'Orléans, Regent of France (1717) for about £1,35,000. Now exhibited in the Apollo Gallery of the Louvre (Paris).
			Fragments.	£7,000.	
2.	"Orloff." Forms the top of the imperial sceptre of Russia. Rose-cut.		194¾ car.	First sold for £2,000; then for £12,000 in London; finally to Prince Orloff for £90,000 and an annuity of £4,000.	Stolen from a temple in Mysore (India), where it formed the eye of a statue of Brahma. Finally presented by Prince Orloff to Catherine II of Russia.
3.	"Moon of the Mountains."				Captured by Nādir SHāh at Delhi. Finally acquired by the Russian Crown for an enormous sum.
4.	"Nizam."		340 car.		Belonged to the Nizam of Hyderabad. Fractured at beginning of Indian Mutiny.
5.	"Daryā-i-Nūr." Fine diamond. Rose-cut. Is of the purest water. Now the largest diamond in the Persian collection.		186 car.		Captured by Nādir SHāh at Delhi.

No.	Name of Stone.	Weight.		Price.	
		When uncut.	When cut.		
6.	"Akbar SHāh" or "Jahāñgīr SHāh."		116 car. Later, 71 car.	About £23,333.	Once the property of Emperor Akbar, this diamond was engraved on two faces with Arabic inscriptions by the instructions of his successor. It disappeared, but turned up again in Turkey under the name of "Shepherd's Stone," being recognized by its original inscriptions, which it still retained. Recut in 1866, being reduced from 116 to 71 carats, the inscriptions being destroyed. Stone sold to the Gaekwar of Baroda for 3½ lakhs (Smith, *Gem-Stones*, 163.).
7.	"Nassak." Originally pear-shaped. Re-cut to a triangular form, being reduced to		89¾ car. 78⅝ car.	£7,200.	
8.	"Napoleon."			£8,000.	Purchased by Napoleon Bonaparte.
9.	"Cumberland."		32 car.	£10,000.	
10.	"Pigott." A fine Indian stone.		47½ car.	£30,000.	Brought to England by Lord Pigott (1775) and sold. Destroyed at 'Alī Pāsha's death.
11.	"White Saxon." Square in contour, measuring 1 1|12 in.		48¾ car.	£150,000.	
12.	"Pacha of Egypt." Brilliant.		40 car.	£28,000.	

13.	"Star of the South." Largest of Brazilian diamonds. Cut as brilliant.	254½ car.	125½ car.	£40,000 (in the rough.)	Discovered 1853.
14.	"Star of South Africa."	83½ car.	46½ car.	£25,000 (when cut).	
15.	"Stewart."	288⅜ car.	120 car.	£6,000; shortly afterwards, £9,000.	
16.	"Victoria," "Imperial," or "Great White."	457 car.	180 car.	£20,000.	Eventually sold to the Nizam of Hyderabad for £20,000.
17.	"Excelsior." By far the largest South African stone till 1905. From it were cut 21 brilliants of varying weights, total weight of cut stones amounting to (Smith).	969½ car.	364 3|32 car.		Found 1893. According to Dr. Bauer, this stone measures 2½ by 2 by 1 in., and is valued by different experts at amounts varying from £50,000 to £1,000,000. But that writer seems to identify this stone with No. 18 below.
18.	"Jubilee." From it was obtained a splendid, faultless brilliant weighing	634 car.	239 car.		Discovered in Jagersfontein mine (1895).
19.	"Porter Rhodes."	150 car.		£200,000.	Found at Kimberley, Feb. 12, 1880. Surpasses all the other South African diamonds in beauty, says Dr. Bauer, who wrote before the discovery of "Cullinan."
20.	A yellowish octahedron found at De Beers.	428½ car.	228½ or 225 car.		
21.	"Star of Minas." Had shape of a dome with a flat base.	174¾ car.			Found in 1911.

No.	Name of Stone.	Weight.		Price.	
		When uncut.	When cut.		
22.	"Star of Africa" or "Cullinan."	3025¾ car. (about 1 1|3 lb.)			Discovered at the Premier mine near Pretoria (Transvaal), Jan. 25, 1905. More than three times the size of any known stone, it broke all previous records, and set up a new scale of size and value. What is most remarkable, its shape suggested that it was a portion of an enormous stone more than double its size.
					Purchased by Transvaal Government for £150,000, and presented to King Edward VII (Nov. 9, 1907).
			516½ car.	{	Pendeloque or drop brilliant. Has 74 facets. Placed in the sceptre.
			309 3|16 car.	{	Square brilliant. Has 66 facets. Placed in the crown.
			and 103 other smaller stones (Total weight of cut stones being 1036 5|32 car.)		The first two are the two largest brilliants in existence. All the stones are of the finest quality.

COLOURED DIAMONDS

No.	Name of Stone.	Weight.		Price.	
		When uncut.	When cut.		
1.	"Hope" Largest of coloured diamonds.		44⅛ car.	£18,000 (London, 1830). £80,000 (America, 1908). £16,000 (1909). £60,000 (1911).	Possibly a portion of the drop-form stone (weighing 67 carats) brought by Tavernier from India (1642). Now privately owned in U. S. A.
2.	"Dresden."		40 car.	About £9,000 (1743)	In Green Vaults of Dresden.

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The Imperial Treasury of the Greater Mughals

By

Abdul Aziz, Bar-at-Law

Part II : Jewel Treasury

Chapter II : Biographical Notices of Gems and Gem-stones (Continued)

RUBIES

Akbar.

Abu'l-Faẓl tells us that a ruby weighing 284 jewellers' *ratīs* was worth a lakh of rupees on the treasury registers. This may be taken as an indication of the current price of this gem-stone in Akbar's reign (*Ā'īn*, I, 12; Blochmann, 16).

Jahāñgīr

In the month of *Jumāda* I, 1st regnal year, Jahāñgīr presented to Prince Parwīz a ruby worth Rs. 25,000 (*Tūzuk*, 37; R. & B., I, 77).

Again, on 21 *Jumāda* II, same year, a necklace composed of 4 rubies and 100 pearls was bestowed on Parwīz (*Tūzuk, ibid.*; R. and B., I, 79).

Next comes an insignificant stone. In II R. Y. a man pretending to be Mīrzā Ḥusain son of Mīrzā SHah Rukh, presented a petition for military assistance, and offered as *peshkash* 'a ruby of the colour of an onion, which was worth 100 rupees' (*Tūzuk*, 56; R. and B., I, 118).

A ruby ring and a ruby are described in the following passage :

'Murtaẓā KHān from Gujarat sent by way of offering a ring made of a single ruby of good colour, substance, and water, the stone, the socket, and the ring being all of one piece. They weighed 1½ tanks and one surkh, which is equal to one miṣqal and 15

surkhs.[1] This was sent to me and much approved. Till that day no one had ever heard of such a ring having come to the hands of any sovereign. A single ruby weighing six surkhs or two tanks and 15 surkhs, [2] and of which the value was stated to be £25,000, [3] was also sent. The ring was valued at the same figure' (*Tūzuk*, 63 ; R. & B., I, 132-33).

On the 22nd. *Jumāda* I (III R. Y.) Āṣaf KHān made Jahāñgīr 'an offering of a ruby of the weight of seven *tānk*, which Abū-l-qāsim, his brother, had bought in the port of Cambay for 75,000 rupees. It is of a beautiful colour and well-shaped, but to my belief is not worth more than 60,000 rupees' (*Tūzuk*, 70 ; R. & B., I, 148).

On the 17th. *Jumāda* II (IV R. Y.) Jahāñgīr bestowed on Prince Parwīz a ruby worth Rs. 60,000, and another ruby with two single pearls, estimated at about Rs. 40,000, were conferred on KHurram (*Tūzuk*, 75 ; R. & B., I, 156).

In the beginning of *Ẕi'l-qa'd* (same year), KHānkẖānān sent to Jahāñgīr by Mullā Ḥayātī a ruby and two pearls worth about Rs. 20,000 (*Tūzuk*, 77 ; R. & B., I, 160).

A famous ruby was offered by Rānā Amar Singh, when hard pressed, to Prince KHurram. The latter placed it among his offerings to the Emperor on his return to court. The story is thus told by Jahāñgīr : 'On the first day he [KHurram] paid his respects, he laid before me a celebrated ruby of the Rānā, which, on the day of his paying his respects, he had made an offering of to my son, and which the jewellers valued at 60,000 rupees. It was not worthy of the praise they had given it. The weight of this ruby was eight *tānk*, and it was formerly in the possession of Rāy Maldeo, [4] who was the chief of the tribe of the Rāṭhors and one of the chief rulers (or Rays) of Hindustan. From him it was transferred to his son

1. This should be 1 *miṣqāl* and 11 *surkẖs*, else the equation is quite wrong. The point is discussed above (p. .. .. .. above).

2. This equation is absurd as it stands. Even if we assume '2 *miṣqāls*' has been omitted before 'six *surkẖs*', we cannot equate the two weights until we also assume the '15 *surkẖs*' to be a mistranscription for '11 *surkẖs*' (as we did before). This would give a not unlikely value of 26½ *ratīs* for the *miṣqāl*.

3. A misprint Rs. 25,000.

4. This Rāja Māldev we often find associated with one gem or another. We have already seen how he made a bid, albeit an unsuccessful one, for Bābur's diamond. He seems to have had a taste for precious stones ; and of course he was a man of considerable resource.

Chandar Sen, who, in the days of his wretchedness and helplessness, sold it to Rānā Uday Singh. From him it went to Rānā Pratāp, and afterwards to this Rānā Amar Singh. As they had no more valuable gift in their family, he presented it on the day that he paid his respects to my fortunate son Bābā KHurram, together with the whole of his stud of elephants, which, according to the Indian idiom, they call [which the Hindus call] *gheta chār*, I ordered them to engrave on the ruby that at the time of paying his respects Rānā Amar Singh had presented it as an offering to Sulṭān KHurram' (*Tūzuk*, 140 ; R. & B., I, 285-86).

On the 10th. *Farwardīn* (XI R. Y.) 'Dayānat KHān presented his offering of two pearl rosaries, two rubies, six large pearls, and one gold tray, to the value of 28,000 rupees. At the end of Thursday, the 11th., I went to the house of I'timād-ud-daulah in order to add to his dignity. He then presented me with his offering, and I examined it in detail. Much of it was exceedingly rare. Of jewels there were two pearls worth 30,000 rupees, one *quṭbī* ruby which had been purchased for 22,000 rupees, with other pearls and rubies. Altogether the value was 110,000 rupees. These had the honour of acceptance, and of cloth, etc., the value of 15,000 rupees was taken' (*Ibid.*, 156 ; R. & B., I, 318-19).

Eight days later Prince KHurram offered to the Emperor 'a ruby of the purest water and brilliancy, which they pronounced to be of the value of 80,000 rupees' (*Tūzuk*, 157 ; R. & B., I, 320).

Next, we have an interesting story from Jahāñgīr which throws welcome sidelight on Prince KHurram's discrimination and memory, and shows that even from a boy he took a lively interest in pearls and precious stones : 'After the victory over the Rānā', says the Emperor, 'my son presented me in Ajmir with an exceedingly beautiful and clear ruby, valued at 60,000 rupees. It occurred to me that I ought to bind this ruby on my own arm. I much wanted two rare pearls of good water of one form to be a fit match for this kind of ruby. Muqarrab KHān had procured one grand pearl of the value of 20,000 rupees, and given it to me as a New Year's offering. It occurred to me that if I could procure a pair to it they would make a perfect bracelet. KHurram, who from his childhood had had the honour of waiting on my revered father, and remained in attendance on him day and night, represented to me that he had seen a pearl in an old turban (*sar-band*)[4a] of a

4a. A *sar-band* is a wreath or fillet for fastening a lady's head-dress (Steingass). *Bahār-i-'Ajam* supports this sense.

weight and shape equal to this pearl. They produced an old *sarpīch* (worn on the turban), containing a royal pearl of the same quality, weight and shape, not differing in weight even by a trifle, so much so that the jewellers were astonished at the matter. It agreed in value, shape, lustre, and brilliance; one might say they had been shed from the same mould. Placing the two pearls alongside of the ruby, I bound them on my arm, and placing my head on the ground of supplication and humility, I returned thanks to the Lord that cherished His slave, and made my tongue utter His praise '[5]—

از دست و زبان که برآید
کز عهده شکرش بدر آید

'Whose hand and tongue can perform the dues of His thanks adequately?'

The story of the bargain of a ruby is thus narrated in the *Tūzuk*. It occurs in the annals of XII R. Y.:—'Then Mahābat KHān had the honour of kissing the ground, and presented an offering of 100 muhrs and 1,000 rupees, with a parcel (*gaṭhṛī*) of precious stones and jewelled vessels, the value of which was 124,000 rupees. Of these one ruby weighed 11 miskals; an European brought it last year to sell at Ajmir, and priced it at 200,000 rupees, but the jewellers valued it at 80,000 rupees. Consequently the bargain did not come off, and it was returned to him and he took it away. When he came to Burhanpur, Mahābat KHān bought it from him for 100,000 rupees' (*Tūzuk*, 195; R. &. B., I, 394).

Among the offerings made by Prince SHāh Jahān after his victorious return from the Deccan (XII R. Y.) there was 'a fine ruby they had bought for my son at the port of Goa for 200,000 rupees; its weight was 19½ tanks,[6] or 17 miskals, and 5½ surkhs. There

5. *Tūzuk*, 158; R. & B., I, 322. I have quoted the verse in the original, and have appended to it my own translation.

6. The Persian text has '19 *tānks*', which seems to be the more correct reading. See P. above.

was no ruby in my establishment over 12 tanks, and the jewellers agreed to this valuation' (*Tūzuk*, 198 ; R. &. B., I, 399-400). This ruby of 12 *tānks*, to which the Emperor refers as hitherto the largest in the treasury, is probably the one mentioned in the last paragraph.

According to Sir Thomas Roe, some seventeen months earlier this ruby had been offered to Jahāñgīr by the Portuguese merchants for five lakhs of rupees, when the Emperor wouldn't pay more than a lakh for it. According to another note by the ambassador, seven lakhs was demanded. The stone, he says, weighed 13 *tolas !* (Roe, 161-62 and f.n.). The way in which Roe has coolly multiplied both the weight and the value by three does not add to his reputation for responsible accuracy.

On Thursday, the 9th. *Āẕar* (XII R. Y.) the Emperor presented Prince SHāh Jahān with 'a ruby of one colour, weighing 9 tanks and 5 surkh, of the value of 125,000 rupees, with two pearls. This is the ruby', he says, 'which had been given to my father[7] at the time of my birth by Ḥaẕrat Maryam-makānī, mother of H. M. Akbar, by way of present when my face was shown, and was for many years in his *sarpīch* (turban ornament). After him I also happily wore it in my *sarpīch*. Apart from its value and delicacy, as it had come down as of auspicious augury to the everlasting State, it was bestowed on my son' (*Tūzuk*, 202-3 ; R. & B., I, 409).

On Tuesday, the 15th. *Isfandārmuẕ* (XIII R. Y.), Jahāñgīr was on a hunting expedition to Amānābād with the ladies of the *maḥal*, where 'a string [necklace ?] of pearls and rubies that Nūr-Jahān Begam had on her neck was broken, and a ruby of the value of Rs. 10,000 and a pearl worth Rs. 1,000 were lost.' Both of them were found on the following Thursday (*Tūzuk*, 263 ; R. & B., II, 74). We learn incidentally the value of some of the jewels worn by the Empress.

A fortnight later, on New Year's Day of R. Y. XIV (which fell on Thursday, the 4th. of *Rabī* 'II, 1028 *A.H.*=March 10, 1619 *A.C.*) Prince SHāh Jahān offered to his royal father, among other things, a *yāqūt* (ruby) weighing 22 *surkhs*, of good colour, water, and shape, valued by the jewellers at Rs. 40,000, and a very fine *quṭbī*[8] ruby (*la'l-i-quṭbī*), 3 *tānks* in weight, also valued at 40,000 rupees (*Tūzuk*, 265 ; R. & B., II, 78).

7. This is the translator's oversight : the ruby was presented to the infant Salīm, and not to his father.

8. The translator prefers to read this word '*Qibṭī*', *i.e.*, Egyptian.

Towards the close of XV R. Y., the SHāh of Persia sent to Jahāñgīr 'a ruby weighing 12 *tānks*,[9] which had belonged to the jewel-chamber of M. Ulugh Beg, the successor of M. SHāh-rukh. In the course of time, and by the revolutions of fate, it had come into the hands of the Ṣafawī family. On this ruby there were engraved in the *Naskh* character the words : " Ulugh Beg b. M. SHāh-rukh Bahādur b. Mīr Tīmūr Gūrgān ". My brother, SHāh 'Abbās, directed that in another corner they should cut the words :

Banda-i-SHāh-i-Wilāyat 'Abbās

" The slave of the King of Holiness, 'Abbās ", in the *Nasta'līq* character. He had this ruby inserted in a *jīgha* (turban ornament), and sent to me as a souvenir. As the ruby bore the names of my ancestors, I took it as a blessing for myself, and bade Sa'īdā, the superintendent of the goldsmith's department, engrave in another corner the words " Jahāñgīr SHāh b. Akbar Shāh ", and the current date. After some days, when the news of the conquest of the Deccan arrived, I gave that ruby to KHurram, and sent it to him' (*Tūzuk*, 325 ; R. & B., II, 195-96).

This is the ruby which was afterwards set in the middle slab of the rail of the Peacock Throne, as will be mentioned in another place (*B. N.*, I, ii, 80). The price of this stone is stated to be one lakh of rupees.

SHāh Jahān

When SHāh Jahān was marching from Junair to Agra, where his coronation was awaiting him, and approached Mewar, Rānā Karan paid his respects at Gogunda (4th. *Jumāda* I, 1037 *A. H.*). Among the presents SHāh Jahān bestowed on the Rānā was a *dhakdakī quṭbī* ruby worth Rs. 30,000 (*'Amal-i-Ṣāliḥ*, I, 220, *Qarniya*, Qazwīnī, and *Iqbālnāma-i-Jahāñgīrī*, 304. *Tūzuk*, 426, has only Rs. 3,000, which is an error).

The account of some important ornaments in SHāh Jahān's Jewel Treasury given by Mullā 'Abdu'l-Ḥamīd Lāhorī is interesting :

The *sarpech* [turban ornament] which the Emperor wears on high occasions consists, he says, of five large rubies and twenty-four large pearls, the central ruby weighing 12 *tānks* or 288 jewel-

9. We have "12 *miṣqāls*" in the *Iqbālnāma*, p. 178.

lers' *ratīs*. Although the price of this stone is only two lakhs of rupees on the royal registers, if a merchant were to obtain such a gem-stone, princes or nobles would pay even four lakhs for it and buy it for presentation to the Emperor : money is so abundant and such a present so rare. It is true that there are a few rubies in the royal jewel treasury exceeding it in weight; for instance, the one which Prince SHāh Jahān bought for two lakhs and presented to his father on 11 *SHawwāl*, 1026 *A. H.*, when he waited on him after his first victory in the Deccan. This last is the heaviest ruby in the imperial collection, and 1½ times the weight of the ruby in question ; but none equals the latter in purity [*kāmil 'iyārī*] (B. N., II, 391).

We have already reviewed Jahāñgīr's report of presentation of this second ruby, which weighed 19 *tānks* (p. 231 above). Now the question is whether this central ruby of the *sarpech* is the stone which Mahābat KHān purchased from a European for a lakh of rupees, and offered to Jahāñgīr. The weight agrees, since 288 strikes very nearly a mean between 286 and 291½, the two alternative weights of the other stone. The prices assigned differ enormously no doubt, but the price asked originally by the European may after all be reasonable ; besides gem-stones of special size and quality were at a premium in SHāh Jahān's reign generally.

In a gem-stone, continues 'Abdu'l-Ḥamīd, four things are required : (1) colour ; for instance, colour of a ruby should be neither dark red, which is too deep, nor the colour of a peach-blossom, which is too light. (2) Clearness and flawlessness [*bejiramī*]. (3) Shape. (4) Size and weight. This ruby is of a beautiful colour and has all the four qualities.

The best and the largest of the pearls in the *sarpech* is of the shape of a guava and weighs 47 *ratīs*, and is priced at Rs. 50,000. The total value of the *sarpech*, allowing only two lakhs for the large ruby, is estimated at 12 lakhs (*B. N.*, II, 391-92).

Next the same historian tells us of a *tasbīḥ* [chaplet or necklace] which consisted of five rubies and thirty pearls, the total price of the ornament being 8 lakhs of rupees.

The largest and the purest of the pearls, he continues, are put on the *sarpech*, and such as are left over are strung on this *tasbīḥ*. Besides these there are two *tasbīḥs* containing altogether 125 pearls between which are strung alternately coloured *yāqūts*. These two *tasbīḥs* are valued at 20 lakhs. Each pearl on these *tasbīḥs* weighs 32 *ratīs*, and is worth Rs. 40,000 (*Ibid.*, 392).

On 24 *Rabī* ' II, 1057 *A. H.*, when the Emperor was at Kabul, Princes SHāh Shujā' and Murād Bakhsh came and waited on him. The Emperor bestowed on SHāh Shujā' a *khil'at* (robe of honour) with *nādirī*, a string of pearls, a *sarpech* of rubies, and a *jīgha* (turban ornament) set with diamonds, besides some jewelled weapons—the whole of the value of a lakh of rupees (*B. N.*, II, 681).

Aurangzeb

For this reign a few European notices are available.

Tavernier, when he inspected the leading gems in Aurangzeb's treasury, saw there a chain ' of pearls and rubies of different shapes pierced like the pearls. ' In the middle of this chain, he says, ' there is a large emerald of the " old rock " [10], cut into a rectangle, and of high colour, but with many flaws. It weighs about 30 *ratīs*.'

Tavernier also saw ' a balass ruby cut en cabochon, of fine colour and clean pierced at the apex, and weighing 17 melscals [*miṣqāls*]. Six melscals make one ounce (French).' Possibly the famous stone which, we know, was presented by Prince SHāh Jahān to Jahāñgīr in XII R. Y. (p. 234 above).

Tavernier also saw ' another cabochon ruby of perfect colour, but slightly flawed and pierced at the apex, which weighs 12 melscals [*miṣqāls*].' (I, 318).

Is this the stone which Mahābat KHān purchased from a European for a lakh of rupees and offered to Jahāñgīr, and which weighed 11 *miṣqāls* ?

Among the articles Tavernier presented to Nawāb Ja'far KHān was a ' ring with a perfect ruby which cost 1,300 livres [£97 10s.].' (Tavernier, I, 114).

It appears that SHāh Jahān knew more about precious stones than the jewellers and experts themselves. In the following anecdote from Tavernier, he is appealed to in a dispute where appraisers disagreed on a vital point, and his verdict was accepted as final with tacit consent.

10. 'Precious stones were denominated "of the old rock" (*rocca velha*), when they exhibited more or less perfect crystalline forms, being considered more developed than those with amorphous forms. (Linschoten, ii, 137 ; Fryer, i, 96 ; Bernier, 148).' (P. 318, f.n. 2).

'No. 2 [in Pl. IV],' says Tavernier, 'represents a large stone believed to be a ruby, and sold as such to Ja'far Khān, the Great Mogul's uncle, who bought it for the sum of 95,000 rupees, which amount to 1,425,000 livres.[11] He presented it to the Great Mogul, with many other precious things, on the King's festival, that is to say, the day whereon he is weighed, as I have elsewhere said. This stone having been priced at a little less than it cost, there happened to be present at that time an old Indian who had previously been chief jeweller to the King, but had been dismissed from his charge through jealousy. Having taken this stone in his hands, he maintained that it was not a balass ruby, that Ja'far Khān had been cheated, and that the stone was not worth more than 500 rupees. The King having been informed of the discussion, summoned the old Indian, with all the other jewellers, who maintained on their side that the stone was a balass ruby. As in the whole Empire of the Great Mogul there was no one more proficient in the knowledge of stones than Shāh Jahān, who was kept as a prisoner at Agra by Aurangzeb, his son, the latter sent the stone to the Emperor, his father, asking for his opinion. After full consideration he confirmed the verdict of the old jeweller, and said that it was not a balass ruby, and that its value did not exceed 500 rupees. The stone having been returned to Aurangzeb, he compelled the merchant who had sold it to take it back and return the money he had received.' (Tavernier, II, 100-101).

The story is corroborated by Bernier in the following passage : 'During a festival of this kind [a royal anniversary] *Aureng-Zebe* having paid a visit to *Jafer-kan,*' ["'Umdat-ul-Mulk" Ja'far KHān], not as his *Vizir* but as a kinsman, on the pretext that he wished to see a house which he lately erected, the *Vizir* made a present to the King of gold coins to the amount of one hundred thousand crowns, some handsome pearls, and a ruby, which was estimated at forty thousand crowns, but which *Chah-Jehan,* who understood better than any man the value of every kind of precious stone, discovered to be worth less than five hundred, to the great confusion of the principal jewellers, who in this instance had been completely deceived' (P. 271-72).

Now we can proceed to tabulate the information obtained so far :

11. There is here a mistake on one side or the other ; a cipher should either be added to the rupees or subtracted from the livres.' (P. 100 f.n. 2).

JAHĀÑGĪR'S REIGN

No.	Description	Weight of Cut Stone	Price	Authorities
1.	Presented by Jahāñgīr to Prince Parwīz (*Jumādā* I, I R. Y.).		Rs. 25,000	*Tūzuk*, 37; R. & B., I, 77
2.	Presented to Jahāñgīr by "Mīrza Ḥusain" (II R. Y.)		Rs. 100	„ 56; „ „ I, 118
3.	Ruby Ring in one piece sent to Jahāñgīr by Murtaẓā KHān from Gujarāt. Of good colour, substance and water.	37 *ratīs*	Rs. 25,000	„ 63; „ „ I, 132
4.	Ruby sent by same.	59 *ratīs*	„ „	„ „ „ „ I, 133
5.	Offered by Āṣaf KHān to Jahāñgīr (*Jumadā* I, III R. Y.). Of beautiful colour and well-shaped.	168 *ratīs*	Rs. 60,000	Abū'l-Qāsim bought it in Cambay for Rs. 75,000. *Tūzuk*, 70; R. & B., I, 148
6.	Bestowed by Jahāñgīr on Prince Parwīz (*Jumādā* II, IV R. Y.)		„ „	„ 75; „ I, 156.
7.	Celebrated Ruby offered by Rānā Amar Singh to Prince KHurram, and by the latter to Jahāñgīr. It came originally from Rāja Māldeo.	192 *ratīs*	„ „	„ 140; „ I, 285-86.
8.	*Quṭbī* Ruby presented by I'timād-ud-daula to Jahāñgīr (Beginning of XI R.Y.)		Rs. 22,000	„ 156; „ I, 318.
9.	Ruby of the purest water and brilliance offered by Prince KHurram.		Rs. 80,000	„ 157; „ I, 320.

No.	Description.	Weight of Cut Stone.	Price	Authorities
10.	Purchased by Mahābat KHān from a European and offered to Jahāñgīr.	286 or 291½ *ratīs*.	Rs. 100,000	„ 195; „ I, 394.
11.	Fine Ruby offered by Prince SHāh Jahān to Jahāñgīr (XII R. Y.). Largest in the Treasury.	456 *ratīs*	Rs. 200,000	Bought at Goa. *Tūzuk*, 198; R. & B., I, 399-400
12.	Ruby of one colour bestowed by Jahāñgīr on Prince SHāh Jahān (XII R. Y.). Akbar's mother had presented it to Prince Salīm at the latter's birth.	221 *ratīs*	Rs. 125,000	„ 202-3; „ I, 409
13.	Ruby on Nūr Jahān's necklace.		Rs. 10,000	„ 263; „ II, 74.
14.	Ruby offered by SHāh Jahān to his royal father (XIV New Year's Day). Of good colour, water and shape.	22 *ratīs*	Rs. 40,000	„ 265; „ II, 78.
15.	Also a very fine *Quṭbī* Ruby (on same occasion).	72 *ratīs*	„ „	„ „ „ „
16.	An engraved Ruby of Timurid family sent by SHāh 'Abbās of Persia to Jahāñgīr; then bestowed by the latter on Prince SHāh Jahān. This history engraved on it in three inscriptions. Later set in the middle slab of the rail of the Peacock Throne.	288 or 312 *ratīs*	Rs. 100,000	„ 325; „ II, 195-96; B. N., I, ii, 80.
	SHĀH JAHĀN'S REIGN			
1.	Central Ruby of SHāh Jahān's *sarpech*. Superior in quality even to the much	288 *ratīs*	Rs. 2,00,000	*B.N.*, II, 391.

INDIAN RUBIES WHICH NEVER ENTERED THE IMPERIAL TREASURY

No.	Description.	Weight of Cut Stone.	Price.	Authorities.
1.	A *Dhakdakī quṭbī* Ruby which SHāh Jahān bestowed on Rānā Karan before Coronation (1037 *A.H.*).		Rs. 30,000	*'Amal-i-Ṣāliḥ*, I, 220 ; *Iqbālnāma-i-Jahāngīrī*, 304 ; *Tūzuk*, 426.
2.	Ruby which belonged to the King of Bījāpur. 'It is hollowed from beneath [i.e. cut *en cabuchon*], clean, and of the first quality.'	16 4|5 Engl. car.	Rs. 49,700 (1653).	Tavernier, II, 101 and 348 (Pl. IV, Nos. 3 and 4).
3.	A Ruby of the second quality. In form an almond cabuchon, somewhat hollowed beneath, and bored near the point.	58 *ratīs*=48 18|25 Engl. car.	Rs. 50,000	A Banian merchant showed it to Tavernier at Benares. Tavernier, II, 102 and 348 (Pl. IV, No. 5).
4.	A Ring with a perfect Ruby which Tavernier presented to Nawāb Ja'far KHān.		£ 97 10s.	Tavernier, I, 114.

Some of the world's famous rubies are tabulated here to give a scale of sizes and values.

FAMOUS RUBIES (*Nos. 1—7 from ruby mines near Magok, near Mandalay, Upper Burma.*).

No.	Description.	Weight. When uncut.	Weight. When cut.	Price.	Authorities.
1.	Ruby, rich in colour; was originally cushion-shaped.	37 carats	32 5|16 carats	£ 10,000	Brought to Europe in 1875. According to Streeter the finest that ever came to Europe.
2.	Ruby, a blunt drop in form.	47 carats	38 9|16 carats	£ 20,000	
3.	A colossal stone. Broken into three pieces: Two were cut and the third was sold uncut in Calcutta.	400 carats	The weights of the cut pieces: 70 carats and 45 carats.	Price of the third piece. sold uncut: 7 lakhs of rupees =£46,667.	
4.	Another large stone broken into two parts.		98 carats 74 carats		
5.	A beautiful ruby, found in Tagoungnandaing Valley; perfectly clear and of splendid colour.	18½ carats	11 carats	Sold for £ 7,000. Now valued at £ 10,000.	
6.	Ruby found in 1899.	77 carats			Sold in India (1904) for 4 lacs (£26,667)
7.	Ruby as large as a pigeon's egg.				Was presented in 1777 to the Czarina Catherine by Gustav III of Sweden when on a visit to St. Petersburg. Now amongst the Russian regalia.
8.	*S̲Hāh's Ruby.* Belongs to the King of Persia. 'It is of the thickness and shape of an egg, is bored through and of very high colour, beautiful and clean, with the exception of a small flaw at the side.'		192 *ratīs*= 161 7|25 Engl. car.		Tavernier, II, 100 and 348 (Pl. IV, No. 1).

SAPPHIRES

Akbar

The *Ā'īn's* quotation for a *yāqūt* of 4 *tānks* and 7¾ *surkhs*, *viz.*, 103¾ jewellers' *ratīs* is Rs. 50,000 (*Ā'īn*, I, 12 ; Blochmann, 16).

Jahāñgīr

In the XII R. Y. ' Ādil KHān sent to Jahāñgīr a sapphire weighing 6 *tānks* and 7 *surkhs*, *i.e.*, 151 jewellers' *ratīs*, and valued at Rs. 100, 000. The Emperor says he had not seen before such a large and fine sapphire, nor one of such a beautiful and rich colour (*Tūzuk*, 198).

In XIII R. Y., again, on Thursday, the 17th. *SHa'bān*, I'timād-ud-daula presented an offering of a *quṭbī* sapphire exceedingly delicate (*Tūzuk*, 237; R. & B., II, 23).

Aurangzeb

Tavernier saw in Aurangzeb's Treasury 'an oriental topaz [yellow sapphire (corundum)] of very high colour cut in eight panels, which weighs 6 melscals [miṣqāls], but on one side it has a small white fog within' (Tavernier, I, 318-19). This, in all probability, was the only jewel which Aurangzeb wore on his cap when he ascended the throne (*Ibid.*, 296).

This stone is illustrated as No. 6 of Pl. IV, where the author adds that he did not see the Emperor wear any other jewel during the time he remained at his court on his last visit to India. It weighed 152 4|25 Engl. carats, and was bought at Goa for the Great Mogul for Rs. 181,000 or £20,412 10s. (*Ibid.*, II, 102 and 348).

Bernier is probably speaking of the same stone in the following passage : 'The King appeared seated upon his throne, at the end of the great hall, in the most magnificent attire. His vest was of white and delicately flowered satin, with a silk and gold embroidery of the finest texture. The turban, of gold cloth, had an aigrette whose base was composed of diamonds of an extraordinary size and value, besides an Oriental topaz, which may be pronounced unparalleled, exhibiting a lustre like the sun' (Bernier, 268).

As we have already seen, Tavernier also saw in Aurangzeb's Treasury an oriental amethyst, *i.e.*, a purple sapphire, strung in the middle of a chain of pearls and emeralds—a long table, weighing some 40 *ratīs* (See p. 242 below).

SAPPHIRES IN MUGHAL TREASURY

JAHĀÑGĪR'S REIGN.

No.	Description.	Weight of Cut Stone.	Price.	Authorities.
1.	Sent by 'Ādil K̲hān to Jahāñgīr (XII R.Y.). Large and fine. Of beautiful and rich colour.	151 *ratīs*	Rs. 100,000	*Tūzuk*, 198 ; R. & B., 1,400
2.	*Quṭbī* sapphire offered by I 'timād-ud-daula to Jahāñgīr (XIII R. Y.).Exceedingly delicate.			„ 237 ; „ II, 23.

AURANGZEB'S REIGN

1.	The favourite 'Oriental Topaz' of Aurangzeb. Of very high colour. Cut in eight panels. 'Unparalleled.'	152 4|25 Engl. car.	Rs. 181,000	Bought at Goa for the Emperor. Tavernier, I, 296, 318-19 ; II, 102 and 348. Bernier, 268.
2.	The 'Oriental Amethyst' in the middle of Aurangzeb's chain of pearls and emeralds. A long table. 'Perfection of beauty'.	40 *ratīs*		Tavernier, 318.

INDIAN SAPPHIRE OUTSIDE MUGHAL TREASURY

No.	Description	Weight of Cut Stone	Price.	Authorities.
1.	A *Yāqūt-i-kuḥlī* (Budāyūnī) or *Yāqūt-i-arzaq* (Firiṯha) plundered by Maḥmūd at Muttra in 409 *A.H.*=1018 *A.C.*	450 *miṣqāls.* (!!!) or 400 *miṣqāls*		Budāyūnī, *Muntakḫab-ut-Tawārīḵh*, I, 15; Engl. Tansl., I, 25. *Tārīḵh-i-Firiṯha* (Nawalkiṯor), p. 29. The weight, whether 450 *miṣqāls* or 400 *miṣqāls* be taken as the correct tradition, is incredible. It comes to well over 2 seers or 4lb. Nor is such a stone heard of at any later time.

FAMOUS SAPPHIRES

No.	Name or Description.	Weight. When uncut	Weight. When cut	Price.	
1.	By far the most gigantic ever reported.	951 carats (cut ?)			Seen in 1827 in the treasury of the King of Ava.
2.	"Rospoli." Quite flawless.	132 1/16 carats.		}	Two splendid rough specimens in the Jardin des Plantes collection.
3.	2 in. long and 1½ in. thick.			}	
4.	A fine cut stone, brilliant-cut above, and step-cut below, the girdle.		100 carats		In possession of Duke of Devonshire.
5.	Image of Budha cut out of a single sapphire, mounted on a gold pin.				In Mineral Gallery of the British Museum (Natural History).

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EMERALDS

Akbar

Abū'l-Faẓl quotes Rs. 52,000 for an emerald weighing 17¾ *tānks* and 3 *surkhs*, *i.e.*, 429 jewellers' *ratīs* (*Ā'īn*, I, 12 ; Blochmann, 16).

Jahāñgīr

Among the offerings of Ibrāhīm 'Ādil KHān already spoken of was an emerald. 'Although it is from a new mine,' says Jahāñgīr, 'it is of such a beautiful colour and delicacy as I have never before seen' (*Tūzuk*, 198 ; R. & B., I, 400).

Aurangzeb

Tavernier saw in Aurangzeb's Treasury a chain of 'pearls and emeralds, round and bored. All the pearls are round,' he says, 'and of diverse waters, and from 10 to 12 ratis each in weight.' In the middle of this chain there was 'an oriental amethyst [*i.e.*, a purple sapphire], a long table, weighing about 40 ratis, and the perfection of beauty' (Tavernier, I, 318).

In the middle of the chain of rubies already spoken of (under Rubies) there was a large emerald of the "old rock", cut into a rectangle, and of high colour, but with many flaws. It weighed about 30 *ratīs* (*Ibid.*) .

EMERALDS IN THE MUGHAL TREASURY

JAHĀÑGĪR'S REIGN.

No.	Description.	Weight of Cut Stone.	Price.	Authorities.
1.	Sent by 'Ādil KHān to Jahāñgīr (XII R. Y.). Fine and of good colour.			*Tūzuk*, 198; R. & B., I, 400.
		AURANGZEB'S REIGN.		
1.	Large Emerald of the 'old rock'. Cut into a rectangle. Of high colour, but with many flaws.	30 *ratīs*.		Tavernier, I, 318.

FAMOUS EMERALDS

No.	Description.	Weight When uncut	Weight When cut.	Price.	Remarks.
1-5.	Five choice stones (the so-called Spanish or Peruvian emeralds) presented by Cortez to his bride. These stones had been worked to divers fantastic shapes.				Lost in 1529, when Cortez was shipwrecked.
6.	Largest single crystal known to exist at present. Diameter, 2 in., length, about the same. Of good colour, but badly flawed.		1347 carats		In possession of the Duke of Devonshire. Exhibited at the Great Exhibition of 1851.
7.	A fine, though much smaller, crystal, but of even better colour. Widest cross-diameter, 1 1|8 in.; length, same.		156½ carats		In Mineral Gallery of the British Museum (Natural History).
8.	Finest cut emerald.		30 carats.		Belonged to the Czar of Russia.
9.	Small but perfect and flawless, faceted emerald. Set in a gold hoop.				In British Museum (Natural History). See Illustration in Smith, *Gem-stones*, Pl. I, fig. 5.

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TOPAZ

Jahāñgīr

Among the presents offered by Mīr Jamāl'ud-Dīn Ḥusain early in XI regnal year was 'a jewelled dagger which had been made under his superintendence. On its hilt was a yellow ruby [*yāqūt-i-zard*, really a topaz] exceeding clear and bright, in size equal to half a hen's egg. I had never before seen so large and beautiful a yellow ruby. Along with it were [set] other rubies of approved colour and old emeralds. Brokers [*muqayyimān*] valued it (the dagger) at 50,000 rupees' (*Tūzuk*, 155-56 ; R. & B., I, 317-18).

TOPAZ IN MUGHAL TREASURY

JAHĀÑGĪR'S REIGN

Description	Weight of Cut Stone.	Price	Authorities.
Topaz set on the hilt of a dagger offered to Jahāñgīr by Mīr Jamāl-ud-Dīn Ḥusain (XI R.Y.). Bright and large and beautiful: in size equal to half a hen's egg.		The dagger worth Rs. 50,000	*Tūzuk*, 155-56; R. & B., I, 317-18.

FAMOUS TOPAZ

Name.	Weight. When uncut	When cut	Price.	Remarks.
"Braganza"	1680 carats			In the Portuguese regalia. Supposed to be a diamond but probably a white topaz, says Mr. Smith (p. 170). The *New Standard Dictionary* treats it as a diamond; and the *Encyclopaedia Britannica* article apparently counts it as a topaz.

PEARLS

Akbar

The standard price given in *Ā'īn* is Rs. 50,000 for a pearl weighing 5 *tānks*, which means 120 jewellers' *ratīs* (*Ā'in*, I, 12; Blochmann, 16).

Jahāñgīr

We have already seen (p. 228 above) that Jahāñgīr presented a necklace consisting of four rubies and one hundred pearls to Prince Parwīz (I R. Y.).

Again, a ruby and two single pearls valued at about Rs. 40,000 were bestowed on Prince KHurram in IV R. Y. (p. 229 above).

Some five months later, KHān Khānān sent to Jahāñgīr a ruby and two pearls of the value of about Rs. 20,000 (*ibid.*).

On the New Year's Day of V R. Y. KHān-i-A'ẓam offered a pearl worth Rs. 4,000 (*Tūzuk*, 79; R. & B., I, 165).

Here is a good example of a gift of low-priced pearls on a large scale: 'As I had made a rule', says Jahāñgīr, 'that they should bring before me after two watches of the night had passed the dervishes and necessitous people who had collected in the illustrious palace, this year also after the same manner I bestowed on the dervishes with my own hand and in my own presence 55,000 rupees and 190,000 bighas of land, with fourteen entire villages, and twenty-six ploughs, and 11,000 *kharwār*[12] (ass-loads) of rice; I presented as well 732 pearls, of the value of 36,000 rupees, to the servants who by way of loyalty had bored their ears' (*Tūzuk*, 136—37; R. & B., I, 279).

We have also already learnt (p. 230 above) that among Dayānat KHān's offerings (XI R. Y.) there were two pearl rosaries and six large pearls, though their price is not separately marked.

The next day I'timād-ud-Daula offered, among other things, two pearls worth Rs. 30,000 (*Ibid.*).

12. A KHarwār, lit., an ass-load, was a weight equal to 100 Tabrīzī maunds or nearly 700 lb. English.

The story has already been narrated of a grand pearl worth Rs. 20,000 which Muqarrab KHān had procured for Jahāñgīr, and for which Prince KHurram found a match in an old *sarpech* of Akbar's time. We need only refer here to p. 231 above.

Among 'Ādil KHān's offerings came (XII R. Y.) two pearls, one weighing 64 or 65 *surkhs* and valued at Rs. 25,000, and another weighing 16 *surkhs*, very round and fine, valued at Rs. 12,000 (*Tūzuk*, 198; R. & B., I, 400).

We have already noticed (p. 232 above) how on a hunting expedition to Amānābād Nūr Jahān broke her necklace and lost a ruby worth Rs. 10,000 and a pearl worth Rs. 1,000.

Among the offerings brought forth by Prince SHāh Jahān on the XIV New Year's Feast were six pearls: one of these, which SHāh Jahān's agents had bought in Gujarāt for Rs. 25,000, weighed 1 *tānk* and 8 *surkhs*, or 32 *ratīs;* while the other five were altogether worth Rs. 33,000 (*Tūzuk*, 265; R. & B., II, 78).

John Company's servants once bought some pearls at a total cost of £ 1521 17s. On being brought to Jahāñgīr's court, they were rejected by Āṣaf KHān. They were then offered to Muqarrab KHān, but were 'disgraced in the Kings presence by Assuff Can, as being his refuzalls' (*English Factories*, 1618—21, p. 9). After having been unsuccessfully offered to many people, they were finally sold in June, 1618, to Āṣaf KHān for Rs. 8,092—at considerable loss (Roe, 450, f. n. 1). Sir Thomas Roe takes them to task for such ruinous dealings. He exhorts them either to buy cheaper or to invoice their goods right. The ambassador assures them that at the prices scheduled by him, a yearly sale to the value of £50,000 ready money is possible, if pearls of good weight and beauty were chosen; and, further, that a trade of similar volume could be driven in precious stones, if bought according to his specifications (Roe, 450).

SHāh Jahān

In the passage quoted at length from 'Abdu'l-Ḥamīd's *Bādshāhnāma* (p. 233 above) we have already seen that SHāh Jahān's celebrated *sar-pech* (turban ornament) comprised besides five rubies twenty-four large pearls. The best and the largest of these, we were told, was of the shape of a guava, weighed 47 *ratīs*, and was valued at Rs. 50,000.

Next to this *sarpech* came the *tasbīḥ* on which there were thirty pearls and five rubies—total value, 8 lakhs of rupees (*Ibid.*).

The two other *tasbīḥs* already referred to comprised 125 pearls. These rosaries, which contained pearls and coloured *yāqūts*, were priced at 20 lakhs; and the central pearl of each was valued at Rs. 40,000, and weighed 32 *ratīs* (*Ibid.*).

SHāh Jahān sent one lakh of rupees through Mīr Ibrāhīm Ṣafdarkẖānī to Madīna, to be paid to Imām Qulī KHān, who had been shamefully ill-treated by his younger brother, Naẕr Muḥammad KHān of Tūrān, and who was now visiting the Holy places. Imām Qulī KHān, it so happened, died at Madīna before Mīr Ibrāhīm reached there. The latter thought it best under the circumstances to invest the money in purchases; so he bought from 'Alī Pāshā, governor of Laḥsā, a guava-shaped pearl weighing 43 *surkhs* for Rs. 30,000, besides some arab horses.

On 21 *Ramaẓān*, 1054 *A.H.*, Ibrāhīm Ṣafdar KHānī came back to Court and waited on the Emperor. The pearl was approved and placed on the famous *sar-pech*, the price being fixed at 40,000 rupees (*B. N.*, II, 390-91).

We have it in the *Bādshāhnāma* that on the occasion of Jahān Ārā's recovery from a long illness lasting 8 months and 8 days, a feast of rejoicing was held from the 5th to the 12th of *SHawwāl*, 1054 *A. H.*, the bath of recovery taking place on the last day of *Ramaẓān*. On the opening day of the feast the Emperor bestowed on her 130 unbored pearls for a *dast-band* (bracelet), the value totalling 5 lakhs of rupees (*B.N.*, II, 396-397).

Aurangzeb

Tavernier has a long note on pearls he found in Aurangzeb's Jewel Treasury: When inspecting it he saw 'two grand pear-shaped pearls, one weighing about 70 ratis, a little flattened on both sides, and of beautiful water and good form. Also a pearl button, which might weigh from 55 to 60 ratis, of good form and good water. Also a round pearl of great perfection, a little flat on one side, which weighs 56 ratis. I ascertained this to be the precise weight,' he continues 'and that Shāh Abbās II, King of Persia, sent it as a present to the Great Mogul. Also three other round pearls, each of 25 to 28 ratis, or thereabouts, but their water tends to yellow. Also a perfectly round pearl of 36½ ratis, of a lively white, and perfect in every respect. It is the only jewel which Aurangzeb, who reigns at present, has himself purchased on account of its beauty, for the rest either came to him from Dārā Shikoh, his eldest brother, he having appropriated them after he had caused his head to be cut off, or they were presents made to him after he ascended the throne. I have

elsewhere remarked that the Emperor has no great regard for jewels, priding himself only on being a great zealot of the law of Muhammad.

'Ākil KHān also placed in my hands, for he allowed me to examine all at my ease, two other pearls, perfectly round and equal, each of which weighed 25¼ ratis. One is slightly yellow, but the other is of a very lively water, and the most beautiful that can be seen. It is true, as I have elsewhere said, that the Prince of Arabia, who has taken Maskat from the Portuguese, possesses a pearl which surpasses in beauty all others in the world; for it is perfectly round, and so white and lively that it looks as though it was transparent, but it only weighs 14 carats. There is not a single monarch in Asia who has not asked the Prince of Arabia to sell him this pearl. Also two chains, one of pearls and rubies of different shapes pierced like the pearls; the other of pearls and emeralds, round and bored. All the pearls are round and of diverse waters, and from 10 to 12 ratis each in weight. In the middle of the chain of rubies there is a large emerald of the "old-rock," cut into a rectangle, and of high colour, but with many flaws. It weighs about 30 ratis. In the middle of the chain of emeralds there is an oriental amethyst [purple sapphire], a long table, weighing about 40 ratis, and the perfection of beauty' (Tavernier, I, 317-18).

Corresponding to the Illustration No. 4, Pl. V, we have the following letterpress :

'No. 4 is the figure of a large pearl perfect both as regards its water and its form which is like that of an olive. It is in the middle of a chain of emeralds and rubies that the Great Mogul sometimes wears round his neck, and it hangs down to his waist' (Tavernier, II, 103).

Now Tavernier, in the long passage quoted above, speaks no doubt of a chain of pearls and rubies, and of another chain of pearls and emeralds, but he has spoken nowhere of one of emeralds and rubies. Nor is it likely that here he is speaking of a third chain ; for he himself tells us in letterpress to No. 5 just below[13] that it is customary to place a pearl between two rubies or between two emeralds—which is corroborated by the arrangement of the two chains already spoken of. The truth of the matter is

13. See next quotation.

that Tavernier is pleasant easy-chair reading, but once you prick the bubble everything goes to pieces. It appears it wasn't Tavernier's practice to turn back to what he had once written, to compare or to verify. Consistency, we have noticed again and again, is a minor virtue with him.

The following letterpress corresponds to Illustration No. 5 on Plate V :

'As a round pearl of perfect form, this is the largest I know of, and it belongs to the Great Mogul. Its equal has never been found, for which reason the Great Mogul has not worn it, but has left it with other jewels which are unmounted. For if a match for it had been found, the pair might have been used as ear pendants, and each of the two pearls would have been placed between two rubies or two emeralds, in conformity with the custom of the country, every one, rich or poor, in proportion to his means, wearing in each ear a pearl set between two coloured stones' (Tavernier, II, 103-4).

Is this one of the single pearls mentioned by Tavernier in his inspection note, or had he forgotten all about this important pearl ? In any case no cross reference is given to facilitate identification ; and we can only make guesses.

The largest pearl Tavernier saw at the Mughal court was the one which, he says, 'is suspended from the neck of a peacock made of precious stones, and rests on the breast, and this peacock surmounts the throne'. This pearl is illustrated in Tavernier, Pl. V, No. 2 (Tavernier, II, 103).

In the following passage Tavernier speaks of a grand bouquet of nine large pear-shaped pearls, which he presented to Aurangzeb, and goes on to narrate at length the story of the sale of a pear-shaped pearl of 55 Florentine (or 52⅘ English) carats, which Ja'far KHān tried in vain to buy, and which was finally sold to SHā'ista KHān at a considerable rebate :

'When I arrived at Jahānābād, one of them [*i.e.*, the two Persians, *viz.*, Nawāb 'Āqil KHān "Mīr 'Askarī" and Mīrzā Mu'aẓẓam, and the Banian, Nihāl CHand] came and told me that he had the Emperor's order to see what I brought, before I would be permitted to exhibit it in his presence. They sincerely wished that the Emperor was not at Jahānābād, because they would have tried to buy all that I had for themselves, in order to profit by reselling it to the Emperor, and to the Princes when the opportunity should

occur—this, nevertheless, they had never been able to induce me to do.

On the following day all three came to see me, one after the other, and they wished to get from me amongst other things a grand bouquet of nine large pear-shaped pearls, the largest of which weighed thirty carats and the least sixteen, with another single pear-shaped pearl of fifty-five carats. As for the bouquet, the Emperor took it; but with regard to the pearl, seeing that, notwithstanding all that they could say, I was unwilling to sell them anything, they so managed that before I had shown my jewels to the Emperor Ja'far KHān, his uncle saw it, after which he did not wish to return it, saying that he would pay me as high a price for it as the Emperor, asking me not to mention it; for in fact he desired to present it to the Emperor.

After the Emperor had selected from among my jewels those which he desired, Ja'far KHān bought several pieces from me, and at the same time purchased the great pearl. Some days afterwards he caused me to be paid the amount agreed upon, with the exception of the pearl, upon which he desired me to rebate 10,000 rupees. The two Persians and the Banian had maliciously informed him that on my arrival they might, if they had wished, have had the pearl for 8,000 or 10,000 less than I had sold it to him for; this was wholly untrue, and Ja'far KHān having told me that if I would not accept the money which he offered me I might take it back, I took him at his word, assuring him that he would never see it again during his life. I kept to my word, and remained firm in my resolve. .. ..

Having then started for Bengal [*i.e.*, Tavernier having then started for Bengal], these three inspectors of jewels, incensed with spite, and urged on, no doubt, by Ja'far KHān, who was anxious to take his revenge for my refusal, wrote to Shāista Khān that I was taking some jewels to show to him, and among others a very beautiful pearl which I had sold to Ja'far Khān; but that he had returned it to me when he ascertained that I was trying to make him pay 10,000 rupees more than it was worth. They wrote similarly regarding the other jewels which I carried, and it was upon these false and malicious advices, which Shāista Khān did not receive till after he had delivered to me my bill of exchange, that the Prince wished to deduct 20,000 rupees from the total sum; this was reduced finally to a rebate of 10,000 rupees, with which I was obliged to content myself (Tavernier, I, 112-13).

The author informs us in another place (II, 89) that this pearl ' of well-formed pear shape, and of fine water' came from the pearl fishery of the Margarita island. The pearls found there, he says, surpass the others in perfection, both as regards water and size.

This pearl is illustrated as No. 3, Pl. V, where, however, the water is described as 'somewhat dead'—by no means a solitary example of the author's short memory and slipshod manner. It is the largest pearl, he adds, which has ever been taken from Europe to Asia (II, 103).

A few more stories of pearls which never entered the Mughal Treasury to our knowledge are nevertheless interesting. Some or all of these may have found their way eventually into the Imperial Treasury.

Tavernier went to meet Mīr Jumla at Gandikota, and paid a preliminary visit to him on September 3, 1652.

' On the 4th,' he says, ' we again visited the Nawāb, and showed him the jewels which we hoped to sell to the King. They consisted of some pear-shaped pearls of a weight, beauty, and size which were unusual—the least exceeding 24 carats. After having examined them well, and shown them to a number of nobles who were present with him, he asked us the price ; which having heard, he returned them to us, and at the same time said he would consider it ' (Tavernier, I, 229).

Elsewhere Tavernier narrates the story of a ' large pearl of good water, but badly shaped ', which SHā'ista KHān had once refused to buy from him. The nobleman asked for it again. Tavernier's report of the transaction is as follows :

' After I had handed it to him, " Say no more about it ", said he. " In a word, how much do you want for this pearl ? " I asked him 7,000 rupees for it, and it is true that rather than carry it back to France I would have taken 3,000. " If I give you ", he replied, " 5,000 rupees for this pearl, you will be well repaid for the loss which you say you have sustained on the golden rupees. Come to-morrow and I shall pay you 5,000 rupees. I wish you to leave contented, and you shall have in addition a khil'at and a horse. " I then made him a bow, and besought him to give me a young horse, fit for work, as I had a long journey to make. Accordingly, on the following day, I received as he had promised, the robe, mantle, two waistbands, and the turban, which constitute, as I have elsewhere described, the complete suit which these princes are accustomed to

bestow upon those whom they desire to honour' (Tavernier, I, 17-18).

The Editor guesses that this pearl was the chief of the pearls Tavernier showed to Mīr Jumla at Gandikota.

Once in the hands of SHā'ista KHān, it may subsequently have found its way into the Imperial collection.

Tavernier has the following story of a pearl belonging to the 'Prince of Muscat': 'This Prince,' he says, 'possesses the most beautiful pearl in the world, not by reason of its size, for it only weighs 12 1|16 carats, nor on account of its perfect roundness; but because it is so clear and so transparent that you can almost see the light through it. As the Gulf opposite Hormuz is scarcely 12 leagues wide from Arabia Felix to the coast of Persia, and the Arabs were at peace with the Persians, the Prince of Muscat came to visit the KHān of Hormuz, who entertained him with magnificence, and invited the English, Dutch, and some other Franks, in which number I was included, to the festival. At the close of the feast the Prince took this pearl out of a small purse which he carried suspended from his neck and showed it to the KHān and the rest of the company. The Khān wished to buy it, to present to the King of Persia, and offered up to 2,000 tomāns [about £6,900], but the Prince was unwilling to part with it. Since then I crossed the sea with a Banian merchant whom the Great Mogul was sending to this Prince to offer him 40,000 écus [£9,000] for this pearl; but he refused to accept that sum' (Tavernier, II, 87).

A footnote by the Editor supplements this information as follows: 'The account in the *Persian Travels* is that the pearl belonged to the Amīr of Vodana, who showed it to M. Constant and our author at Hormuz; it was perfectly round and transparent, and weighed 17 'abbās, or 14 7|8 carats, the 'abbās being equal to 7|8 of a carat. On behalf of the Governor of Surat, the latter, on a subsequent occasion, offered 60,000 rupees, say £6,750, to the owner for it, but he refused to sell it (*Persian Travels*, bk. ii, ch. ix.).' (P. 86, f.n. 1). We can only add that the discrepancies are irreconcilable and thoroughly characteristic of the author.

No.	Description	Weight	Price	Remarks and Authorities
	Model Pearl in Akbar's Treasury.	120 *ratīs*.	Rs. 50,000.	*Ā'īn*, I, 12 ; Blochmann, 16.
			JAHĀÑGĪR'S REIGN	
1.	Offered by "KHān-i-A'ẓam" to Jahāñgīr (V New Year's Day).		Rs. 4,000.	*Tūzuk*, 79 ; R. & B., I, 165.
2.	732 pearls distributed by Jahāñgīr among his loyal servants.		Rs. 36,000 for 732 pearls.	„ 136-37 ; R. & B., I, 279.
3.	Two pearls offered by I'timād-ud-Daula (XI R. Y.).		Rs. 30,000 for both.	„ 156 ; „ „ , I, 318-19.
4.	Grand Pearl procured by Muqarrab KHān for Jahāñgīr.		Rs. 20,000.	Another to match it found in Akbar's *sarpech*. *Tūzuk*, 158 ; R. & B., I, 322.
5.	'Ādil KHān's offerings (XII R. Y.): One Pearl.	64 *ratīs*.	Rs. 25,000.	„ 198 ; „ „ I, 400.
6.	Another Pearl. Very round and fine.	16 *ratīs*.	Rs. 12,000.	„ „ „ „ „
7.	Pearl on Nūr Jahān's Necklace.		Rs. 1,000.	„ 263 ; „ „ II, 74.
8.	Prince SHāh Jahān's offerings (XIV New Year's Feast) : One Pearl.	32 *ratīs*.	Rs. 25,000.	
9.	Five other Pearls.		Rs. 33,000 for all the five pearls.	Bought in Gujarāt. } *Tūzuk*, 265; R. & B., II, 78.

SHĀH JAHĀN'S REIGN

No.	Description	Weight	Price	Remarks and Authorities
1.	The best and the largest Pearl on SHāh Jahān's famous *sarpech*. Of the shape of a guava.	47 *ratīs*.	Rs. 50,000.	*B. N.*, II, 392.
2.	The central Pearl of each of the two *tasbīḥs*.	32 *ratīs*.	Rs. 40,000.	„ „ „
3.	Guava-shaped Pearl bought by Mīr Ibrāhīm Ṣafdarkhānī at Madīna.	43 *ratīs*.	Bought for Rs. 30,000. Official price : Rs. 40,000	„ „ 390-91.
4.	130 unbored Pearls presented by SHāh Jahān for Jahān Ārā's bracelet.		Rs. 500,000 for all the pearls.	„ „ 396-97.

No.	Description	Weight	Price	Remarks and Authorities
1.	Seen by Tavernier in Aurangzeb's Treasury : (a) Pear-shaped Pearl. A little flattened on both sides. Of beautiful water and good form.	70 *ratīs*.		Tavernier, I, 317-18.
2.	(b) A Pearl-button. Of good form and good water.	55 to 60 *ratīs*.		
3.	(c) A round Pearl of great perfection. A little flat on one side. Sent by Sh̲āh 'Abbās II to the Great Mogul.	56 *ratīs*.		
4.	(d) Three round Pearls. Their water tends to yellow.	25 to 28 *ratīs* each.		
5.	(e) A perfectly round Pearl. Of a lively white. Perfect in every respect. The only jewel purchased by Aurangzeb on account of its beauty.	36½ *ratīs*.		
6	(f) Two other Pearls. Perfectly round. One slightly yellow. The other of very lively water, and most beautiful.	25¼ *ratīs* each.		

No.	Description	Weight	Price	Remarks and Authorities
7.	(g) The Pearls on the chain of pearls and rubies, and on that of pearls and emeralds. All the pearls round and of diverse waters.	10 to 12 *ratīs* each.		
8.	Large Pearl 'in the middle of a chain of emeralds and rubies'. Perfect as regards water and form. Of the shape of an olive.			Tavernier, II, 103 (Illustr. No. 4, Pl. V).
9.	Round Pearl of perfect form. Largest in Tavernier's knowledge.			" " 103-104 (Illustr. No. 5 Pl. V). It may or may not be the same as No. 3 (c) or No. 5 (e) above.
10.	Pearl suspended from the neck of the peacock on the Peacock Throne. The largest pearl Tavernier saw at the Mughal Court.			Tavernier, II, 103 (Illustr. No. 2, Pl. V).
11-12.	A grand bouquet of nine large pear-shaped Pearls offered by Tavernier to Aurangzeb. The largest of these weighed 30 Flor. carats. and the smallest 16 Flor. carats.			Tavernier, I, 112.

No.	Description	Weight	Price	Remarks and Authorities
1.	Pear-shaped Pearl of fine water which Ja'far KHān tried to buy, and SHā'ista KHān finally purchased from Tavernier.	55 Flor. car=52 4|5 Engl. car.	Probably a costly article since a rebate of Rs. 10,000 was asked on it.	Tavernier, I, 112-113, and II, 103 (Illustr. No. 3, Pl. V) and 348.
2.	Some pear-shaped Pearls of unusual weight, beauty, and size shown by Tavernier to Mīr Jumla.	From 24 Flor. carats upwards.		Tavernier, I, 229.
3.	Large Pearl of good water but badly shaped, sold by Tavernier to SHā'ista KHān.			Tavernier, I, 17-18. Possibly the chief of the pearls shown by Tavernier to Mīr Jumla (No. 2 above).

FAMOUS PEARLS

No.	Description	Weight	Price	
1.	Largest known pearl. Cylindrical in form, with a slight swelling at one end. Measures 2in. in length, 4½in. in circumference about the thicker, and 3¼in. about the thinner, end. About three-quarters of it is white in colour with a fine 'orient', the remainder bronze in tint (Smith, 294).	454 carats.	Over £12,000	Was at one time in Henry Philip Hope's famous collection.
2.	Large pearl.	300 carats.		In Imperial crown of Emperor of Austria.
3.	Pear-shaped.			In possession of the SHāh of Persia.
4.	"La Pellegrina". Beautiful white Indian pearl. Perfect sphere in shape.	28 carats.		In Museum of Zosima in Moscow.
5.	"Great Southern Cross". 'Consists of nine large pearls naturally joined together in the shape of a cross, was discovered in an oyster fished up in 1886 off the beds of Western Australia' (Smith, 294).			
6.	Some pearls of curious shapes.			In Green Vaults at Dresden.

7.	The pearl of the Prince of Muscat. The most beautiful in the world. Round, perfectly clear and transparent.	12 1/16 or 14⅞ Flor. carats.	More than £9,000.	Tavernier, II, 87 ; and p. 86, f.n. 1.
8.	The largest pearl of which Tavernier had knowledge. The King of Persia bought this in 1633 from an Arab who had just received it from the fisheries at Al-katīf. 'It is the largest and most perfect pearl ever discovered, and it has not the least defect.'		£110,400	Tavernier, II, 103 (Ilustr. No. 1, Pl. V).
9.	The biggest absolutely perfect pearl. The most superb specimen in the world. 'Although its diameter is that of a dime, the pearl is flawless, with a clear, lustrous beauty which excites wonder in all who see it' (Newspaper report, April, 1930).		$750,000.	'Experts with the greatest knowledge of pearls say it is the biggest absolutely perfect pearl they have ever seen. It is ceratin there is not another like it in the whole world. It is one of nature's miracles. There are pearls in England that are bigger, but in quality cannot equal this one.'—Speech of Captain W. Llewellyn Amos, Secretary, National Jewellers' Association. It was fished by divers in the Persian Gulf, and came by way of India. Now in possession of a London firm. If all this is not mere journalistic sensationalism, this pearl ought to be among pearls what Cullinan (when whole) was among diamonds.

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The Imperial Treasury of the Greater Mughals

By

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Part II : Jewel Treasury

Chapter II : Biographical Notices of Gems and Gem-stones (Continued)

ROCK-CRYSTAL

'Rockcrystal,' says Mr. Goodchild, 'is the ordinary colourless variety; it is always crystalline and often crystallised. The crystals are usually elongated, and of sizes varying from a small pin to several feet in length. Fresange records a crystal from Madagascar measuring 20 feet in circumference. Dauphiné (Bourg d'Oisans) is famous for its groups of Rock Crystal (Fig. 12). The Alps generally have afforded fine specimens, and a notable group in the Museum at Naples may be mentioned. In 1719 a cavity was found at Zinken, in the Bernese Oberland, from which crystals weighing altogether 50 tons were taken, and sold for some £60,000, some of the crystals weighing up to 8 hundredweight. In Upper Valais, crystals were found in a cavity which were of extraordinary size, up to over half a ton in weight. The Carrara marble quarries have also afforded good specimens. A specimen in Paris, taken by the French in Italy in 1797, weighs 8 hundredweight and is 3 feet in diameter. The Caucasus, Siberia, Brazil, and particularly Japan, have produced fine specimens. In North America, Moose Mountain, in New Hampshire, may be cited as a locality' (Goodchild, 149-50).

'The fashionable ladies of ancient Rome,' continues the same writer, 'used it to cool their delicate hands with, for this purpose carrying small spheres of Rockcrystal in hot weather. . . . . .

In ancient times it was highly valued, especially perhaps by the Romans, for the production of vases and cups, some of which

were of remarkable size, for it is recorded by Ben Mansur that at the capture of Ghasna in 1159 four vases made of Rock Crystal were found, each of which would hold two skinfuls of water. Pliny records that the material then used came from the Alps, and at that time it was believed to be water frozen so hard that it could not be thawed at ordinary temperature; this is said to have led the Romans to only use it for cold liquids. One of the most beautiful pieces of work in this material was a vase belonging to the French Kings; it was 9 inches high and 9½ inches in diameter, and was carved with figures illustrating the intoxication of Noah. It cost some £4,000. ....

The Indians seem to have had some secret method of *uniformly* staining Quartz' (Goodchild, 150-52).

Articles made of rock-crystal, both for use and decoration, were in great favour at the Mughal court. In Persian histories we are often coming up against mentions of pure, stainless crystals and articles of all kinds made of them. Cups and other things are of common occurrence. Occasionally we hear of 'looking-glasses' of Aleppo in gold and jewelled cases, and of Venetian crystal boxes and cups.

From a remark by Linschoten (II, 138) it appears that rock-crystal was not found in India nor in any other Oriental country.

But we are told in Watt, *Dictionary of the Economic Products of India* (II, 170) that rock-crystals are abundant in South India, and are found in the Bombay Presidency and all over the country.

Jahāñgīr

On the Fifth New Year's Day, Mahābat KHān offered 'two European boxes, the sides of which were made with slabs of glass, so that whatever was placed inside could be seen from outside in a way that you might say there was nothing between them' (*Tūzuk*, 79; R. & B., I, 165).

Among the articles offered by Prince KHurram to his royal father on one occasion (early in X R. Y.) was, 'a little crystal box of Frank work, made with great taste' (*Tūzuk*, 140; R. & B., I, 286).

'When the merchant 'Abdu-l-Karīm left Iran for Hindustan, my exalted brother SHāh 'Abbās sent me by his hand a rosary of

cornelian from Yemen and a cup of Venetian workmanship, which was very fine and rare' (*Tūzuk*, 152; R. & B., I, 310). They were placed before the Emperor on the 9th *Bahman*, X R. Y.

'On the 21st [*Farwardīn*, XII R. Y.=1026 *A.H.*],' says Jahāñgīr, 'I gave leave to Muḥammad Riẓā, ambassador of the ruler of Īrān, and bestowed on him 60,000 darbs, equal to 30,000 rupees, with a dress of honour. As an equivalent to the souvenir (*yād-būdī*) that my brother SHāh 'Abbās had sent to me, I forwarded with the aforesaid ambassador certain presents of jewelled things which the rulers of the Deccan had sent, with cloths and rare things of every kind fit for presentation, of the value of 100,000 rupees. Among these was a crystal cup that Chelebī had sent from 'Irāq. The SHāh had seen this cup and said to the ambassador that if his brother (Jahāñgīr) would drink wine out of it and send it to him it would be a great mark of affection. When the ambassador represented this, having drunk wine several times out of the cup in his presence, I ordered them to make a lid and a saucer for it and sent it along with the presents. The lid was of enamel (*mīnā-kārī*). I ordered the Munshis of mercurial writing (*'Uṭārid-raqm*) to write in due form an answer to the letter he had brought' (*Tūzuk*, 185; R. & B., I, 374).

'Lately,' writes Roe in a letter to the East India Company dated Ajmīr, 25 January, 1615 [-16], 'the King of Bisampore sent his ambassador with 36 elephants, two with all their chaines of wrought beaten gould, two of silver, the rest brasse, and 40 rich furnished horses, with jewells to the valew of 10 *lecks* of *rupias;* yet withall he sent China wares and one figure of christall, which the King accepted more then that masse of wealth' (Roe, 99).

On March 12, 1616, Roe was brought before Jahāñgīr, to whom he delivered as a most welcome present 'a purse which cost in England 24*s*., containing "a little boxe of cristall, made by arte like a rubie, and cutt into the stone in curious workes, which was all inameld and inlayde with fine gould. Soe rare a peece was never seene in India, as can wittnes all your servants resident at Adsmere. I can sett noe price, because it was geven me; but I could have sould it for a thousand rupees, and was enformed that had it beene knowne how highlye the King esteemed it, I mought have had 5,000 rupees. The King the same night sent for all the Christians, and others his owne subjects, artificers in gould and stone, to demand if ever they sawe such woorke or howe it could be wrought; who generallie confessed they never sawe such arte,

nor could tell how to goe about it, whereat the King sent me woord he esteemed it above a diamonde geven him that day of 6,000*li.* price. * .... Within the boxe (which I presented to keepe the jewells in which others gave him) I putt a chain of gould of double lincks veary small, wheratt was hanged a whyte emrald cutt in the forme of a seale, and therein engraved, no bigger than a penny, a Cupid drawing his bowe, with his motto *Guardes* : being a curiositie not easilie matched, and esteemed by the King for exellent woorke. The stone was unsett, pendent and veary lardge, above halfe an inch in length. The gould wayed 46*s*. . . . . There being noe man in London, much lesse here, that can enamell upon stone, and therfore I knowe not what it [the box] coste ; and the seale stone uncutt, I bought in the West Indies, and had it pollished and carved in London; it cost noe great matter rough " ' (Roe, P. 127, f.n. 1). This seems to be rather an overdrawn picture of an article of considerable beauty and workmanship. There is no mention of it in the *Tūzuk*, however.

Among the articles required by the John Company factors for presents, we have 'two or three Venice crystal boxes' (*Letters*, III, 88).

On Thursday, the 13th *Tīr*, XIV R. Y., Sayyid Ḥasan, the ambassador of SHāh 'Abbās of Persia, placed before Jahāñgīr, with a letter from his master ' a crystal drinking-cup, on the cover of which was [set] a ruby' (*Tūzuk*, 273; R. & B., II, 93-94).

Aurangzeb

Tavernier once presented to Aurangzeb ' a battle mace [*gurz* or *shash-par*] of rock-crystal, all the sides of which were covered with rubies and emeralds inlaid in gold in the crystal. This piece cost 3,119 livres [£233 18*s*. 6*d*.] (Tavernier, I, 114).

'I remember seeing the Emperor drink upon three different occasions while seated on his throne,' says the same writer in another place. 'He had brought to him on a golden saucer, enriched with diamonds, rubies and emeralds, a large cup of rock-crystal, all round and smooth, the cover of which was of gold, with the same decoration as the saucer. As a rule no one sees the Emperor eat except his womenkind and eunuchs, and it is very

* There is, however, no mention of this stone in *Tūzuk*.

rarely that he goes to dine at the house of any of his subjects, whether it belongs to a Prince or to one of his own relatives' (I, 309-10).

'Vessels made of rock-crystal,' adds the editor, 'were much esteemed by the Emperors. Ball saw some very fine examples of large size which were found in the palace at the capture of Delhi after the Mutiny. Possibly some of the fine specimens preserved in the Green Vaults at Dresden came from India. See Watt, *Commercial Products*, 561: *Ency. Brit.*, xxiii. 433. Some splendid examples of modern work in rock-crystal are illustrated in *Country Life*, 16th April 1921, p. lxxii' (Tavernier, I, 309, f.n. 3).

The following story from the *Storia* is just worth quoting:

Prince SHāh 'Ālam once ordered Manucci 'to send at once to procure him some crystal vessels for drinking water from. I sent off a man to Bombay to bring some. This order he executed —nay, those he brought were very handsome. These I presented to the prince. He seemed to be astonished to see so many crystals at once—more than he had ever seen in all his life—for he imagined them to be of rock-crystal, which is extremely costly in the Mogul country. This is the reason of his asking me what the whole might be worth. Quite happy, I answered him that it was a present from me, and that Doctor Nicolas stated no prices to kings' (*Storia*, II, 401). Nor, apparently, did Doctor Nicolas scruple to play tricks on kings when opportunity served. SHāh 'Ālam then gave Manucci a valuable set of robes and a very nice horse.

Here is a report from the same source of a rather large crystal found in the Ganges near Patna: 'When Dā'ūd KHān was in charge of Paṭnah, as I have already said (II. 61), there was found one morning in the Ganges river, near the English Factory adjoining the city gate, a rock-crystal eight palms in length and thirty palms in circumference. As it was a rarity, it was sent to the king in a boat. I saw it myself, and measured it in the year one thousand six hundred and sixty-three (1663)' (*Storia*, III, 133).

Chapter III. Notices of Semi-precious Stones and other Substances.

We have been able to deal specifically only with the so-called precious stones. It is not to be inferred by any means that the treasury contained no other stones. Probably what are known as semi-precious stones went to make up a much larger quantity in the treasury.

One would think that exceptionally good and large specimens (some of which we have already incidentally noticed in a general way) were assiduously collected and jealously guarded.

We have no doubt the treasury contained specimens remarkable for beauty and colour, purity and size, of hyacinths amethysts, garnets, chrysolites, turquoises, agates, moss-agates, sphenes, jaspers, opals, cornelians, onyxes, sardonyxes, cat's-eyes, corals, chalcedony, lapis-lazuli, and vermilion.[1] And presumably there was no dearth of such curiosities as the bezoar-stones, the so-called snake-stones, the porcupine stones, and the *yadatash* or rain-stones. Nor is this cursory catalogue by any means exhaustive.

We may now take up some of these and string together a few interesting remarks about each made either by scientists who have specialized in the subject or by European travellers like Linschoten, Tavernier and Fryer, who comment on them with special regard to Indian conditions.

HYACINTH

Hyacinth or Jacinth is a variety of zircon, and is of a yellowish red colour. It is not a common mineral.

'The Hyacinth,' says Fryer, 'is a Stone Yellow and Transparent; it's of the hardness of the *Emerald;* these Stones are naturally foul, and full of little Sands like Gold; if they be in Perfection, and of a very good Colour, they bear a reasonable Price.' (Fryer II, 147).

AMETHYST

It is a species of quartz, and has beautiful violet, purple or blue shades.

The word is derived from the Greek and means non-intoxicant, testifying to the old belief that the wine drunk out of a cup of amethyst would not intoxicate.

On exposure to heat amethyst generally turns yellow.

1. These names are not chosen at random. I have taken most of them from Fryer's list of 'Precious Stones of the East' (II, 142) and Linschoten's accounts of stones found in various places in India. These I have supplemented with such others as have been actually mentioned by Persian and English historians and other European travellers.

'The amethyst was used as a gem-stone by the ancient Egyptians, and was largely employed in antiquity for intaglios. It is now used for episcopal rings' (*Ency. Brit.* I, 807).

This mineral is widely distributed, but good specimens of pure amethyst fit for ornamental purposes are comparatively rare.

'The Amethist,' says Fryer, 'is a Stone of three several colours, some of them are of a Violet Colour, some are of a more Oriental Colour, therefore called (*Amethist* Oriental) which bears a very good Price, few of these being to be found, but are the pleasantest Colour of all Stones. Another sort being Pale is called the White *Amethist*, or *Amethist* of *Carthagena*: This naturally is of a quick or sparkling Water, and very good Colour, having for the most part a Blush of Red, which Stones in Perfection bear a tolerable Price' (II, 148).

AGATE

'In India, Agate is abundantly found in the Deccan rocks in the Kathiawar Peninsula to the West of the Gulf of Cambay, and is largely cut at Cambay (Kanbayat). Also in Rajpipla, and in the Rajmahal Hills' (Goodchild, *Precious Stones*, 170).

The Royal Scottish Museum contains a fine collection of Agates from various places in Scotland.

'There are many purposes besides those of ornament to which this material is put; such are, its use for the knife-edges of chemical balances, for the pivots for marine compasses in the manufacture of pestles and mortars for grinding hard substances, for burnishing metals, rollers for use in textile industries, for moulding plumbago for lead pencils, etc. But by far the greater part produced is wrought into vases, bowls, paper-knifes, trays, (p. 171) Signet rings, seals, brooches, beads, sleeve links, and other such articles' (*Ibid.* 170-71).

'Many very beautiful works of art have been produced in this material. France possesses a complete service in Agate, valued at one times at £20,000; and many fine examples of this work are to be seen in most of our larger museums' (p. 171).

The price of rough agate runs from £5 to £250 per hundredweight according to quality.

Cat's eyes 'come out of Cambaia, but the best out of Seylon and Pegu: they are little brought into Portingal, for there they

are not esteemed, and likewise because they are worth more in India then in Portingall, for the Indians esteeme much of them, specially the Chinos, and thether they are caryed, better esteemed, and sold there then any other stones: the Indians say that this stone hath a certaine propertie and vertue to preserve and keepe a man in the riches which he hath, and that they shall not lessen, but stil increase' (Linschoten, II, 141-142).

The Surat factors say that they can supply Agate or *bābā-ghorī*[2] beads, and also speak of agate cups which the Ahamadābād factors have sent them (*E.F.I.* **1618-***1621*, p. 52).

Fryer says (II, 148) that agate is used for handles of knives, which is corroborated by a statement on p. 231 of *E.F.I. 1637-1641*, where we read of a case of knives with agate handles being presented to the king of Bījāpur.

It appears that agate pictures were imported into India and offered for sale both by the East India Company and by the Venetians, for we are told on p. 327 of *E.F.I. 1618-1621*, that 'the aggatt pictures come farr shorte of your esteeme of them, by reason of quantities brought in by the Venetians; those that are allready sould of the said aggatt pictures doe produce but fifty per cent. proffitt, whereas in tymes past such yeilded three for one.'

On p. 99 of *E.F.I. 1668-1669* we read of 'a small agate box containing three cornelian rings being presented to Lord Arlington.

Moss agates, which Fryer calls 'Tree-stones,' have, he says, a lively representation or form of a tree on them, and are esteemed (II, 147).

LOADSTONE OR MAGNETITE

Although Sir Thomas Roe categorically asserts that there are no loadstones in India (p. 91, bottom), Linschoten assures us that it is found in great quantity and in many places in India. 'The Indians say, that if a man use dayly to eate a little of that stone, it preservth him and maketh him look yong, and that he shall never looke olde: wherefore the Kinges and great Lordes of India

2. 'The white agate of Cambay, so called from the patron saint of the district in which the mines are situated' (*Ibid.*, f.n.1).

use it in pottes and vesselles, therein to [eate and] seeth their meate, thereby as they beleeve to preserve their youthes' (*Ibid.*).

CORAL

'Although coral does not rank among precious stones in Europe,' remarks Tavernier, 'it is nevertheless held in high esteem in the other quarters of the globe, and it is one of the most beautiful of nature's productions, so that there are some nations who prefer it to precious stones' (II, 104). The Japanese, who esteem neither pearls nor precious stones, value beautiful beads of coral. The Portuguese, who formerly did a large trade in Japan, could obtain for a coral as much as 20,000 écus or £4,500. 'The common people wear it and use it as an ornament for the neck and arms throughout Asia, but principally towards the north in the territories of the Great Mogul, and beyond them, in the mountains, of the Kingdoms of Assam and Bhutān' (*Ibid*, II, 106-107).

Coral came chiefly from the Red Sea and the Mediterranean.[3]

The run of prices, the quality of the articles and the conditions of demand and supply in India may be gathered from scattered notices in the *E.F.I.* and *Letters Received.*

The best market for polished coral was Surat.[4] But as regards actual consumption, while great quantities of coral beads were absorbed by Bengal[5], the Deccan was the greatest buyer of red coral, which was much worn by the people and buried with them when they died.[6]

The superior coral known as the "Grezio" or "Gretzo" was in great request.[7] We are also told that coral in round or long beads and branches sold best;[8] likewise coral of deepest colour and in thickest pieces, though short.[9]

3. *E.F.I. 1618-1621*, p. 131 and *E.F.I. 1624-29*, p. XXXV.
4. *E.F.I. 1618-1621*, p. 326.
5. *Ibid.*, p. 259.
6. *Letters Received*, I, 307.
7. *E.F.I. 1642-1645*, p. 174.
8. *Letters Received*, III, 10.
9. *E.F.I. 1618-1621*, p. 326.

Between 1622 and 1648 the price of good coral was 9 to 10 rupees a seer (of ¾lb.) [10]; and in the years 1665-68 it ranged between 10 and 16 rupees per seer. [11] Coarse coral was, however, available at all prices from ¾ of a rupee to about 7 rupees a seer.[12]

Prices of coral beads in Bengal ran as follows :—

Beads of 12 beads to a *tānk* at 6 *tānks* for a rupee,
„ 6 „ „ 2 „ „
„ 4 „ „ 1¾ „ „
„ 3 „ „ 1½ „ „

(*E.F.I.* 1618-*1621*, p. 259).

Enclosing a copy of the custom-house valuation of the coral, the factors write to the Company, 'By this it will be seen that the sort called "recaduti" of 8*s*. or 9*s*. the lb., yields most benefit; the small sort now sent, called "tiraglia brutura," is not so much in demand. A hundred chests of coral will sell yearly, viz. fifty of from 2*s*. to 15*s*.' (*E.F.I. 1630-33*, p. 31). We are informed in a footnote that 'recaduti' means 'dead coral,' and that 'tiraglia brutura' signifies the rough growths and crusts that form on the plant.

A fine ornament of coral which Ṣāfī KHān meant to present to Jahāñgīr on his birthday is thus described in *E.F.I. 1622-1623* : 'The principall thinge in her [the junk belonging to Ṣāfī KHān, the Governor of Cambay] is a tree currall sett in gould by artt, made to distill watter from the topp unseene, rounde aboutt the branches. Itt is contayned in five chestes, and beinge by us vallued itt was thought to bee worth 2,000 *l*., itt beinge procured by the Governor Cambaya to bee made in Goa against the beirthdaye of the Greatte Mogull and to him to bee presented, for which intentt this juncke was purposely sentt' (p. 215).

We learn incidentally that the charge for polishing coral at a place in the Bījāpur kingdom was 10 pagodas, *i.e.*, about 40 rupees, a *man*.[13]

10. *E.F.I. 1622-1623*, p. 8; *E.F.I. 1634-1636*, p. 24; *E.F.I. 1637-1641*, p. 204; *E.F.I. 1642-1645*, p. 210.
11. *E.F.I. 1665-1667*, p. 31; *E.F.I. 1668-1669*, p. 3.
12. *E.F.I. 1630-1633*, p. 31; *E.F.I. 1630-1633*, p. 84; *E.F.I. 1634-1636*, p. 23; *E.F.I. 1634-1636*, p. 69; *E.F.I. 1642-1645*, p. 210; *E.F.I. 1665-1667*, p. 31; *E.F.I. 1668-1669*, p. 3.
13. *E.F.I. 1618-1621*, p. 265.

11

LAPIS LAZULI

'Lapis Lazuli,' says Goodchild 'has been known from very remote times, being much used by the Egyptians, and to a lesser extent by the Assyrians. Epiphanius, Bishop of Salamis, says the Tables of the Law given to Moses were inscribed on Lapis Lazuli. The Romans used it to some extent as a material for engraving on' (P. 240).

'It is cut as a flat plaque, or *en cabochon;* more often it is worked into vases and other small ornamental objects, though now the solid material is not so often used as thin slices, which are veneered on. It is largely used, too, for mosaics and in the ornamentation of luxurious buildings such as the palaces of the Russian Czars. Formerly it was the sole source of the beautiful pigment ultramarine, which was greatly esteemed on account of the purity of its colour and permanence. Now, however, the pigment is made artificially, though the artificial product does not command nearly the same price' (*Ibid.*, 242-43). The columns of St. Isaac's Cathedral at Petrograd present a fine example of the use of lapis lazuli for architectural decoration.

The lapis lazuli mine in Badakhshān (Afghānistān) is mentioned by Tavernier and Marco Polo.

Soon after Aurangzeb had brought the war of succession to a successful issue, the ambassadors of the KHāns of Balkh and Samarkand waited on the Emperor, ostensibly to offer congratulations, really to conciliate his good will. Among the presents they brought were some boxes of lapis lazuli (Bernier, 118).

MOTHER-OF-PEARL

This is the substance which lines the interior of many species of molluscs, and is similar in nature to the pearl (*Encycl. Britan.*,[14] XV, 852). It is cut out and used extensively for such purposes as making buttons, handles of cutlery, etc. It is also used in the inlaying of Japanese and Chinese lacquers, European lacquered papier-mâché work, and trays, etc., and as an ornamental inlay generally (*Ibid.*, XVII, 422).

'Its beautiful iridescence and lustre are due to that well-known optical phenomenon, the interference of light' (*Ibid.*, XV, 852).

About the mother-of-pearl Linschoten has the following :—

The Indians know how to prepare and clean it. 'They bring many of them into Portingale to serve for to drinke in, and to keepe for an ornament, [and for pleasure] specially those that come out of China and Bengalen, some guilt and painted with colours [very faire some] wrought with branches and other figures, as we dayly see them brought thether [Orig. Dutch: 'hither']. In India they make divers thinges of them, as deskes, tables, cubbards, tables to play on [Backgammon boards], boxes, staves for women to beare in their hands, and a thousand such fine devises, which are all inlaid and covered with this Chanco or Mother of Pearle, very faire to beholde, and very workmanlike made, and are in India so common that there is almost no place in those countries but they have of them. It is likewise much caried abroad, both into Portingale, and elswhere, but they are most used in India, for there the women, speciallie those of Bengala use to weare manillias, or bracelets of them about their armes, that is to say, those of most account, and they must not take a maidens maindenhead from her that is of any estate or degree, but she must have some of these mother of Pearle bracelets about her armes, which at this day is yet much used, [and observed,] whereby it is verie much worne' (II, 135-36).

Linschoten is apparently confusing mother-of-pearl with ivory in the latter part of this passage.

Perhaps the finest specimen in India of mother-of-pearl inlay on a large scale is the canopy of the mausoleum of Ḥaẓrat Salīm Chishtī at Fatḥpur Sīkrī, which is thus described by E. W. Smith :

'Salîm's cenotaph is of white marble surmounted by a wooden canopy inlaid with mother-of-pearl tesseræ ....

The outside of the canopy is entirely encrusted with mother-of-pearl, laid in geometrical designs, bound at the corners and sides with copper. The cornice is worked with the favourite fish-scale ornament so common to the period in which the mausoleum was built. Running through it is an embattlemented pattern in ebony, which material is also freely used upon the four-armed bracket capitals the sub-caps and the bases of the columns. The capitals and brackets are very intricately and delicately carved, and, in order to protect the fine inlaying upon them, the *arrises* of the mouldings are bound with copper. To show clearly the nature of the inlaying, a portion of the eaves around the top of the canopy

has been omitted on the drawing. The brackets project in two tiers and beneath each is a circular pendant, tipped with copper; across the centre of the lower of the two brackets is a band of copper and one of ebony inlaid with quatrefoils in mother-of-pearl. The combination of the mother-of-pearl and ebony is very pleasing. The full effect of the treatment is seen upon the bases of the columns one of which is illustrated on Plate XLII. As it is impossible to reproduce the peculiar nacrous sheen of the mother-of-pearl upon a drawing, it has been shown in white upon the illustration; whilst the ebony is in black.

The same design, or nearly the same, appears on each of the bases, but that upon one side of the base is unlike that on the other. The inlaying is so intricate that it looks like damask-work, but in mother-of-pearl instead of gold or copper wire. Each little piece of mother-of-pearl is exactly shaped and fitted into the allotted position previously prepared for it, and then secured with minute brass pins and shellac. The minute strips of ebony between each piece of mother-of-pearl are secured in like manner and are perfectly flush with the face of the mother-of-pearl. It is impossible to describe the effect of the mother-of-pearl as seen in the dim light of the mortuary chamber. It is one of those things which defy description, and in order to realize its beauty it must be seen. The inlaying is most minutely and beautifully executed. There is nothing like it elsewhere in Northern India, and it is very doubtful whether such an elegant piece of like workmanship exists in any other part of India' (E. W. Smith, *The Moghul Architecture of Fathpur-Sikri*, Pt. III, 21-22).

CHINESE PORCELAIN

Porcelain is an important subject. Not only is it interesting in itself, but we know that the Imperial Treasury contained some 25 lakhs worth of 'most elegant vessels of every kind in porcelain and coloured glass.' We are, I think, justified, in according it a more extended treatment than to the majority of other articles.

In the passages selected here we have been at pains to avoid specialized treatment and technical terminology. It is hoped the reader, who requires an introduction to the subject, will find the following smooth and interesting reading:—

'Every connoisseur and every unprejudiced potter,' says Mr. Burton in his monograph on Porcelain, 'will admit, in his lucid

moments, that the porcelain of the Chinese marks the very crowning point of the potter's achievements. We may single out the glazed work of the ancient Egyptians or Assyrians, the painted terra-cotta vases of the Greeks, the brilliantly-enamelled faïence of the Persians, or the majolica of the Italians, as worthy of our high regard, yet Chinese porcelain surpasses all these as much in sheer beauty of colour as in technical skill and in the wide range of its accomplishment' (46).

'The idea that a cup of porcelain changed colour and flew into pieces directly a poisonous draught was poured into it, was implicitly believed for many centuries. This belief was current not only in Europe but in Persia, India, and other Asiatic countries where porcelain was not made, so that we should probably be justified in regarding these false notions as the fables invented by cunning dealers, whether Chinese or Arab, anxious to enhance the value of their wares' (*Ibid.* 47).

The chinaware in favour in the better Mughal days was chiefly that of the Ming period (1368-1644), though there may also have been pieces of the time of the Sung dynasty (960-1259). So in the account that follows we shall confine ourselves to the history and characteristics of the porcelain of the Ming period.

The famous chinaware of the Ming period (1368-1644) was manufactured in the imperial factory at Ching-tê Chên, near the Po-yang lake in Kiangse, rendered famous throughout the world by the fine white porcelain made there. 'As this ware lent itself peculiarly well to painted decoration,' says the *Encycl. Britan.* article, 'the vogue for painted porcelain rapidly replaced the old Sung taste for monochromes' (*Encycl. Britan.*,[14] XVIII, p. 366).

Hitherto, says Mr. Burton, 'all the colour effects were in the nature of coloured glazes applied either on plain shapes or on vessels that had previously been decorated with incised or embossed ornament. The first new departure, and a most natural one, was to decorate the piece with ornamental schemes, either of conventional foliage or of figure subjects, in which the different patterns of the design, isolated by raised lines, could be filled in with different glazes so as to produce an effect roughly analogous to that of a design in cloisonné enamel' (W. Burton, *Porcelain,* 66).

'With the discovery and the extended use of the materials of true porcelain, *kao-lin* and *pe-tun-tse*, the possibility must soon

have presented itself to the delighted potter of preparing an absolutely white translucent porcelain, and when once this possibility had been realised there can be no doubt that everything else would give way before it. . . . . We read at an early period of pure white porcelain made of the utmost thinness and delicacy, so that its translucence might be most apparent, and decorated only with delicate patterns, generally of dragons, waves or clouds, sharply engraved with a steel point in the dry clay before it was glazed and fired. Ware of this kind is said to have been produced at the famous factory of Ting-chou early in the twelfth century of our era. Occasionally the same ware was produced with a bright purple glaze having a tint like that of ripe grapes, and more rarely still with a beautiful clear black glaze. Dr. Bushell has translated a description of some of these early pieces left by a Chinese connoisseur of the sixteenth century, who, in describing a duck-headed vase of this Ting-chou porcelain, says: "I have seen hundreds of specimens of the white, scores of the purple-brown, but only this one of black in all my life"' (*Porcelain,* 67-68).

'The Chinese esteem most highly the blue-and-white of the Hsüan-tê period (1426-1435), and of the period Ch'êng-hua (1465-1487), while they relegate to the third place the blue-and-white produced during the reign of Yung-lo (1403-1424)' (*Ibid.*, 68).

The cobalt used during these reigns is known as the Mohammedan blue, probably obtained from Baluchistan, where deposits of the purest cobalt ore, a mineral sometimes called cobalt bloom, has been found, which might be used without any other preparation than that of grinding and levigation.

Supply of the Mohammedan blue failed in the latter part of the fifteenth century, when the Chinese potter had to fall back upon his native ore. With this the character of the blue colour at once deteriorated. During the Chêng-tê period (1506-21), however, further supplies of the Mohammedan blue were arranged for at a cost of twice its weight in gold; and at this exorbitant price it remained available down to the middle of the sixteenth century. After this date the Chinese had to depend again on the cobalt pigment prepared by many refinings of their native ore. It must be said that nothing ever equalled in brilliance the Mohammedan blue, which is often spoken of as rivalling the blue of the sapphire (*Ibid.*, 68-69).

Again, an underglaze red, made from copper, was used by the Chinese at a very early date. When we remember how difficult it has proved, even for the most expert of modern scientific pot-

ters, to produce this underglaze red colour, we bow before the Chinese in respect and admiration (*Ibid.*, 69). 'This magnificent underglaze red appears to have been obtained in its utmost perfection during the early part of the Ming dynasty, for we find it especially mentioned in the Hsüan-tê period (1426-1435)' (70).

The wonderful eggshell porcelain pieces, which the Chinese called "Bodyless," first appeared during the early times of the Ming dynasty. 'The true eggshell porcelain must always have required the utmost skill and dexterity of manipulation, for its substance has been reduced to so thin a layer that in a fine specimen it almost seems as if there could be no clay left between the two layers of glaze. At all events, from the Yung-lo period (1403-1424) eggshell porcelains of varying degress of delicacy, attesting the skill of different generations of potters, have been made practically without interruption. In spite of the extreme thinness of such pieces, the finest specimens had elaborate designs engraved, with a steel tool, in the paste before firing. The designs generally take the form of dragons in the midst of clouds or waves, the whole work being executed with such delicacy and precision as to leave us absolutely amazed at the audacity which could conceive, and the patient skill which could execute such marvels of technique. The finest early eggshell pieces, covered with incised patterns of this nature, were generally in pure white; so that the design is barely visible unless the vessel be held against the light or filled with a liquid. Considering that the difficulties of manufacturing such pieces must always have been formidable, it was only natural that a similar style of incised or engraved decoration should have been used on vessels of ordinary thickness, and these were often covered with delicately coloured glazes, of which a beautiful pale-yellow seems to have been most highly prized, especially in the Hung-Chih period (1488-1505), and the Chêng-tê period (1506-1521).

At the same early date, too, another delicate and difficult method of decorating white porcelain was invented. This is the decoration so often known among modern collectors as "grain of rice" pattern, where the design is actually cut out of the vessel while it is yet in the clay state, and then, when the glaze-coating is applied, the glaze fills up the perforations, which become like so many window-openings in the piece. This particularly charming method of decoration, which was also adopted by the Persian potters for their transparent ware, has excited the greatest interest among modern European porcelain-makers' (p. 71-72).

Some European manufacturers have in the nineteenth century made creditable attempts to imitate that kind of ware, but, in justice to the Chinese potter, it must be admitted that 'they can never rank for subtle beauty and delicacy with the dainty white Chinese pieces' (72).

Towards the close of the Ming dynasty the Chinese use of on-glaze colours in the decoration of porcelain comes in, thus foreshadowing the course which the decoration of pottery has practically taken in all the great pottery-centres of the world. This new manner of working, *i.e.*, painting on the fired glaze, 'replaces the freedom and abandon as well as the rich depths of colour of the earlier work by finer, more delicately drawn, more precise, and, as an artist would say, " tighter " work, inevitable from the changed technical method' (72).

CHINAWARE IN MUGHAL INDIA

The Imperial Treasury, as we have said, had huge stores of Chinese porcelain of the most valuable kind; and in contemporary paintings we see chinaware of the Ming period reposing in niches in Mughal interiors. So we notice that China was used not only on the table but also for purely decorative purposes.

There must have been, among the rest, a considerable amount of the willow-green porcelain known as Céladon, which has been so popular among Muslim countries throughout the ages as actually to suggest a Muslim origin. This last view, however, is discredited by modern authorities, who hold that the old céladon, which must be regarded as one of the earliest forms of porcelain, originated in China (Burton, *Porcelain,* 64).

Colonel T. H. Hendley has the following on céladon ware in India: 'In old Mogul towns in India, until lately, a good many specimens of céladon plates or vases might be purchased. It is said that this ware was in great demand even so far back as the Sung Dynasty—that is, from the tenth to the thirteenth centuries. The want was most largely met with, however, in the days of the East India Company, by importation from China. It was thought that it possessed in common with rhinoceros horn, the quality of splitting or breaking when brought into contact with poisoned food; hence the value attributed to it by Mohammedans, and especially by the Moguls. Dr. Bushell informs us that the presence of poison was said to be revealed by the exudation of a

white humour from the cup or from the surface of a rod of rhinoceros horn put into the liquid to test it. The belief was prevalent from very early times in China and Sumatra. The ware is extremely heavy. The basis is red and the glaze, which is very thick, has a dark willow-green colour. The vases are generally crackled, and the plates or dishes are deep and sometimes have fluted or gadrooned edges. Beneath the glaze there are usually bouquets of flowers (generally chrysanthemums), fishes and other designs. . . .
.. ..
.. .. The bright grass-green celadons of the Sung Dynasty (960-1280 A.D.) are certainly rare in India, but the greyish-green or sea-green of later dynasties, as the old Lung Ch'uan of the Ming period (1368-1644), which Dr. Bushell says are quite in the style of the antecedent Sung Dynasty, are common. Some of the dishes purchased at Delhi thirty years ago, of which one is illustrated (Plate 2), are exactly like that shewn in Plate II, Vol. II of his work, though they are generally more worn. As the Sung productions vary from pale sea-green to deep olive, and those of later periods are also of the latter colour, it is not easy to distinguish them, especially as both may exhibit plain and crackled surfaces. Most of the Delhi specimens are dark grey-green and crackled. The glaze is generally very thick and runs down at the foot or border. The paste is usually red or brown, and is very hard. The popular Mogul or Delhi name was Ghori ware' ('Foreign Industrial Art Products imported into India' in *The Journal of Indian Art and Industry*, No. 129, for Jan., 1915).

We are not prepared to endorse the view that the *ghorīs*, as they are known in India, are all céladon ware.

We should have liked to have a description of the particular articles in favour and their prices. Unfortunately the material available is so scanty that we can only present the reader with the following odd notes :—

Sir Thomas Roe assures us that chinaware was in great request in India.[14]

He tells the East India Company in one place that 'faire China bedsteeds' would be rich presents at the Mughal court (p. 99).

14. Roe, 445 and 459 (bottom).

We have already seen (under Rock-Crystal) that the King of Bisampore's ambassador brought to Jahāñgīr's court, among other very valuable things 'China wares and one figure of christall which the King accepted more then that masse of wealth' (Roe, 99).

Roe, it appears, wanted, when going home, to buy some china to take home with him. In a letter to Nicholas Bangham dated April 1, 1617, he says: 'I heare yow have fine and curious China ware. If yow will spare me some dozen fine cupps and dishes (such as yow will choose), I will give as much as any man. All these I desier yow will keepe for mee till wee meete; for I hope to pass downe by Brampoor toward England in October, and I would not trouble yow soe much but that I am resolved homward, and would willingly carry somewhat. My stock will not reach to things of profitt and trade; therfore, seeing I shall not gett riches, I would yet pleasure my frends' (p. 360). So he wanted these for presentation at home.

Bangham apparently bought only two cups for him, and those dearly; for, says Roe, in a letter to Bangham written three months later, 'I thancke yow for the two China cupps, and doe extreamely like them for the curiositye. Their price I must bee content with, because the buyer cannot make yt; but they are dearer here at that rate by much then in England. I doe not desier any more of that sort so small; but if yow can fitt mee out of the rest with a parcell of fine dishes or cupps for use, or any peece, as a bottle or eywer, and of the best sorts . . . to make up this summe 100 or 80 *rup.*, I desier yow to make your choyce for mee' (p. 367).

It appears that the cups bought by Bangham were for ornamental purposes, while Roe wanted some china for use. Still Roe appreciates the beauty of the articles bought. One of these two cups, we are informed in another place, cost eight rupees (400, f.n.1). We thus learn incidentally that Roe desired to get a dozen cups and dishes for 80 or 100 rupees, but could not.

On October 12, 1617, Roe saw Prince SHāh Jahān in his private room, where Āṣaf KHān had taken him, and presented him with 'a small China gold-chaine, in a China cup' (400).

Under January 13, 1618, we have the following entry in Roe's diary: 'The Dutch came to court with a great present of China ware, sanders [*i.e.* sandalwood], parrots and cloaves' (427). This is supported by other reports to the effect that the Dutch were strong in the porcelain trade.[15]

15. See below.

Hawkins narrates the story of a 'faire China dish (which cost ninetie Rupias, or fortie five Rials of eight)' belonging to Jahāñgīr, which was broken by a mischance, when the Emperor was out in camp. The officer in charge, 'knowing how deerely the King loved this dish above the rest,' sent a trusty servant to 'China-machina'[16] over land, hoping that the dish would come before the Emperor remembered it. After a lapse of two years, before the new dish had arrived, the Emperor thought of the old one. When told that the dish was broken, he very nearly flogged the life out of the nobleman, and was sending him to prison for life when, on the intercession of a prince, he was ordered not to come before him till he had procured a similar dish. The Emperor advanced him five thousand rupees towards his expenses of a journey to China, and a quarter of his *jāgīr* was restored to him. Hawkins says that he had been fourteen months travelling, and had not yet come back; but the King of Persia, it so happened, had a like dish, and on hearing this pitiful tale, had sent it to the officer, who, at the time of Hawkins' departure, was going home (Purchas III, 39-40).

The E. I. Company had no porcelain trade in India worth speaking of. Consequently very little information about this trade in India is available in the E. I. Company's correspondence (*E.F.I.* and *letters*). From the constant complaints of the factors that the china is bad and 'crazed' and broken and unvendible,[17] we are led to infer that their packing was careless and their buying defective. On their own showing the Dutch enjoyed a prosperous trade in this commodity. We are told that, 'at present all their estate [at Masulipatam] is in chinaware, "which is as britle as their harts to us are fickle."'[18] Again, 'the Chinaware which either Cartwright or Clark took in exchange for lead will not sell for a tenth of what it is rated at. No more should be sent, for the Dutch sup-

16. Māchīn, a popular corruption of Mahāchīn, is a very old Hindu name. It means Great China, and was vaguely used for the Chinese empire. With Persian writers Mahāchīn, strictly, is South China, while KHatā (English, Cathay) is North China; but Chīn Māchīn is often used in the vague sense of China. And that is how it is used here.

17. *E.F.I. 1618-1621*, pp. 47, 208 and 263;
E.F.I. 1624-1629, pp. 281, 284 and 297;
E.F.I. 1637-41, pp. 256 and 266.
Also *E.F.I. 1642-1645*, p. 284, which, however, is written from Basra.

18. *E.F.I. 1637-41*, p. 45.

ply this place [Masulipatam] at such cheap rates that it does not pay to bring such brittle ware. [19]

As for prices, the following quotation gives the cost price of each of the articles mentioned, at Bantam (in Java) :—'From a note on the latter [the cargo list] we find that of the porcelain the prime cost was: saucer dishes, nearly 2*d.* apiece : flat sallet [salad] dishes, about 3½*d.*; sallet cups, 3½*d.*; posset dishes 4*d.*; small ("quarter") basins, 1*s.* 9*d.* ; larger ("half") basins, 2*s.* 6*d.* ; largest ("whole") basins, 5*s.*' (*Letters,* III, 324-25).

From the low run of prices detailed here, we gather that the E. I. Co. did not go in for higher lines in the porcelain business. No wonder that they derived small profit and lost heart.

The following is part of a letter, dated May 15, 1617 and written by the factors at Ispahan to Bantam. The requirements appertain no doubt to the Persian Court, but the social customs and domestic conditions in the two countries were so similar that we may presume the requisitions to apply quite as much to India as to the country to which it owed its civilization and culture : 'I have been entreated by the King's treasurer and favourite to procure him divers necessaries and toys for the King's use, according to a remembrance he hath given me. Part of them being what Suratt and India can furnish, I have to them written for. These hereunder specified in your Southern parts are only to be found; pleasing you to order their sending accordingly :

Cheney [China] dishes in sorts, 200 pieces to serve meat at table. Their dishes here are like our English, broad and not deep, and such ones he desireth.

Cheney dishes, 50 pieces of the largest and fairest can be gotten of the same making. These are intended when the King feasteth.

6 basins and ewers of Cheney.

100 small coffa dishes [coffee cups].

....

We give you to understand that Cheney ware of all sorts is here a good commodity, being much in request; but we doubt in

19. *Ibid.*, p. 190. Also see *Ibid.*, p. 244.

no great quantity. Besides, the brittleness of the commodity is considerable' (*Letters* V, 246).

'In obedience to instructions from Sir Thomas Chamberlain to purchase rarities for presentation to King Charles, Buckeridge bought twelve China dishes: "a sort reported to breake if any poyson bee put into them, but I dare not affirme that as a truth"' (*E.F.I. 1661-1664*, p. 392).

IVORY

A term properly confined to the material which forms the tusk of the elephant, and, for commercial purposes, almost entirely to that of the male elephant, but often extended to a similar substance obtained from the walrus, hippopotamus, narwhal, cachalot or sperm-whale, etc., although only the first two of these are really important.

ELEPHANT IVORY

These tusks are sometimes of tremendous size, a single specimen occasionally weighing 200 lb. 'The ivory from the African elephants is the most esteemed on account of its superior density and whiteness, but a certain amount is also obtained from India, Ceylon, Burma, and the islands of the Eastern Archipelago. In African elephants both the males and females have tusks, although those of the males are larger, but in the Indian species the females are practically tuskless' (*Everyman's Encyclopædia*, VII, 718).

The quality of ivory varies according to the districts whence it is obtained, the soft variety of the eastern parts of Africa being the most esteemed.

The price varies with size and soundness of the tusks, ranging from £10 to £90 per cwt.

Special qualities of ivory, which have been recognised from the earliest times, are its beautiful texture and tints, its perfect elasticity and adaptability to the carver's tools.

As for modern industrial application, ivory is used at present in the manufacture of billiard-balls, cutlery handles, piano-keys, brushware and toilet articles, chessmen, carved figures, and other useful and ornamental articles.

Ivory carving is a highly interesting art. 'Since earliest times ivory has been used either alone or in conjunction with silver and bronze as a decorative material, and it has been both carved and engraved. Ivory has always been used considerably for the decoration of palaces, and the Romans sent an ivory throne to Porsena, while, in the nineteenth century, an Indian Prince sent one to Queen Victoria. Ivory has also been used a great deal for religious purposes in such things as crucifixes, the heads of pastoral staves, liturgical combs, and even altar-pieces. Secular works of art, in which ivory has been employed, include seals, hunting-horns, knick-knacks, snuff-boxes, toilet combs, mirror cases, chessmen, and draughts. Prehistoric man used pieces of bone, horn, and ivory for his sketch-book, and scratched on it drawings of animals. The ancient Egyptians and Assyrians used ivory for domestic purposes and for the decoration of furniture but Egyptian ivory statuettes have also been found. The Greeks used ivory for the decorations on the trappings of their horses and for the bosses of their shields and for small boxes and caskets, but we possess few examples of Greek ivories, especially of the early period. Of Roman ivories we have a great number of consular diptychs, often from writing tablets and plaques which are beautifully carved in relief. The subjects of these carvings were usually classical myths or pictures of Roman gods. The earliest Christian ivories in existence date from the time of Constantine and among these we have pyxes carved from ivory tusks, plaques, and book-covers. Byzantine ivories are very numerous and beautiful, and if the figure of Christ, so often portrayed, is inclined to be stereotyped, the decorative designs of these ivories are excellent. Up to the end of the fourteenth century, ivory carvings were usually of religious subjects, although often used for secular purposes, but after this date hunting scenes, deeds of chivalry, and pictures of tournaments were depicted, the sculptures being influenced by the romantic literature of the period. In India, ivory has been much used for caskets, many of which are extremely beautiful, and consist chiefly of elaborately carved balls and models of villas; in the latter, however, some very beautiful work is to be found. Japanese ivories are usually very small, but very well designed and finished. Most Japanese ivories are comparatively modern, and the Japanese have used ivory a great deal for "netsukes," which are a kind of toggle used in connection with their smoking gear. In modern times ivory has been used for sculpture, either alone or in conjunction with bronze and jewels. One modern example of ivory sculpture that may be mentioned is the

"Lamia" by George Frampton. This piece is the bust of a woman. The face is life-size and carved out of ivory, while the head-dress and dress are of bronze (*Ibid.*, pp. 718-20).

The ivory throne sent by the Indian Prince to Queen Victoria (referred to in this passage) is a little more fully described in the following quotation from a monograph [20] published by The Government of India in 1883 :

'Some will no doubt remember the ivory throne and footstool exhibited in 1851, the gift of the Raja of Travancore to Her Majesty the Queen. It is a remarkable specimen of carved ivory, displaying skill in the design and execution. The ornament of the back and sides is very elaborate, and consists of bands and compartments of conventional foliage, human figures and animals, the style and arrangement of which derives its character from the carved architectural ornament of Dravidian art' (p. 5).

The rest of the note on Carved Ivory is not devoid of interest:
'India has always been famed for ivory carvings, which are applied to furniture and to all descriptions of useful and ornamental objects. The modern work is produced mostly at Murshedabad in Bengal, and at Shahpur, Amritsar and Delhi in the Punjab, at Bhurtpur, Jodhpur and Udaipur in Rajputana, in Bombay, in Assam, and in Burma, and at Vizagapatam and Travancore in Madras. Small statuettes, models of elephants and other animals, carved paper-cutters, chowris or fly whisks, sword and knife handles, chess-boards and chessmen, tankards, combs, and all descriptions of boxes, are among the most commonly produced articles. Carving in ivory produced in India is done for the most part by hand, and is much to be admired for elaboration of detail and for picturesque grouping of figures and animals. The geometrical and foliated ornament is always first-rate, and the production of carved ivory suitable for the application to furniture and to useful objects should be developed and encouraged' (*Ibid.*).

20. *Fifty-one Photographic Illustrations taken by order of the Government of India of some selected objects shown at the Third Exhibition of Native Fine and Industrial Art opened at Simla by His Excellency the Viceroy on the 24th September, 1881. London, 1883.*

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The Imperial Treasury of the Greater Mughals

By

Mr. Abdul Aziz, Bar-at-Law,

Part II : Jewel Treasury

Chapter III : Notices of Semi-precious Stones and other Substances. (Continued)

IVORY AND IVORY WORK IN INDIA.

Now we can jot down some bits of information about ivory and articles of ivory in India during the Mughal period :—

Ivory, especially the best kinds, came chiefly from Africa in the first instance.[21] It was, however, also imported from England, though sometimes the commodity was rather dearer in England than in India.[22] The ivory brought from England was not so white as that which came from Mozambique.[23] 'The largest teeth', says Milburn, 'are said to come from Africa, and are most esteemed, being of a closer texture, and less liable to turn yellow than those from the East Indies.'[24]

'The ivory from the islands of Ceylon and Achīn [he means Sumatra]', says Tavernier, 'has the peculiarity when it is worked that it never becomes yellow like that from the Peninsula and the West (*sic*) Indies ; this causes it to be more esteemed and dearer than the other' (I,222-23). No elephants are found in the West Indies !

So also Ovington : 'The *Achen* Elephants are most looked upon for their Teeth, because that Ivory they say, maintains its Whiteness, and turns not Yellow, as other does' (p. 192).

21. *E. F. I. 1624-1629*, p. XXXV and Milburn, *Oriental Commerce* I, 62.
22. *E. F. I. 1630-1633*, p. 5.
23. *Letters*, III, 10.
24. Milburn, *Oriental Commerce*, I, 62.

The elephants of Ceylon, says Linschoten, are the best (I, 80).

These remarks are corroborated by Watt, *Dictionary of the Economic Products of India* :

'It is said that Indian ivory has an opaque dead-white colour, and manifests a tendency to become discoloured. The Ceylon ivory is distinguished by fine grain, small size, and pearly bluish tint. Siam ivory is in the trade regarded as much superior to the Indian in appearance and density. It has been remarked of Africa that the nearer the equator the smaller the elephants but the larger the tusks. The finest *transparent* ivory is collected along the West Coast, between latitudes 10°N. and 10°S. The best *white* ivory is obtained from the East Coast. African ivory is said to be best when recently cut. It has a mellow warm transparent tint, as if soaked in oil, and has very little appearance of grain or texture' (Watt, *Dict.*, III, 227).

We gather from scattered remarks by the John Company factors that the quality of ivory depended on weight, length, and whiteness, as well as on the perfect roundness and soundness of the tusks.[25]

According to Fryer there were three qualities of ivory :

'*Muyn*, such are the greatest, free from Flaws.

Muyda, which are the lesser, or the great ones with Flaws.

Sera, the least, or worst sort' (II. 140).

I am not able to trace the words, *Muyn*, *Muyda* and *Sera* ; nor am I able to suggest whether they are of Portuguese or Oriental origin.

'The Weights by which they are bought,' continues Fryer, 'are *Baharrs* and *Frasslees* ; each *Baharr* 20 *Frasslees*, each *Frasslee* 12 *l.* and they call the *Baharrs Gross.*

Of *Muyne*, ½ *Baharr* of 20 *Frasslees*, makes 1 *Baharr Gross.*

Of *Muyda* and *Muyn* they hold equal Price, in regard that though the Teeth of *Muyn* be bigger than the other, yet the *Muyda* giving more Weight, they balance Account' (II, 140).

This means apparently that *Muyn* and *Muyda*—the first and second quality—were quoted nominally at the same price, but as the

25. *Letters*, II, 181 ; III, 10 ; IV, 296.

Baharr Gross of the former was half the weight of the *Baharr Gross* of the latter, the price of the former was really double that of the latter.

Formerly, says Fryer, *Muyn* and *Muyda* were worth 260, 270 and 280 *Cruzado* per *Baharr Gross.* A *Cruzado,* according to Fryer, is ⅘ of a Roy of ⅜, or ⅘ (or 1⅗) rupees,[26] since a royal (or rial or real) or eight=Rs. 2. The price of a *Baharr Gross* would thus be Rs. 416, 432 and 448 respectively ; that is to say, for *Muyn* Rs. 416 to 448 per 120 lb., and for *Muyda* Rs. 416 to 448 per 240 lb.

Of the third quality ; *Sera,* the current price, says Fryer, is 150, 160 and rarely 180 *Cruzado* per *Baharr Gross.* Presuming that the *Baharr Gross* of this quality was 240 ℔., the quoted price would come to Rs. 240, 256 and 288 respectively for 240 lb.

Further, at Surat the following rule was observed in the ivory trade : ' All over 16 *Sear* sell at 40 *Sear* to the *Maund;* from 10 to 16, at 60 *Sear* to the *Maund;* from 10 *Sear* and under, 80 *Sear* allowed to the *Maund'* (*Ibid.*)

Here the figures refer apparently to the total weight of the particular tusk, a larger one being far more valuable than a smaller one, other things being equal.

As Fryer is talking of Surat, by *seer* he means presumably Surat *seer,* which was ¾ of a pound or a little under ; so that 16 *seers* would be 11 or 12 ℔, and 10 *seers* about 7 ℔.

William Milburn, who was in India in the beginning of the eighteenth and end of the nineteenth century, supports this statement, with the further subdivision, that while the tusks weighing from 10 to 5 *seers* each went 80 *seers* (or 2 maunds) to the maund, those weighing under 5 *seers* went 160 *seers* (*i.e.,* 4 maunds) to the maund (Milburn, *Oriental Commerce,* I, 62.)

Milburn also is talking of Surat and Cutch, but he makes his 16 *seers* equal to 15 lb., which is an unusual value.

The E. I. Company factors give a widely different scale of weights for the various kinds :

26. This result is not consistent with the value assigned by Dr. Ball to a crusado, which ranges between 2 *s.* 3 *d.* and 2 *s.* 10 *d.* But when we are taking Fryer's statements and weights we must accept his values.

Surat factors, writing under date 26 Feb., 1616 [1617], place in the first class tusks weighing two, three, or four to a hundredweight, in the second those weighing four to eight to a hundredweight, and in the third such as weighed 27 per cwt. (*Letters*, V, 105).

This would assign tusks weighing 28 to 56 lb. to the first class, those weighing 14 to 28 lb. to the second, and those weighing 4 lb. and under to the third.

Again, we are told that tusks weighing under 16 lb. lose a third in value (*E. F. I. 1651-1654*, 140), the hollow of the teeth being worth little (*Letters*, II, 181).

We learn that the medium kinds of ivory found the best market in Gujarāt, while the largest specimens, as one would imagine, were in demand at Agra and Lahore (*Letters*, V. 105). In another place we are told that tusks weighing 16 to 30 lb. apiece were most vendible at Surat (*E. F. I. 1651-1654, p. 140*).

The following run of prices can be gathered from the notices in *E. F. I.* and *Letters* :—

Quality.	*Price in rupees per* Akbarī *maund (of 55 lb.).*
Large.	40 to 50, with a possible rise to 60.[27]
Medium.	30 to 35.[28]
Small.	16 to 30.[29]

The smaller sort is called "Chan-dahare."[30]

27. *E. F. I. 1622-1623*, p. 108 ;
„ *1624-1629*, p. 326 ;
„ *1630-1633*, p. 132 ;
„ *1646-1650*, p. 8.
„ *1646-1650*, p. 250.
Letters, I, 28, 33 and 238 ;
II, 100, 218, 248, 260 ;
III, 8, 86 ;
IV, 296 ; V, 105 ; VI, 159.

28. *Letters*, III, 41 ; VI, 159 ;
E. F. I. 1622-1623, p. 8.

29. E. F. I. 1661-1664, p. 211 ; *E. F. I. 1665-1667*, p. 31 ;
Letters, I, 299 and 304 ;
Letters, V, 105 ; VI, 159.

30. *E. F. I. 1618-1621*, p. 189.

Linschoten speaks in glowing terms of the skill and workmanship of Cingalese artificers in gold, silver, ivory, iron, and other metals. 'They make the fairest barrels for pèeces that may be found in any place, which shine as bright as if they were Silver. The same writer thus describes a crucifix of ivory : ' My maister the Archbishop had a crucifixe of Ivorie of an elle long, presented unto him, by one of the inhabitants of the Ile, and made by him so cunningly and workmanly wrought, that in the hayre, beard, and face it séemed to be alive, and in al [other parts] so neatly wrought and proportioned in limmes, that the like can not be done in [all] Europe : Whereupon my maister caused it to be put into a case and sent unto the King of Spaine, as a thing to be wondered at, and worthy of so great a Lord, to be kept among his [costliest] Jewels' (1, 81).

'Their teeth which is the Ivory bone, is much used in India, specially in Cambaia, whereof they make many curious peeces of workemanship, the women weare manillas, or arme bracelets thereof, ten or twelve about each arme, whereby it is there much worne, and are in great numbers brought out of Aethiopia, Mosambique and other places' (Linschoten, II, 3).

In this connection the following passage in the E. F. I. chronicle relating to the Surat Presidency in 1668 is of interest : 'Elephants teeth have fallen in price these five yeares, and hath not that good esteeme as in former tymes ; which made us very inquisitive to finde out the reason, and are told that much of the use they were putt to is taken off ; as, uppon the death of the husband, the wife, putting herselfe into widowhood, not onely layes by all her jewells and ornaments, but breakes her ivory braceletts, which are 8 or 10 uppon each wrist ; and soe did the whole kindred, mourning certain dayes, and then were again supplyed with new from the deceaseds kindred ; which superstition was soe universall that it caused a vast expence of teeth. But they of late are become wiser and make silver in their stead, which att funeralls they lay by for a tyme and then putt them on again ; and this is now become soe generall that little or noe ivory is worne' (*E. F. I. 1668-1669*, p. 26).

Jahāñgīr tells with his usual unction the story of a slave's workmanship in ivory carving : 'One of the royal slaves who was serving in the seal-cutting departments prepared and laid before me a design such as I had never seen or heard of before. As it is exceedingly strange, a detailed description of it is given. In the shell of a filbert four compartments had been carved out of ivory

[strictly, elephant bone]. The first compartment was one of wrestlers, in which two men were engaged in wrestling, a third was standing with a spear in his hand, a fourth with a hard stone ['a stone and a cord'. *i.e.*, a sling]. Another was sitting with his hands placed on the ground, while in front of him were laid a piece of wood, a bow and a pot. In the second a throne had been made above which a *shamiyāna* (a tent-fly or canopy) was depicted, and a man of wealth (a prince) was seated on the throne with one leg placed over the other and a pillow at his back. Five servants were standing around and before him, and tree-boughs threw a shade over the throne. In the third compartment is a company of rope-dancers, who have raised upright a pole with three ropes fastened to it. A rope-dancer upon it (qu. on the ropes ?) has taken hold of his own right foot with his left hand behind his head, and standing on one foot has placed a goat on the top of the pole.[31] Another person has thrown a drum on his neck and is beating it, whilst another man is standing with his hands lifted up and looking at the rope-dancer. Five other men are also standing, of whom one has a stick in his hand. In the fourth compartment there is a tree, below which the figure of the revered (*ḥazrat*) Jesus is shown. One person has placed his head at Jesus' feet, and an old man is conversing with Jesus and four others are standing by. As he had made such a masterpiece, I honoured him with a present and with increased salary' (*Tūzuk*, 97-98; R. & B., I, 200-1).

From the likeness of Jesus Christ in the fourth compartment, Sir Sayyid Aḥmad argues that this piece of carving was probably the work of a European artist; the royal slave having got hold of it and passed it off as his own handiwork.

The King of Ethiopia, Bernier informs us, sent some presents to Aurangzeb at his accession, in token of his goodwill. .These included 'a couple of elephants' teeth, of a size so prodigious that it required, it seems, the utmost exertion of a strong man to lift

31. The translator makes a correction in the text, which is not warranted by the readings of the MSS. extant. The I.O. MS., to which the translator refers in a footnote, and the finely-written, though incomplete, copy of the *Tūzuk* in the P. U. L., agree with *Iqbālnāma* (p. 58), which reads *buzbāzī*, and not *barbāzī*, as the translator construes it. Sir Sayyid Aḥmad's reading is incorrect. The meaning clearly is that a *buzbāz* is standing and is making a goat stand on the pole, while a person who has a drum round his neck beats it. A *buzbāz* is a performer (quite common in India) who goes about with a goat showing its tricks.

either of them from the ground' (p. 135). None of the presents, however, ever reached Delhi, owing to a series of mishaps on the way.

WALRUS IVORY OR THE 'FISH-TEETH.'

These are the two long canine teeth or tusks in the upper jaw of the walrus, also called sea-horse or morse. The tusks of the female are slightly longer, though not stouter, than those of the male, and may attain a maximum length of three feet.[32]

The ivory obtained from walrus-tooth is white like elephant ivory, though somewhat more yellowish; but there seem to have been extant some parti-coloured (veined or spotted) specimens of it, which, when produced before Jahāñgīr, drew his enthusiastic admiration.

Out of the presents KHān Daurān sent to Jahāñgīr from Kābul, the following, among others, were accepted (5 *Urdībihisht*, XI. R. Y.): 63 horses, 15 camels, a handful of plumes (for aigrettes), 9 pieces of china from KHaṭā 9 veined fish-teeth (walrus-teeth), and 3 guns (*Tūzuk*, 158).

SHāh 'Abbās, King of Persia, had bestowed on "KHān-i-'Ālam" a dagger the hilt of which was made of walrus-tooth with black spots (or veins). "KHān-i-'Ālam", thinking that the best use he could make of the fine arm was to present it to the Emperor, sent it to court through a servant. The dagger was placed before Jahāñgīr on Thursday, the 20th *Tīr*, XIV R. Y. He was delighted with it, and records that it is a rare present, and that he has never seen a spotted specimen of walrus-tooth before. In fact it so whetted his zest for the article that he, ever keen-set for the unusual in nature, sent out men in search of the specimen. But let us hear the rest of the story in his own words: 'A strange circumstance was that I was so much delighted with a jewelled dagger-hilt of piebald teeth which KHān 'Ālam had got from SHāh 'Abbās and sent to me, that I appointed several skilful men to go to Īrān and Tūrān to look for them and to be consistently searching for them, and to bring some from anywhere and any person, anyhow, and at any price. Many of my servants who knew my disposition, and dignified Amīrs in the course of their duty, engaged in the search. It happened that in this city a stupid

32. J. A. Thomson, *New Natural History*, II, 542.

stranger bought in the open bazaar a coloured tooth of great beauty and delicacy for a trifle ; he believed that some time or other it had fallen into the fire, and that the black on it was the mark of burning ! After some time he showed it to one of the carpenters on the establishment of my prosperous son SHāh-Jahān, desiring that he should take off a piece of the tooth in order to make a ring (*shast*) [rather, thumb-stall worn by archers], and pointed out that he should remove the marks of burning and the blacknesses, being ignorant that the blackness enhanced the value and price of the whiteness. Those moles and patches were what the tirewoman of destiny had given as an adornment of its beauty. The carpenter at once went to the Superintendent of his workshop, and gave him the good news that such a rare and precious thing, in search of which people were wandering and going long distances, and hastening to all corners and in all directions in various countries, had fallen for nothing into the hands of an ignorant man, who did not know its value. It could be easily and cheaply obtained from him. The Superintendent went off with him and immediately procured it, and next day produced it before my son. When my son SHāh Jahān came to wait on me he at first showed great delight, and after his brain had become free from the intoxication of the wine of joy, produced it, and greatly pleased me'—

May thy time be happy that
thou hast made mine happy !

'I invoked so many blessings on him that if one of them out of a hundred obtain acceptance, it will suffice for his spiritual and material well-being' (*Tūzuk*, 275; R. & B. II, 96).

The story is continued a page or so lower : 'On the 1st of the Divine month, out of the veined (*jauhar-dār*) spotted tooth (walrus) which my son SHāh-Jahān had given me as an offering, I ordered to be cut off sufficient for two dagger-hilts and a thumb-stall : it came out of a beautiful colour and was very choice. I ordered the *Ustāds* (masters) Pūran and Kalyān, who had no rivals in the art of engraving, to make dagger-hilts of a shape that was approved at this time, and has become known as the Jahāngīrī fashion. At the same time the blade and the sheath and fastenings were given to skilful men, each of whom was unique in his age in his art. Truly, it was all carried out according to my wish. One hilt came out coloured in such a way as to create astonishment. It turned out of all the seven colours, and some of the flowers looked as if a skilful painter had depicted them in black lines round it with a wonder-

working pencil. In short, it was so delicate that I never wish it to be apart from me for a moment. Of all the gems of great price that are in the treasury I consider it the most precious. On Thursday I girded it auspiciously and with joy round my waist, and the masters who in their completion had exercised great skill and taken great pains were rewarded, Ustād Pūran with the gift of an elephant, a dress of honour, and a golden bracelet for the wrist, which the people of India call *Kara*, and Kalyān with the title of 'Ajā'ib-dast (wondrous hand), and increased mansab, a dress of honour, and a jewelled bracelet (*pahūnchī*), and in the same way every one according to his circumstances and skill received favours' (*Tūzuk*, 276-277 ; R. & B., II, 98-99).

But this was not the end of the matter. The vigorous search for the "fish-teeth" which the Emperor instituted soon bore fruit in another quarter. In the annals of the next year he has the following information to give us : 'As at this time I was much inclined to parti-coloured veined teeth, the great Amirs exerted themselves greatly in looking out for them. Of these, 'Abdu-l-'Azīz K. Naqshbandī sent a servant of the name of 'Abdu-llah with a letter to KHwāja Ḥasan and KHwāja 'Abdu-r-Raḥīm, ss. KHwāja Kalān Jūybārī, who are to-day the leading holy men of Transoxiana, containing a request for these things. By chance KHwāja Ḥasan had a perfect tooth, exceedingly delicate, and immediately sent it with the aforesaid (servant) to the Court, which it reached this day. I was greatly pleased, and ordered them to send the value of Rs. 30,000 in choice goods to the KHwājas, a service for which Mīr Baraka Bukhārī was fixed upon' (*Tuzuk*, 310 ; R. & B., II, 166).

The translator thinks that tortoise-shell, and not walrus-tooth, is referred to in these passages ; because 'there is nothing black or piebald about walrus-teeth, and Jahāñgīr would surely not admire greatly a kind of ivory which was inferior to that of the elephant' (II, 94, f. n.). I am rather inclined to think that what is meant *is* walrus-teeth. We cannot imagine that Indian emperors did not know the difference between walrus-tooth and tortoise-shell. And it was just because walrus-tooth is usually white, and just because the particular specimens obtained bore the beautiful black-and-white veins or spots (which, he says, are rare), that Jahāñgīr was so enthusiastic over them, and was so keen for more.

On Thursday, the 15th Ābān, XIV R. Y., Jahāñgīr presented to Sulṭān Parwīz a *tipchāq* horse, a waist-dagger with a black-and-

white *jauhardār* handle [of walrus-tooth], a *KHaṣṣa* sword and a *KHaṣṣa* shield (*Tūzuk*, 280).

RHINOCEROS-HORN

Mysterious properties were supposed to belong to the horn of the rhinoceros from ancient times.

The medical dictionaries like the *Muḥīṭ-i-Aʿẓam* tell us in detail how various diseases could be cured, some by the patient wearing a ring cut out of the horn, others by grinding the horn and drinking the juice, or again by drinking from a cup made of it, or else through vapours rising from the horn held on fire (*Muḥīṭ-i-Aʿẓam*, Cawnpore, 1313 *A.H.*, IV, p. 61).

Cups made of rhinoceros-horn indicated the presence of poison, and were consequently held in high esteem among nations where poisoning was a common form of taking life. Besides drinking-cups, knife-handles and rings were carved out of the horn.

We find there was a similar belief current in the West, which continued down to the seventeenth century; but there the horn was known as the "unicorn's horn"; that is to say, the Europeans ascribed imaginary properties to the horn of an imaginary animal. This was natural enough, since we know that the rhinoceros did not exist in Europe.

We learn from Fuller's *Worthies of England* that there was a "unicorn's horn" in the Tower as well as another in Windsor Castle. As for its properties, he says, it is reputed to be not only an antidote against several poisons, but it resists 'poisons which kill by second qualities, that is, by corrosion of parts.' Dr. Fuller himself heard a report of a successful experiment made with it, where some grains of the horn proved an effective antidote against poison.[33]

Whether these horns were of the rhinoceros, or of the narwhal, or of some other animal, is entirely a matter of conjecture.

It has been remarked that the belief about the properties of a "unicorn's horn" was later transferred to the horn of the rhinoceros, when no unicorn was found to exist.[34] Obviously this cannot

33. Thomas Fuller, *History of the Worthies of England*, London, 1840, II, 338 and 340.

34. Linschoten, II, p. 9, footnote 2.

apply to the eastern peoples, who from the beginning stuck to the rhinoceros, and in whose mythology the unicorn had no place.

But we are concerned chiefly with the rhinoceros horn in Mughal India and the popular belief about its virtues in that country.

After describing the rhinoceros and its horn, Linschoten says : 'The Portingales and those of Bengala affirme, that by the River Ganges in the Kingdome of Bengala, are many of these Rhinoceros, which when they will drinke, the other beasts stand and waite upon them, till the Rhinoceros hath drunke, and thrust their horne into the water, for he cannot drink but his horne must be under the water because it standeth so close unto his nose, and muzzle : and then after him all the other beastes doe drinke. Their hornes in India are much esteemed and used against all venime, poyson, and many other diseases : likewise his teeth, clawes, flesh, skin and blood, and his very dung, and water and all whatsoever is about him, is much esteemed in India, and used for the curing of many diseases and sicknesses, which is very good and most true, as I my selfe by experience have found ; but it is to be understood, that all Rhinocerotes are not a like good, for there are some whose hornes are sold for one, two, or three hundred Pardawes the peece, and there are others of the same colour and greatnes that are sold but for three or foure Pardawes, which the Indians know and can discerne. The cause is that some Rhinocerotes, which are found in certaine places in the countrie of Bengala have this vertue, by reason of the hearbes which that place only yeeldeth and bringeth foorth, which in other places is not so, and this estimation is not onely held of the horne, but of all other things in his whole body, as I saide before' (II, 9-10).

William Finch has the following : 'Here [near Ajodhyā] is great Trade, and such abundance of Indian Asse-horne, that they make hereof Bucklers, and divers sorts of Drinking Cups. There are of these Hornes, all the Indians affirme, some rare of great price, no Jewell comparable, some esteeming them the right Unicornes Horne (Purchas, IV, 66).

'Great Prices', says Fryer, 'are offered for those [rhinoceros horns] that are inadulterate ; which they in *India* pretend to try by the Liquors presently fermenting in them ; but notwithstanding that Experiment they are often deceived by false Horns made into drinking Cups' (II, 298).

'They ascribe very much likewise to the Rhinoceros Horn in *India*', says Ovington, 'as it is an Antidote against all poysonous Draughts, and hugely extol in it that Medicinal Excellence and singular Quality. The Character of this Horn prevail'd so far with a former President of ours at *Suratt*, that he exchang'd for a Cup made of this Horn a large capacious Silver Bowl of the same bigness'.[35]

We read in an Armenian's report that 'there are many beasts with one horn in their forehead like unto an unicorn, which horn they say is good against poison, there are of them which weigh 8 ℔., some 7, 6, 4, and 3 ℔., the greatest and fairest worth some 4 rials per piece, and those of a lesser sort worth less. Amongst the Turks and Moors in Arabia every ℔. is worth one rial of 8' (*Letters*, I, 193).

Bābur tells us that 'out of one of the largest of these horns I had a drinking-vessel made, and a dice-box, and about three or four fingers' bulk of it might be left' (*Memoirs of Bābur*, tr. Leyden, Erskine and King, II, 210).

Sir Thomas Roe once laid a nice little plot against Prince SHāh Jahān. He tried to win his good graces by offering him a "Unicorn's horn" at a price, pretending that he did not speak of it to Jahāñgīr since he wanted to give him (the Prince) an opportunity of securing it and offering it in due course to the Emperor. The ambassador spoke in glowing terms of the virtues of the horn, and represented that it was so valuable that he had no power to sell it, and that the merchants made a secret of it, and did not allow it to come out of the ship. He made an offer, however, that if the Prince wished to buy it and would accede to certain demands of Sir Thomas's then pending, he could let the Prince's officers see the horn. 'This I hoped,' continues the ambassador, ever a clever diplomat, and at this moment at his best, 'would both sett an extreame appetite on the Prince, to passe it at a high price, and would insinuate an extraordinary desire in mee to doe him service; and if hee reavealed it to the King, I would answere: because it was not in my power to give His Majestie, I was ashamed to name yt, but had mooved the Prince to buy it for his use.'[35a]

35. Ovington, *Voyage to Suratt*, London, 1696, p. 297.
35 (a). Foster, *Embassy of Sir Thomas Roe to India* p. 255.

The Prince, always a match for the tactician, was in this case too clever for him. He returned formal thanks, but matters proceeded no further.

The above entry is under October 16, 1616. Eight months later Roe records that 'the unicornes horne was returned as without vertue' (p. 366). It was then sent on to Sūrat and then to Ahmadābād, where John Browne, a factor, showed it to Muqarrab KHān, asking 5,000 rupees for it. The factor says that he tried the efficacy of the horn on the lives of 'a pigeon, goate, and man, which they loosing, itt also lost his esteeme, and soe I retourned it aboard from whence I had ytt'.[36]

Muqarrab KHān not buying it, the horn was sent to Achin,[37] and then on to Bantam.[38] Finally it passed into the hands of the Dutch, and was sold in Holland for £400.[39]

TORTOISE-SHELL

It consists of the horny plates of the hawksbill turtle (*Chelonia imbricata*), the smallest of the sea turtles. These plates are harder, more brittle and less fibrous than ordinary horn. Their value depends on the rich mottled colours they display—a warm translucent yellow, dashed and spotted with rich brown tints—and on the high polish they take and retain. The finest tortoise-shell is obtained from the Eastern Archipelago, particularly from the east coast of Celebes to New Guinea; large supplies come from the West Indian islands and Brazil' (*Encycl. Britan.*, XXII, p. 310).

'Tortoiseshell,' continues the writer of the same article, 'has been a prized ornamental material from very early times. It was one of the highly esteemed treasures of the Far East brought to ancient Rome by way of Egypt, and it was eagerly sought by wealthy Romans as a veneer for their rich furniture. In modern times it is most characteristically used in the elaborate inlaying of cabinet work known as buhl furniture, and in combination with silver for toilet articles. It is also employed as a veneer for small boxes and frames. It is cut into combs, moulded into snuff-boxes and

36. *E. F. I. 1618-1621*, p. 12.
37. *Ibid.*, p. 58.
38. *Ibid.*, p. 184.
39. *Ibid.*, p. 11, f. n.

other small boxes, formed into knife-handles, and worked up into many other similar minor articles. The plates from certain other tortoises, known commercially as turtle-shell, possess a certain industrial value, but they are either opaque or soft and leathery, and cannot be mistaken for tortoise-shell. A close imitation of tortoise-shell can be made by staining translucent horn or by varieties of celluloid' (*Ibid.*).

'Torteanxes [tortoises] there are likewise in great numbers throughout all India : of their shelles they make many curious devises, as Combes, Cuppes, and Boles to drinke in, with tablemen [men at backgammon] and divers such like thinges, knowing howe to give it a faire and shining colour most pleasant to behold, and is more esteemed of in India, then the mother of pearle, by reason of the beautifull colour they set uppon it' (Linschoten, II, 136). The same writer in another place speaks of shields made of tortoise-shell 'wrought and inlaide very workemanlike' (*Ibid.*, I, 61).

Tortoise-shell seems to have come mainly from Bantam, and also from Ceylon.[40]

The Sūrat factors declare that the blackest colour and thickest shells are most in request.[41]

Sūrat quotations extending from 1619 to 1649 give a nearly uniform price of just over two rupees a seer (of 7/10 ℔.).[42]

When the shell of a single animal weighed 1½ or 2 ℔., says Fryer, it sold for 30 or 36 *Cruzado* per *Frasslee* (II, 140). This price comes to Rs. 48 to 57⅜ per *frasslee*.

We assume the *frasslee* to be equal to about 22½ ℔., which is the usual value ; although on the same page, in connection with ivory, Fryer makes the *frasslee* = 12 ℔., which is presumably the special value of the *frasslee* of ivory.

This calculation would yield the price 2½ rupees to the pound —a rate which tallies roughly with that deduced from the factors'

40. *E. F. I. 1634-1636*, pp. 49 and 296 ;
„ *1642-1645*, p. 86 and 211 ;
„ *1655-1660*, p 56.
41. *E. F. I. 1618-1621*, p. 55.
42. *E. F. I. 1618-1621*, p. 55 ;
„ *1642-1645*, p. 211 ;
„ *1646-1650*, p. 234.

reports (given above) ; although Fryer's time is late in the century, *viz.*, 1672-81.

MISCELLANEOUS

As a supplement to the above are appended the following notices of articles made of ivory, tortoise-shell, ebony, jet, amber, and crystal :

Linschoten, speaking of the industries and trade of Cambay, says that there are found there 'fine playing tables, and Chessebordes of Ivory, and shields of Torteur shelles, wrought and inlaide very workemanlike, many fayre signets, ringes, and other curious worke of Ivorie, and sea horse téeth, as also of Amber, whereof there is great quantitie : They have likewise a kind of mountain Christall, wherof they make many signets, buttons, beades, and divers other devises' (I, 61).

Roe thus narrates the presents he made to Āghā Nūr, the *Kotwāl* of Agra, who, he says, was one of his best friends :

'I gave him according to the custome two knives, one of amber and one of jett, cost xs., and a pare of tables of ebonie and eliphants tooth, worth 30*s*. Then hee desired mee to give his brother a pare of knives, which I did, of vis. price. After that hee desired some greater knives, and I shewed him fower, which hee tooke every one, without restooring the former. Though this was somewhat unmannerly, yet I was content, because hee is one of the best frends wee have in India and did keepe the English house from being taken from them in Agra' (Roe, 143, f. n. 1).

Tavernier's general remarks about the course of trade in coral and lapis lazuli beads, yellow amber, tortoise-shell, etc., are interesting.

'Those merchants who come from Bhutān and Kābul go to Kandahār and on to Ispahān, and they generally take back coral beads, yellow amber, and lapis wrought into beads when they can obtain them. The other merchants, returning from the regions about Multān, Lahore, and Agra, take calicoes, indigo, and an abundance of carnelian and crystal beads. Finally, those who return by Gorakhpur, and have an understanding with the customs officer, take from Patna and Dacca coral, yellow amber, tortoise-shell bracelets, and others of sea shells, with numerous round and square pieces of the size of our 15-sol coins, which are also of the

same tortoise-shell and sea shells. When I was at Patna four Armenians, who had previously made a journey to the Kingdom of Bhutān, came from Dantzic, where they had had made numerous images of yellow amber, which represented all kinds of animals and monsters; these they were taking to the King of Bhutān to place in his pagodas, he being, like his people, exceedingly idolatrous. Wherever the Armenians see that money is to be made they have no scruple about supplying materials for the purposes of idolatry, and they told me that if they had been able to get an idol made which the King had ordered from them they would have been enriched. It was a head in the form of a monster, which had six horns, four ears, and four arms, with six fingers on each hand, the whole to be of yellow amber, but the Armenians could not find sufficiently large pieces for the purpose (*Tavernier*, II, 203-204).

BEZOAR-STONE

Bezoar-stone (from Pers. *pad-zahr*, lit., protecting from poison, *i.e.*, an antidote) is a concretion found in the stomach and intestines of ruminants and some other animals. We are here concerned only with the Oriental species, and not with the Occidental, which is obtained from the llamas of Peru, nor with the German, which is obtained from the chamois.

The Oriental bezoar was supposed to possess powerful medicinal qualities, being specially used as an antidote in Persia, India and other eastern countries.

Dr. Kunz tells us that a bezoar-stone upon which scorpion's figure had been engraved during the time when the constellation Scorpio was in the ascendant, was considered an effective cure for a scorpion's bite (*Curious Lore of Precious Stones* 340).

This intestinal calculus appears to have been in great request in India, and the early European travellers (including Garcia da Orta) seem to believe in its efficacy not only as an antidote, but as a useful therapeutic agent and an aphrodisiac.

The Oriental bezoar is found in the wild goat of Persia and in various kinds of antelopes. But we are specially concerned with India, about which information from contemporary observers is available :

In this country, in the seventeenth and eighteenth centuries, the bezoar was obtainable chiefly from goats, but also from cows and monkeys, and geographically was strictly localized.

The following is from Linschoten:—'The Bezar stone commeth out of Persia, from the land or Province called Carassone [KHurāsān], and also out of other places in India: they grow within the maw of a sheepe or Goat, about a little straw, that lyeth in the middle [of the maw], for by experience the straw is often found within them: the stone is very slicke and smooth without, of a darke greene colour' (II, 142).

'This Bezars stone is very costly, and is much used in India against all poyson, and [other] diseases, and is more esteemed then Unicornes horne in Europe, for it is much tryed and sold very deare: the greater and heavier they are, the better and of more vertue they are: the common sorte are of three foure or five octaves weight, some more, some lesse: they are much brought into Portingal, and greatly esteemed: the place where they are most found, is (as I said before) in Persia and also in the Island called Insula das Vacas, or the Island of Cowes: It lyeth before the mouth of the river, entering into Cambaia, hard by the coast where the Portingall navie often putteth in to refresh themselves, and [being there], kill divers of the sheepe or Goats, wherein they finde many of these Bezars stones: likewise in the lande of Pan [Pahang] by Malacca, there are many found' (*Ibid.*, 143-44).

'The Bezars stone is as hard as [any] stone, but not very heavie: It is thought that these stones doe grow in the mawes of sheepe by vertue of the grasse [or hearbes] whereon they pasture and feed, as we have declared of the Rhinoceros, because they doe onely breede in those places above named, and in no place els, where these kinds of beastes are' (144).

Manucci tells us how he once fed on chicken-broth and bezoar-stone a patient who had been weakened with enema and purgatives. The patient, who was a *qāẓī's* wife, steadily gained strength, and was, in a few days, restored to perfect health (*Storia*, II 178).

Roe, Tavernier, and Manucci seem to agree that the bezoar-stone was found in what is now the Masulipatam district in the Madras presidency; though Manucci is quite wrong in deriving the name *pad-zahr* from Bezwada in that district. Manucci says that in that part the goats are 'very numerous', and that 'the goat-herds who tend them are aware of how many there are in each goat, and the weight of each' (*Storia*, II, 431).

Roe adds Bengal as another Indian locality. But his remarks are worth quoting in full. 'For Bezars,' he says, 'ther are three sorts;

the best are of Persia, others from Malacca, the last of Masolapatan and Bengala. .... The best .... are a blackish greene of Persia... The prices in England are about 3 *li.* an ounce; if the stones be great and whole they are woorth 5 *li* ... To avoid counterfaytes ... ... with a very hot needles poynt peck them. If it make noe signe, they are not false; if the nedle enter or burne them, they are made ones. The best triall of the virtue is to lay them in buffles milke, and the best will turne it like runnett and those are rich' (Roe, 157, f.n. 1).

We are told in the Relations of Golconda that where they are found, the bezoar-goats are killed for their skins and the stones in large numbers, so that the flesh is mostly thrown away. Two, three, and sometimes as many as four small stones are found in a single goat, some long, others round in shape. The concretion forms round a woody nucleus (p. 34).

From an experiment reported in the same place one may infer that the formation of a bezoar-stone depends more upon the kind of vegetation on which the goat feeds in that region, than on any peculiarity of the species (p. 35). This seems corroborated by Tavernier who refers to a particular tree on which the goats feed, though, he says, he has forgotten the name of it. 'This plant', he continues, 'bears little buds, about which, and also on the tips of the branches, which the goats eat, the bezoar concretes in the bellies of these animals. It assumes a form according to the shape of the buds and the ends of the branches, and this is why one finds it in so many different shapes. The peasants, by feeling the belly of the goat, know how many bezoars it contains, and they sell the goat for a price in proportion to the number which are therein. In order to ascertain this, they run both hands under the belly of the goat and beat the paunch along both sides, so that all the stones fall to the middle, and they then estimate exactly, by touch, how many bezoars are in it. The value of bezoar depends on the size, although the small possess no less virtue than the large. But in this respect one is often deceived by the fact that there are people who enlarge the bezoar with a kind of paste made of gum and other materials of the same colour as the bezoar. They understand, even, how to give as many coats as the natural bezoar ought to have. One can detect this fraud easily by two methods. The first by weighing the bezoar and placing it to steep for some time in lukewarm water; if the water does not change its colour, and if bezoar does not lose weight it has not been adulterated. The other means is to touch

the bezoar with a pointed hot iron ; if the iron enters it and makes it fry, it is a sign that it is a mixture, and that it is not genuine. For the rest, the larger the bezoar the higher the price, which rises in proportion like that of the diamond. For if 5 or 6 bezoars weigh an ounce, the ounce will be worth from 15 to 18 francs, but if it is a bezoar of one ounce, the ounce will be worth fully 100 francs. I have sold one of 4¼ ounces for as much as 2,000 livres [£ 150], (Tavernier, II, 116).

These prices work out as follows :

Weight	Price.
⅙ to ⅕ of an oz.	2*s.* to 2*s.* 10*d.*
1 oz.	£ 4.
4¼ oz.	£ 150

We have seen that Roe quotes £3 to £5 an oz. as the price in England, which is considerably lower. This goes to support Fryer's statement that owing to a heavy demand in India the stones cannot be bought there to yield profit in England enough to repay for the trouble (Fryer, II, 34).

William Methwold bought at Masulipatam in 1621 a few bezoar-stones, some at 24 rialls (= 48 rupees) per seer (of 12 oz.) and some dearer (*E. F. I. 1618-1621*, p. 255).

In a communication dated Jan. 6, 1648 from Surat, we have the following remark :—'Bezoar stones cannot be got from Golconda (where the "pagode" is now worth, exchange included, 4¾ rupees) under 33 and 36 mahmūdīs per ounce' (*E. F. I. 1646-1650*, 182). So the price at Golconda was Rs. 13 or 14 per oz.—a very high price compared with the last quotation; but we may explain it by supposing that here the stones were larger, and therefore much more costly ;—besides the dates are 27 years apart.

Again, in a Sūrat report for 1668, Rs. 3½ per *tola* is quoted for bezoar-stone. This is equivalent to Rs. 8¾ per *oz.* (*E. F. I. 1668-1669*, p. 3).

Tavernier visited Golconda several times and was interested in the bezoar-goats. He once purchased as much as about 60,000 rupees' worth of bezoar for the servants of the English and Dutch Companies. Considering Roe's quotation and Fryer's remark, the English could not have bought it for importation to England. Possibly they did so for local disposal.

It appears that export of bezoar-goats from Golconda was prohibited on pain of death, the king of Golconda farming out the trade for a yearly payment of 6,000 old pagodas, or 45,000 livres.[43] It was with great difficulty, therefore, that Tavernier once succeeded in procuring six bezoar-goats, which he examined at his leasure. 'They are beautiful animals', he says, 'very tall, and having fine hair, like silk.' He had to pay 3 rupees for a goat with one bezoar only, 4 rupees each for another two, and 4¼ each for the remaining three. The last five had from two to four bezoars each. (Tavernier, II, 116-18).

Jahāñgīr relates that an Afghān once 'brought from the Carnatic two goats that had *pāzahar* (bezoar stones, an antidote against poison). I had always heard that an animal that has pazahar is very thin and miserable, but these goats were very fat and fresh. I ordered them to kill one of them, which was a female. Four pazahar stones became apparent, and this caused great astonishment' (*Tūzuk*, 117; R. & B., I, 240). The Carnatic, as the reader is aware, borders on Golconda.

Bezoars are also obtained from cows, which weigh up to 17 or 18 French ounces. But these are not esteemed. A bezoar from a monkey, which is round in shape, is particularly efficacious, but rare, and proportionately costly. One of the size of a nut would cost more than 100 ēcus (i.e. £22-10-0) (Tavernier, II, 118-19).

Methwold (*Relations of Golconda*, 34) and Fryer (II, 141) are at one with Tavernier in thinking that the monkey bezoars are the best; though Fryer says they are long, while Tavernier makes them round. 'Those that are rough', continues Fryer, 'prove commonly faulty, breaking with Stones in the middle: Others in form of Tares, somewhat flat, which break in smaller Stones in the middle, are better than the rough ones' (*ibid.*)

Manucci has the following interesting, if fantastic, account, of the origin of the bezoar in the monkey: 'They [the monks] told me that in that country [Borneo] was an island where there were many baboons. The natives inflict wounds on them with a small poisoned arrow shot from a *zarvatana* (blow-tube). The baboon,

43. This equation is untenable on Tavernier's own showing; since 6,000 old pagodas=£2,700, and 45,000 livres=£3,375. But with Tavernier this is a small matter.

aware that the wound is poisoned, takes to flight at once, and goes to find a certain herb which is an antidote. The blood is then stanched and the wound closes, but at the spot, instead of flesh, the blood congeals into a stone which possesses the virtue of the plant that was eaten. The natives recognise these baboons by their height, and killing them, withdraw the stone, which has greater potency than any others' (*Storia*, III, 191-92).

Fryer suggests the following methods of detecting fraudulent manufactures : '*Bezoar* is tried sundry ways: As the rubbing Chalk upon a Paper, then rubbing the Stone hard upon the Chalk, if it leave an Olive-Colour it is good. Also touch any with a Red-hot Iron, which you suspect because their Colour is lighter than ordinarily they use to be, and if they fry like Resin or Wax, they are naught. Sometimes they are tried by putting them into clear Water, and if there arise upon them small white Bubbles, they are good, and if none, they are doubtful. The use of the Hot Iron is esteemed infallible.' (II, 141).

The reader will notice that at least one test, *viz.*, that of the pointed hot iron, is common to Roe, Tavernier, Fryer, and the last writer calls it infallible.

PORCUPINE STONE

The bezoar leads on naturally to the 'porcupine stone', which was another much, esteemed antidote, and, according to Tavernier, 'more efficacious against poison than bezoar'. It was found in the head of the porcupine. 'When it is placed to steep in water for a quarter of an hour,' continues Tavernier, ' the water becomes so bitter that there is nothing in the world to equal it in bitterness. This animal has also sometimes, in its belly, a stone which is of the same nature and equally good as that which comes from the head, except with this difference, that it loses nothing of its weight or size by steeping in water, while there is diminution of the other. During my life I have bought three of these stones. One cost me 500 écus [£ 112-10-0], and I disposed of it subsequently with advantage to the Ambassador Dominico de Santis, of whom I have spoken in my accounts of Persia. I paid 400 écus [£ 90] for another, which I still keep ; and the third was sold to me for 300 écus [£ 67-10-0], and I made a present of it to a friend ' (Tavernier, II, 119-20).

The editor's footnote to this passage is worth quoting : 'It seems probable that the substance supposed to be obtained in the

head of the porcupine was a vegetable drug, to which that mythical origin was ascribed (Garcia da Orta, 470 f.). Castanheda mentions a stone obtained in the head of an animal called bulgoldorf, which was exceedingly rare, and was said to be an antidote against all kinds of poison (Kerr, *Voyages and Travels*, ii, 439). A. Hamilton (in Pinkerton, viii, 450) says that at Lingen, near Johore, he has seen pieces of porcupine bezoar as big as, and shaped like, a walnut, valued at 600 pieces of eight.' It is only necessary to add that a piece of eight had the same value as an *écu, viz.*, 4*s.* 6*d.*

SNAKE-STONE

Tavernier winds up his long account of miscellaneous stones with the following passage: 'I shall finally make mention of the snake-stone, which is nearly the size of a double [? doubloon, a Spanish gold coin, larger than the English penny, formerly worth 33 to 36s., now slightly over £ 1], some of them tending to an oval shape, being thick in the middle and becoming thin towards the edges. The Indians say that it grows on the heads of certain snakes, but I should rather believe that it is the priests of the idolaters who make them think so, and that this stone is a composition which is made of certain drugs. Whatever it may be, it has an excellent virtue in extracting all the poison when one has been bitten by a poisonous reptile. If the part bitten is not punctured it is necessary to make an incision so that the blood may flow; and when the stone has been applied to it, it does not fall off till it has extracted all the venom which is drawn to it. In order to clean it it is steeped in woman's milk, or, in default of it, in that of a cow; and after having been steeped for ten or twelve hours, the milk, which has absorbed all the venom, assumes the colour of matter. One day, when I dined with the Archbishop of Goa, he took me into his museum, where he had many curiosities. Among other things he showed me one of these stones, and in telling me of its properties assured me that but three days since he had made trial of it, and then he presented it to me. As he traversed a marsh on the island of Salsette, upon which Goa is situated, on his way to a house in the country, one of his pallankeen bearers, who was almost naked, was bitten by a serpent and was at once cured by this stone. I have bought many of them; it is only the Brahmans who sell them, and it is that which makes me think that they make them. You employ two methods to ascertain if the snake-stone is good, and that there is no fraud. The first is by placing the stone in the mouth, for then, if good, it leaps and attaches itself immediately to the palate. The other is to place it in a glass full of water,

and immediately, if it is genuine, the water begins to boil, and small bubbles ascend from the stone which is at the bottom, to the top of the water' (Tavernier, II, 120-21).

Much useful bibliography is condensed in the following footnote to the above passage: 'Thévenot says that they were made of the ashes of the root of a certain plant, mixed with a particular kind of clay (*Voyages,* p. 94). Some snake-stones appear to have been made of charred bone. (See for an exhaustive account of this subject Yule, *Hobson-Jobson,* 847; Tennent, *Ceylon,* i, 197; Fryer, 138 f; *Voyage of F. Leguat,* ii, 234). The belief in their efficacy is still very general in India; by some they are supposed to be found in the head of the adjutant bird (see Ball, *Jungle Life in India,* 82; Prof. W. R. Halliday, *Folk-lore,* xxxii, 262 ff., xxxiii, 118f.).' (P. 120, f.n. 2).

'There is still another stone,' continues Tavernier, 'which is called "stone of the hooded snake." It is a kind of snake which has, as it were, a hood which hangs behind the head, and it is behind this hood that the stone is found, the smallest being of the size of a hen's egg. There are snakes in Africa and in Asia of an enormous size, and up to 25 feet in length, as was that one whose skin is preserved at Batavia. This snake had swallowed a girl of eighteen years, of which fact I have elsewhere given an account. You find these stones only in snakes which are, at the least, two feet in length. The stone, which is not hard, when rubbed against another stone yields a kind of slime which, when dissolved in water and drunk by a person who has some poison in his body, has the property of driving it out at once. These snakes are only to be found on the coasts of Melinda, and you can obtain the stones from Portuguese sailors and soldiers on their return from Mozambique' (Tavernier, II, 121).

Ovington tells a story of a snake-bite and the cure of it effected with a snake-stone, which he follows up with a description of composition and virtues of a snake-stone, and the methods of putting it to the test: 'A Peon of mine, named *Gemal,*' he says 'walking abroad in the Grass after the Rains, was unfortunately bit on a sudden by one of them. The latent Snake twisted unawares about his Leg, and in a short time brought him to the Ground, by causing in him an immediate deliquium of Spirit, almost even to Expiration. The Servants who were standing by, amaz'd at the accident, called immediately upon an *English* Merchant, who hasten'd to-

wards him with a special Medicine for his Recovery. The thing which he carried about him, and which instantly applyed, is a Specifick against the Poison of Snakes, cured him, and therefore obtains the Name of Snake-stone. It is a small artificial Stone, almost flat, only with a little protuberance in the middle, and of a gray Colour. The Composition of it is Ashes of burnt Roots, mixt with a kind of Earth, which is found at *Diu*, belonging to the *Portuguese*; and those are burnt together again, out of which Paste the Stones are formed. They are not all alike Colour'd, but those that have receiv'd more of the Fire, are thereby inclin'd to a lighter Gray, the others are a little more dark. This Stone Cures by the application of it to the part invenom'd, to which it immediately sticks fast, and by its powerful Attraction sucks back the infus'd Venom, 'till its Pores are full. Then like a glutted Horse-Leach it falls off, and disgorges the replenisht Pores in Milk (the properest liquor for this purpose) which by discolouring, it renders livid. Upon this it recovers new strength, and its Alexipharmick quality again, and is speedily prepar'd for a fresh Draught of Poison, if any remains in the affected part, 'till it quite extracts whatever the venomous Serpent had immited; which makes those Counterpoisons in great esteem against all external Attacks upon the Body; as the Cordial Antidotes are most valuable for expelling or subduing any Poyson inwardly receiv'd. The double Excellence of this Stone recommends its worth very highly, in that a little of it scraped off, and mixt with Wine, or some other proper vehicle, and inwardly taken, is reputed one of the most powerful Medicines against any Malignant Fevers or Infectious Diseases, that is known; and much excels the deservedly fam'd *Gasper Antoni*, or Goa Stone. The trial of these Stones is made by fixing them to the Roof of the Mouth, to which if they stick fast, 'tis a sign they are genuine, if they easily fall off, fictitious. Another method for knowing the true Stones from the Counterfeit, is to immerse them in a Glass of Water, where, after a while, if some light Ebullitions rise from them, and ascend through the Body of the Water, this likewise is an approv'd Sign that the Stone is not spurious. The *Europeans*, for the Security of themselves against the Danger of these Serpents, which are every where so common in *India*, carry always about them one of these Stones inclosed in a Heart of Gold, fixt to a Golden Chain, which hangs about their Necks' (p. 260-63).

The reader will have remarked that the author is speaking here of the artificial snake-stone. He knows nothing apparently of the 'natural' snake-stone.

YADATĀSH OR RAIN-STONE

According to the *Farhang-i-Anandrāj,* it was a stone which, when incantations were recited over it, and the stone placed on the hand and put up to the sky, was believed to bring clouds and rain in abundance. This belief was widely current among the Turks. It is to be traced to the following incident in sacred history, which, however, is not to be found in the *Old Testament.*

It is related that when Japheth got leave from his father Noah, to proceed towards the east and the north with his family and relations, he requested his father to teach him a prayer which should bring rain whenever he wished it. The patriarch Noah gave him a stone which had that virtue, and either recited, or made a show of reciting the *ism-i-aʿẓam* over it (*Akbarnāma,* I, 58). According to another version, Noah taught him the *ism-i-aʿẓam* and traced it on the stone (*Shajaratul Atrāk,* 24).

Japheth then set out on his journey, and produced rain with the help of that stone whenever he required it.

'It is said that this secret was disclosed to Noah by Gabriel, and that he was intructed, when he wanted rain, to repeat the name of God, to breathe on the stone, and throw it in water, and rain would then fall' (*Shajaratul Atrāk* 24).

On Japheth's death the stone passed to his eldest son, Turk, who succeeded him.

This, we should remember, was the first stone of its kind.

This stone, which was called *jada tāsh* or *yada tāsh* by the Turks, *sang-i-yada* by the *Persians, and ḥajaru'l-maṭr* by the Arabs, was reported to be common among the Turks in later times—which presumably means that a *kind* of stone came in succeeding ages to be credited with similar properties, and was supposed to be descended in some mysterious way from the celebrated stone of Noah (*Akbarnāma,* I, 58 ; *Shajaratul Atrak,* 24).

Bābur often speaks of this stone in his *Memoirs ;* and mention of it in Mughal history is frequent.

Later on, the *yada* stone was believed to bring not only clouds, wind and rain, but hail, snow, excessive cold and violent tempests.

An instance where the stone was merely thrown into water, and snow and hail appeared is cited in *Shajaratul Atrak* on p. 66.

Another instance: When Tūlī KHān, son of CHingīz KHān, during the Mughals' invasion of China in 627 *A.H.* (=1230 *A.C.*) was driven by the chinese to KHaṭā, and was reduced to an extremity, he used the *sang-i-yada*, which brought snow and rain and intense cold. He thus scored a victory and put a large number of the enemy to the sword, taking some prisoner, Ghiāṣu'd-Dīn "KHwand Mīr," *Ḥabību's Siyar*, Bombay 1857 III, Pt. i, 29).

Rain-making with this stone, however, was not a common thing within the power of every tiro. It was an esoteric art and was practised professionally. Those who knew the use of the stone were called *yadahī* or *jadahī*.

Rai Anand Rām "Mukhliṣ" reports that a Turk, who understood the art of the *yada* stone, was once on a visit to Nawāb "Saifu'd-Daula" Abdu's-Ṣamad KHān, who was *Nāẓim* of Multān in the reign of Muḥammad SHāh. At the Nawāb's request he gave the performance once, and produced plenty of cloud, and rain and hail.

The Emperor Muḥammad SHāh, having heard of it, directed his immediate attendance at Delhi; but by the time the orders reached Multān, the Turk had left for Turkistān, his home *Mir'ātu'l-Iṣṭilāḥ*, P.U.L. MS., f. 136 *b*).

The *Shajaratul Atrak* wrongly identifies this stone with, or at least assimilates it to, the bezoar-stone, and thus has misled many European scholars of repute. Again, the word *jada* has no connection with 'jade,' as has been sometimes supposed.

The Imperial Treasury of the Greater Mughals

By

Mr. Abdul Aziz, Bar-at-Law.

CHAPTER IV :

THE ACTUAL CONTENTS OF THE JEWEL TREASURY FROM THE INVASION OF BĀBUR TO THAT OF NĀDIR SHĀH.

Now that we have surveyed the historical notices of precious and semi-precious stones and other valuable substances, we are in a position to try and form an idea of the actual amount of the total treasure ; for while fragments, diarists' entries and anecdotes may be good history, they fail to produce an *impression* unless they are synthesized into a concrete and self-sustaining whole, and visualized as such.

It is as if after witnessing the presentations in court and other individual accretions to the Treasury we were now entering the Treasury itself, and trying to take stock of the wealth that has accumulated there.

The Indian Mughals had a great reputation for wealth, which, as far as the Jewel Treasury is concerned, was well deserved. While the contents of the Cash Treasury waxed and waned with the exigencies of the Mughal Empire and with the habits and temperament of the Emperor, the Jewel Treasury grew without abatement, at least from the accession of Akbar down to Nādir SHāh's invasion in 1739.

The impressions of foreign travellers can be gathered from the following excerpts :

'Of these precious stones the Mogul has a quantity inherited from Taimūr-i-lang and the other kings, his predecessors, also those obtained in the conquests of the Bījāpur and Gulkandah kingdoms. In addition there are those he is daily buying. This takes no account of the fact that in these days he has become master of the diamond mines, and there is no stint of stones, the largest and best. For, although King Humāyūn was dethroned and expelled from his

kingdom by Sher Shāh, he did not thereby lose his jewels, for he took them away and brought them back with him.' (*Storia*, II, 343.)

We are not sure about the 'Mogul' inheriting precious stones 'from Taimūr-i-lang'. Nor is any importance to be attached to the last sentence, which stands unsupported by any evidence.[1]

The following is more sensible :

'*Chah-Jehan*,' says Bernier, 'who was a great economist, and reigned more than forty years without being involved in any great wars, never amassed six *kourours of roupies*.[2] But I do not include in this sum a great abundance of gold and silver articles, of various descriptions, curiously wrought, and covered with precious stones ; or a prodigious quantity of pearls and gems of all kinds, of great size and value. I doubt whether any other Monarch possesses more of this species of wealth ; a throne of the great *Mogol*, covered with pearls and diamonds, being alone valued, if my memory be correct, at three *kourours* of *roupies*.[3] But all these precious stones, and valuable articles, are the spoils of ancient princes, *Patans* and *Rajas*, collected during a long course of years, and increasing regularly under every reign, by presents which the *Omrahs* are compelled to make on certain annual festivals' (P. 223).

But this is only by way of introduction.

It is now time we attempted some stock-taking of the Mughal Jewel Treasury. We should love to have before us an authentic report of the contents of the Treasury for each of the major reigns, duly signed and verified by the Treasurer in charge at the time, setting forth, as was the rule, the number and the weight of the stones and pearls with the quality and the value of each clearly indicated. Unfortunately such a report, extremely desirable as it would be, is not available. But we possess a few documents of comparatively minor importance with which we shall have to shift as best we may. But we must begin at the beginning.

BĀBUR.

The swingeing victory of Panipat placed at Bābur's disposal the cumulated 'treasures of five kings.'[4] We have no doubt that

1. See below, pp. 278-9.
2. A remark already dealt with under "Cash Treasury".
3. For criticism of this see p. 302 below.
4. *Humāyūn Nāma*, 12.

huge quantities of jewels fell into Bābur's hands at Delhi and Agra, but we know also that Bābur showered money and jewels recklessly on his followers—princes, nobles, soldiers and the rest —just as he squandered the cash hoarded for generations by a line of thrifty kings before him. Some idea of the scale of munificence can be gathered from the following, which is only a part of the general distribution, which chances to be recorded:

KHwāja Kalān Beg repeatedly asked for leave to proceed to Kābul, as the climate of India did not suit him.

Bābur reluctantly gave him permission and by his hands sent the following presents for his relations at Kābul, with the instruction that all begums should set up their various tents in the garden of the audience-chamber, celebrate the occasion properly and thank God for the great victory, accepting these presents from the Emperor.

To each begum was to be presented one of Sulṭān Ibrāhīm's special dancing girls with a gold plate full of jewels—ruby, pearl, cornelian, diamond, emerald, turquoise, topaz and cat's-eye—two small mother-of-pearl trays full of *ashrafīs* and two other trays full of *shāhrukhīs* and all kinds of stuffs in sets of nine—four trays and one plate in all. And to the elder relations were sent a dancing girl, a plate of jewels, and a tray each of *ashrafīs* and *shāhrukhīs*—the dancing girl with the plate to be presented first, and the rest later. Jewels, *ashrafīs*, *shāhrukhīs* and stuffs were to be given to sisters, children, harams, kinsmen, begums, *āghās*, nurses, foster-brothers, *āghāchas* and others.

These instructions were carried out, and there were great doings for three days in the audience-hall garden at Kābul.[5]

HUMĀYŪN

Humāyūn apparently carried about with him in his wanderings as many of the jewels as he could remove from the Jewel Treasury.

We do not hear much of them, however. On his way to Persia, near Bābā Ḥāji fort (in the south of Afghanistan), Humāyūn offered a ruby, a pearl and a few things to a Balūch chief, who had treated him kindly and shown devotion.[6]

5. *Humāyūn Nāma*, 12-13. I have here freely translated, and slightly condensed, the passage, as a literal translation does not read well in English.
6. *Humāyūn Nāma*, 68 [168].

Abū'l-Faẓl has already told us how after his arrival in Persia Humāyūn offered to SHāh Ṭahmāsp Bābur's famous diamond with 250 rubies.[7]

Gulbadan Begum has a different story to tell of the presentation of the jewels to the SHāh. She tells us that Humāyūn kept his collection of precious stones in a purse or pocket-book which he carried on his body, and which he left in charge of Ḥamīda Bānū Begum when he went out. The existence of it was known to none other than those two. One day the Begum went for a bath, and, wrapping up the purse in a handkerchief, put it on the Emperor's bed. Raushan Kūka, finding his opportunity, abstracted five rubies from the purse. He made common cause with KHwāja ghāzī, another traitor, entrusted the rubies to him, and the two together made plans for their disposal. They went to a horse-coper and bought *tipūchāq* horses for themselves, promising them the rubies in consideration.

When the Begum returned from the bath, the Emperor handed her the purse. Finding it too light, she at once suspected foul play and spoke to her husband. They were alarmed. The Begum acted promptly, took her brother KHwāja Mu'aẓẓam, into her confidence and asked him to make inquiry into the matter without making fuss. KHwāja Mu'aẓẓam acted silently and skilfully. He interrogated the horse-merchants and KHwājā ghāzi's servant, with the result that the little plot was discovered and the rubies located. Ultimately the rubies were tactfully recovered from KHwājā ghāzī and restored to the Emperor.

KHwāja ghāzī and Raushan Kūka, thus balked and disgraced, could think of no better plan of avenging themselves than carrying tales to the SHāh, and trying to poison his mind against their master. The Emperor noticed that the SHāh's manner towards him cooled and there were signs of estrangement. Humāyūn at once sent to the SHāh all the rubies and jewels that he possessed,[8] and explained the whole matter. The SHāh then admitted that KHwāja Ghāzī and Raushan Kūka were entirely responsible for the strained relations. The old cordiality was then restored, and the two mischief mongers were handed over by Humāyūn to the SHāh, who cast them into prison (*Humāyūn Nāma*, 70-73).

7. See above.
8. Mrs. Beveridge's rendering is not sufficiently clear on this point.

As this is the only occasion on which presentation of jewels is mentioned in *Humāyūn Nāma,* this must be the great presentation including 'Bābur's diamond'. So thinks also Mrs. Beveridge (Tr., 173, f.n. 1).

This story is only partially corroborated by Jauhar in the following passages: He writes: Humāyūn always carried 'this valuable diamonds and rubies in a purse in his pocket; but when he was performing his ablutions he generally laid them on one side; he had done so this day, and forgot them: it so happened that when the King was gone, and the humble servant *Jouher* was about to remount his horse, he saw a green-flowered purse lying on the ground, and a pen-case by the side of it: he immediately took them up, and as soon as he had overtaken the King, presented them'. Humāyūn was much astonished when he saw them, and was delighted (Stewart, 66-67; *Tazkara,* P.U.L.MS., f. 56 *b*). Then he goes on to say that Humāyūn kept these valuables about him because he had formerly entrusted them to Raushan Beg who had been guilty of dishonestly (Stewart, 67; *Tazkara,* f. 56 *b*). This last is at variance with the version in *Humāyūn Nāma.* Probably the facts of the matter did not come to Jauhar's knowledge, and when Jauhar heard that Raushan Kūka had stolen the jewels he thought he had been in charge of them.

The fullest account of the presentation of the jewels to the SHāh that we possess is found in the following passage in Jauhar:—'We remained several days encamped on the hunting grounds; during this time his Majesty ordered his diamonds and rubies to be brought to him; and having selected the largest diamond, placed it in a mother-of-pearl box; he then added several other diamonds[8a] and rubies; and having placed them on a tray, gave them in charge of Byram Beg to present them to the Persian monarch, with a message, "that they were brought from Hindūstan purposely for his Majesty."

When SHāh Tahmāsp saw these precious stones he was astonished, and sent for his jewellers to value them. The jewellers declared they were above all price; on which the Persian signified his acceptance, and conferred on Byram Beg the title of *KHān,* with permission to use the kettle-drum and standard.[9] The diploma and

8a. The MS. does not mention diamonds here.
9. No 'standard' in the MS.

insignia were sent the next day ; but from that time, for two months, there was no intercourse of any kind between the monarchs' (Stewart, 68 ; *Tazkara*, f. 57 *a-b*). The last statement is cryptic. Probably Jauhar is thinking of the coolness caused by Raushan Kūka's backbiting, and has got mixed up about the time and the occasion.

Jauhar's account also refers to the great presentation. Major Stewart thinks the same (P. 68, f.n.). Excepting the slight discrepancies already noticed, there is nothing really inconsistent in the accounts of Gulbadan Begum and Jauhar. The reader has no doubt noticed that Raushan Kūka's episode occurred some time before Jauhar found the purse, and the presentation followed some days later.

AKBAR

We are emerging into daylight as we approach the reign of Akbar. Thanks to Abū'l-Faẓl's encyclopaedic mind and method, we have some definite information about the contents of the Mughal Treasury, their arrangement and valuation. Akbar's great minister thus outlines the establishment of the Jewel Treasury and the method of classification and storing followed :

A treasurer, a clerk (bitikchī), a *dārogha* and a few experienced jewellers constituted the staff of the Treasury. The jewels were classified according to value in an elaborate system. Rubies were put in twelve classes, diamonds, emeralds, and red and blue *yāqūts* also in twelve classes, and pearls in sixteen.

The value of the rubies in each class ran as follows :

Class.	Value.
1	From 1,000 *muhrs* upwards
2	„ 999 „ to 500 *muhrs*
3	„ 499 „ „ 300 „
4	„ 299 „ „ 200 „
5	„ 199 „ „ 100 „
6	„ 99 „ „ 60 „
7	„ 59 „ „ 40 „
8	„ 39 „ „ 30 „
9	„ 29 „ „ 10 „
10	„ $9\frac{3}{4}$ „ „ 5 „
11	„ $4\frac{3}{4}$ „ „ 1 *muhr*
12	„ $\frac{3}{4}$ *muhr* „ $\frac{1}{4}$ rupee.

The diamonds, emeralds, and red and blue *yāqūts* were likewise classified thus :

Class.	Value.				
1.	From	30	*muhrs*	upwards	
2.	„	$29\frac{3}{4}$	„	to 15	*muhrs*
3.	„	$14\frac{3}{4}$	„	„ 12	„
4.	„	$11\frac{3}{4}$	„	„ 10	„
5.	„	$9\frac{3}{4}$	„	„ 7	„
6.	„	$6\frac{3}{4}$	„	„ 5	„
7.	„	$4\frac{3}{4}$	„	„ 3	„
8.	„	$2\frac{3}{4}$	„	„ 2	„
9.	„	$1\frac{3}{4}$	„	„ 1	*muhr*
10.	„	A quarter rupee less than a *muhr.*	„	„ 5	rupees
11.	„	$4\frac{3}{4}$ rupees		„ 2	„
12.	„	$1\frac{3}{4}$	„	„ $\frac{1}{4}$	rupee

We don't know the weight of the stones assigned to the various classes either in this or in the previous list ; but the reader will see that while rubies ranging in price from 30 to 1000 *muhrs* and upwards are classified under eight heads, diamonds, emeralds and *yāqūts* of the same prices are all grouped together in the first class. In other words, rubies of *over* 30 *muhrs* and diamonds and other stones of under 30 *muhrs* are elaborately classified. From this one would be inclined to think that rubies or at least the high class ones, were, weight for weight, more valuable than other stones. But this is not true, for we learn a little lower down that a diamond worth 1 lakh of rupees weighed less than half as much as a ruby of the same price ; though emeralds were several degrees cheaper than either.[10]

10. See below.

Pearls had sixteen classes :

Class.	Value.						
1.	From	30	*muhrs*		upwards.		
2.	,,	$29\frac{3}{4}$	,,	to	15	*muhrs*	
3.	,,	$14\frac{3}{4}$	,,	,,	12	,,	
4.	,,	$11\frac{3}{4}$	,,	,,	10	,,	
5.	,,	$9\frac{3}{4}$	,,	,,	7	,,	
6.	,,	$6\frac{3}{4}$	,,	,,	5	,,	
7.	,,	$4\frac{3}{4}$	,,	,,	3	,,	
8.	,,	$2\frac{3}{4}$	,,	,,	2	,,	
9.	,,	$1\frac{3}{4}$	,,	,,	1	*muhr*	
10.	From under	1	*muhr*	,,	5	rupees	
11.	,, ,,	5	rupees	,,	2	,,	
12.	,, ,,	2	,,	,,	$1\frac{1}{4}$	,,	
13.	,, ,,	$1\frac{1}{4}$	,,	,,	30	dāms	
14.	,, ,,	30	dāms	,,	20	,,	
15.	,, ,,	20	,,	,,	10	,,	
16.	,, ,,	10	,,	,,	5	,,	

The way these pearls were stored and strung is given in detail : Twenty pearls were placed on each of the strings in the first class. The actual number of the strings in this class is not given, since that probably varied from time to time. Next we are told that the total number of strings in each class corresponded to the class itself, *i.e.*, the second class contained two strings, the third class three strings, and the sixteenth class sixteen strings. In this case the number of pearls on each string is not known. Presumably it was kept elastic on purpose. This arrangement apparently did not apply to the first class, where the number of pearls on each string was fixed, and the total number of strings was left undetermined. The reader observes that in both cases room was left for fresh acquisitions and disbursements.

At the end of every string the royal seal was affixed, to guard against replacement or fraud.

Abū'l-Faẓl then goes on to detail the charges for boring pearls, which varied with the class of the pearl bored.

Next follow the prices of jewels of unusual weight and value in Akbar's Treasury :

Kind of Jewel	Weight		Price
Ruby.	11 *tānk*,	20 *ratīs*	Rs. 100,000
Diamond.	5 „	16 „	„ 100,000
Emerald.	17 „	21 „	„ 52,000
Yāqūt.	4 „	$7\frac{3}{4}$ „	„ 50,000
Pearl.	5 „	„	„ 50,000

(*Ā'īn*, Text, I, 11-12 ; Blochmann, 15-16).

The weight and price of the ruby correspond beautifully to those of (1) a ruby purchased by Mahābat KHān from a European and offered to Jahāñgīr (Jahāñgīr's Reign, No. 10), and (2) the engraved ruby sent by SHāh ' Abbās to Jahāñgīr and ultimately set on the rail of the Peacock Throne (*Ibid.*, No. 16).

As regards the value of diamonds, Nos. 1 and 2 of SHāh Jahān's reign in our list both weigh 100 *ratīs* each, and are priced at Rs. 100,000 and Rs. 150,000 respectively ; while No. 8 of Jahāñgīr's reign, which weighed less than 80 *ratīs*, was also valued at Rs. 100,000. It thus appears that the prices of diamonds ruled much higher in the reigns of Jahāñgīr and SHāh Jahān than in Akbar's time.

JAHĀÑGIR.

As the reader is aware, we possess the De Laët-Manrique inventory of the treasure left by Akbar in 1605, the cash part of which was given and discussed in the chapter on ' Cash Treasury '. The remaining portion of it can now be set forth.

For convenience of treatment the inventory of the Jewel Treasury is given entire, although it comprises besides precious stones and gems, ornaments, furniture, gold and silver plate and utensils, statues, porcelain, books, cloths and woollens, tents and curtains, arms and accoutrements, harness and housings. These items will be severally treated of in the succeeding chapters. But with the details of gems and jewels fresh in the reader's mind, I have considered it worth while to attempt an estimate of the entire contents of the Jewel Treasury at this stage, although it includes a great deal of miscellaneous wealth not usually counted as treasure. This course seems better than breaking up the lists into individual items, and distributing them over the various chapters dealing with those

details. Nor would it then be possible to discuss the value and utility of these lists if their contents were so dissipated. These considerations have led the writer to place this chapter on the 'Actual Contents of the Jewel Treasury' immediately after gems and jewels, the fuller details of many of the articles summarized here being reserved for the chapters to follow. When the reader has gone through those chapters, he may refer back to this summary to form an idea of the total amounts accumulated.

Articles.	Value in rupees.
Diamonds, rubies, emeralds, sapphires, pearls, and similar gems ..	60,520,521

(De Laët, 108; Manrique, II, 293; Smith, J.R.A.S., 1915, p. 241).

Wrought gold, including necklaces ..	19,006,745
Golden furniture (supellex); all kinds of gold plate; various images of elephants, horses, camels, and similar animals, made of gold ..	9,507,992
Wrought silver, such as goblets (*scyphi*), dishes (*disci*), candlesticks, columns, and other vases and utensils of every kind ..	2,225,838
Brazen (*aenea*) vessels and furniture of every kind and fashion ..	51,225
Most elegant vessels of every kind in porcelain (Manrique adds 'and also of coloured glass', *i.e.*, crystal) ..	2,507,747
Books written by great men, and adorned with extremely valuable bindings (24,000 volumes) ..	6,463,731
Cloths interwoven with gold and silver, from Persia, Turkey, Gujarāt, and Europe; also silks of various kinds; with cotton goods from Bengal and other provinces ..	15,509,979
Woollen cloths, European, Persian, and Tartar ..	503,252
Tents, hangings, umbrellas, *canopea*, rugs, and all things needed for the adornment of houses or for camp use ..	9,925,545
Engines of war (*tormenta bellica*), mortars (*bombardae*), balls, and gunpowder—as well as other military material ..	8,575,971
Weapons—shields, swords, daggers, bows, arrows, and the like ..	7,555,525

Articles.	Value in rupees.
Harness, bits of gold and silver, and everything else pertaining to horse furniture ..	2,525,646
Housings decorated with gold and silver (*tunicae equestres*) [Mandelslo : 'covering-clothes for horses and elephants']; cloaks of every kind, and royal arms (*arma regalia*) ['Various kinds of coats and equestrian ornaments, worked and (417/2) embroidered with gold, silver, and precious stones, including the arms borne and insignia carried before the Imperial person and those of the Royal house.'—Manrique] ..	5,000,000
Total ..	89,359,196

(De Laët, 108-9 ; Manrique, II, 293-94 ; Smith, *J.R.A.S.*, 1915, 241-42).[11]

Adding to this total the value of precious stones and gems we get the grand total :

Brought forward	Rs.	89,359,196
Price of precious stones and pearls.	,,	60,520,521
Grand total.	,,	149,879,717

It is to be noticed that thrones and chairs are not specifically mentioned in De Laët's list. We must presume them to be included under 'Golden furniture (*supellex*)'.

It is now fairly established that Manrique, who is much overestimated by V. A. Smith, only copied out De Laët's list, so that his document has no independent—and at best only a corroborative—value. De Laët's *De Imperio Magni Mogolis* was published in 1631, while Manrique's *Itinerario* appeared in 1640. But these dates should not mislead us, as the two documents are only copies of the

11. For facility of reference the price of precious stones and pearls is not included in the total, but is added only afterwards to make the grand total.

identical official record, which represented the state of things at the death of Akbar.

It may be noted in passing that in Mr. Hoyland's translation the amounts have been carelessly transcribed in one or two cases, though the total given by him tallies with the total of the true sums, showing that the former are only clerical errors. For this and other reasons I have considered it safe to adopt Smith's translation, which is made after collation of original texts, not entirely excluding even Mandelslo's, which he considers spurious.

This can be followed up with Hawkins' account of the contents of Jahāñgīr's Treasury about 1610, when Hawkins was at the Mughal court.

Precious stones and pearls.	Weight or number.
Diamonds of not less than $2\frac{1}{2}$ car., 'rough, of all sorts and sizes, great and small'.	$1\frac{1}{2}$ battmans or $82\frac{1}{2}$ lbs.
'Ballace rubies little and great, good and bad.' ..	2,000 pieces.
Pearls of all sorts. ..	12 battmans or 660 lbs.
Rubies of all sorts. ..	2 battmans or 110 lbs.
Emeralds of all sorts. ..	5 battmans or or 275 lbs.
Yashm or jade, which comes from Cathay. ..	1 battman or 55 lbs.
Stones of Yemen (which is a red stone).	5,000 pieces.
All other sorts, such as corals, topaz, etc. ..	'An infinite number.'

Ornaments and Jewelled Gold and Silver Ware.	Number or weight.
Chains of pearls and chains of all sorts of precious stones. ..	'An infinite number'.
Rings 'with Jewels of rich Diamants, Ballace Rubies, Rubies and old Emerods' ..	,,
'Swords of Almaine Blades, with the Hilts and Scabberds set with divers sorts of rich stones, of the richest sort'. ..	2,200
Poniards of two sorts. ..	2,000
Saddle drums, used in hawking: very rich ones of gold, set with stones. ..	500
Brooches 'for their heads, where-into their Feathers be put': very rich. ..	2,000
Saddles of gold and silver set with stones. ..	1,000
Teukes (great lances) covered with gold, and the fluke (point) set with stones ('These instead of their colours, are carryed, when the King goeth to the warres'). ..	25
Kittasoles (umbrellas, *i.e.*, the *chatr*) of state. 'None in his Empire dareth in any sort have any of these carryed for his shadow but himselfe.'	20
Chairs of state (De Laët calls these thrones, and probably rightly) of silver 3 / of gold 2 ..	5
Other chairs of silver and gold. ..	100
Rich glasses (*i.e.*, mirrors). ..	200
Vases for wine, 'very faire and rich, set with jewels.' ..	100
Drinking cups (Fifty of these very rich, being 'made of one piece of Ballace Ruby, and also of Emerods, of Eshim, of Turkish stone, and of other sorts of stones'). ..	500
Plate (dishes, cups, basins, pots and beakers):	
of silver ..	2,000 battmans or 110,000 lbs.
of gold ..	1,000 battmans or 55,000 lbs.

Hawkins (Purchas, III, 32-33).

The thrones and chairs are all expressly included and separately enumerated in this list.

The reader will notice that although these two independent accounts refer to very nearly the same period, the dates being only five years apart, yet it is not possible for us to compare or verify the items; since De Laët gives only the total value of each set of articles in rupees, while Hawkins gives the total number of the articles, and sometimes their total weight.

For comparison or verification we have to fall back upon *Muntakẖabu'l-Lubāb*. The reader has already seen that, according to Khāfī Khān, the Emperor's jewels (*jawāhar-i-kẖāṣṣa*), at Akbar's death, weighed one maund and were worth over three crores of rupees (*M.L.*, I, 243). Now De Laët places the total value of diamonds, rubies, emeralds, sapphires, pearls and other gems, at well over six crores, which is just about double KHāfī KHān's estimate. As for the weight, Hawkins gives weights for five gems out of eight in his list: these total 21½ *battmans* or maunds. Counting in the other gems, at a guess, the total weight of precious and semi-precious stones and pearls would be over 30 maunds—as against one maund of KHāfī KHān. No reconciliation between these authorities is possible even by assuming that KHāfī KHān is counting only precious gems, and ignoring all semi-precious stuff; for diamonds, rubies, pearls and emeralds (in Hawkins' list) alone exceed 20 maunds, even leaving 'ballace rubies' out of account. The result is utter chaos. The present writer has more respect for the two inventories elaborately copied out by the European travellers than for KHāfi KHān's ravings.

SHĀH JAHĀN

SHāh Jahān's reign represents the heyday of material splendour and prosperity, and with his accession the art of collecting, valuing and classifying jewels entered on a new career. The leading spirit of the age, the Emperor himself, was a great connoisseur of pearls and stones.

Let us for a moment step backward to get a true perspective.

Vicissitudes had come to an end with Humāyūn, and the sledge-hammer strokes of Akbar's victories gave a rough outline to an empire, which fifty years of wise and tolerant government was gradually to make ship-shape and tolerably homogeneous.

The opportunities offered by the settled government and peace left behind by Akbar were not however used to the best advantage by his son. With all the advantages of a strong and healthy constitution, high education and a mind delicately responsive to the appeal of natural phenomena, he had a fine temperament, a healthy curiosity, highly developed tastes and an extensive range of interests. with all this to his credit, his intemperate habits, specially in the latter half of his reign, reduced him to the condition of a *roi fainéant,* the real power being vested in the hands of Nūr Jahān, who, considering her disabilities, steered the ship of state with remarkable ability and talent.

Against this background SHāh Jahān's accession stands out in conspicuous relief. The increasing resources of a peacefully progressing empire were at once placed at the disposal of a man who understood the true meaning and value of wealth—who did not spend a pice where no return was assured, and who did not scruple to spend millions where to his mind a real need was being satisfied.

SHāh Jahān had a great passion for art and a particularly well-balanced asthetic judgment. His attachment to precious stones has often been misinterpreted as greed, whereas, in point of fact, that emperor was the most liberal and the most geneous in the whole line of Mughal kings, not only with his money but in his ideas and sympathies, his daily dealings and actions. Bernier describes him as a great economist.[12]

On whatever he has left us we see an indelible impress of unapproachable ideals and an unerring eye for effect. Designs and proportions of his buildings and gardens, quality and symmetry of their patterns and decorations, even furnishings of his halls and chambers, and dispositions and arrangements in his durbars, and finally the miracles of the jeweller's art—in all these we find a master mind trying to realize its dreams of beauty and perfection in terms of brick or stone here, of line and colour there, of gold and jewels and precious stuffs, using the costliest material with nonchalant ease and seemingly reckless extravagance. The noble band of designing architects, painters and jewellers played up to his ideas and plans in a way that does credit to all concerned.

We must not forget that both as prince and even after his deposition SHāh Jahān was considered a great connoisseur of pearls

12. P. 223.

and precious stones. The reader remembers how Jahāñgīr was once worried over finding a match for a pearl to put on an armlet, and Prince KHurram rootled out a beautiful one from an old disused *sarpech* of Akbar's, which nobody knew of.[13] It shows that the Prince from a boy had an eagle's eye for jewels, and did not forget one when he had once seen it.

The reader will also remember the occasion when Aurangzeb and his court jewellers were puzzled by a ruby, and the question of its genuineness or otherwise was referred to SHāh Jahān in prison, as the greatest living authority on the subject, his verdict being accepted as final by all parties.[14]

Things being what they are, we approach this reign with high hopes and a whetted curiosity. But as far as the actual figures of treasury totals are concerned these hopes are doomed to be foiled.

Unfortunately we do not possess any reasonably authentic catalogue of the contents of SHāh Jahān's Jewel Treasury.

Mandelslo, who came in 1638, has the following :

'I was credibly informed, that the *Mogul*, who lived in my time, had a Treasure, which amounted to above fifteen hundred Millions of Crowns' (P. 37). This appraisement of the total wealth at the end of the first decade comes to 300 crores of rupees. And this, even if it includes both cash and jewels (which probably it does) is, on the face of it, a gross exaggeration based on unverified rumours.

Again, after giving the inventory of Akbar's treasure, which is the De Laët-Manrique document, he continues : "But this came not any thing near the Treasure which *Scach Choram* was possessed of, at the time of my Travels in those Parts. This Wealth is more and more augmented every day, not so much out of the ordinary Revenue coming in from the great Kingdoms he hath..... as by the Presents which are made him, and the Escheats falling to him at the death of great Lords and Favourites' (P. 38). It is to be noted that this passage does not form part of the earlier German edition (1656) of Mandelslo's work and is adjudged to be spurious by critics. But as Mr. Commissariat remarks, though these 'elaborate additions' ' are not from Mandelslo's pen, they have nevertheless a historical importance of their own, for the information given in

13. p. 296 above.
14. See above,

them is based on the best books on eastern travels available to Olearius or to de Wicquefort in the middle of the seventeenth century.'[15]

For a more sober estimate we must resort to SHāh Jahān's court historian. Mullā 'Abdu'l-Ḥamīd of Lahore, after speaking (under XVIII R.Y.) of the *sarpech* which consisted of five rubies and twenty-four pearls and was valued at 12 lakhs, and of the *tasbīḥ* comprising five rubies and thirty pearls, valued at 8 lakhs, and of two other *tasbīḥs* of pearls and *yāqūts* (total price, 20 lakhs),[16] goes on to say that although most of these gems have come down from Akbar's time, additions continued to be made during the reigns of Jahāñgīr and SHāh Jahān, so that in this reign a wealth of gems and jewels has accumulated, to which the treasury of no other monarch in the world can present a parallel. The total value of this wealth, not counting 2 crores' worth of gems presented to princes and others during this reign, is 5 crores. Out of this total gems and jewelled articles to the value of 2 crores of rupees are worn on the Emperor's person, and are kept in charge of trustworthy servants in the *maḥal ;* and the remainder worth 3 crores is kept outside in charge of *chelas* (slaves) (*B.N.*, 391-93).[17]

After the earlier statement in the superlative these figures seem tame and read almost like an anti-climax. But both statements are accurate, and there is no attempt at creating an impression.

But in a reign like SHāh Jahān's disbursements should also be taken into account. The same writer, when reviewing SHāh Jahān's cash treasure at the end of XX R.Y., remarks that since the beginning of this reign Rs. 9,50,00,000 in cash and kind has been given away as *in'ām,* nearly half in cash, and a little over half in

15. M. S. Commissariat, *Mandelslo's Travels in Western India(A.D. 1638-9),* pp. xv-xvi.

16. See p. 295 above.

17. KHāfī KHān says SHāh Jahān inherited 10 crores' worth of gems and jewelled things. Up to XVIII R. Y. 2 crores' worth had been given away in gifts and presents, and a half crore in charity (*ma'jūnāt, ṣadqa* and *niṣār* on weighments and festivals), while the value of 5 crores was present in the Jewel Treasury at this date, the rest, worn on the Emperor's body, being in the *Toshak KHāna* among the royal wardrobe (*M.L.*, I, 605). Where this account agrees, or can be reconciled with, the authentic and explicit statement in *B.N.*, cited above, it is welcome, and where it differs it is to be received with caution.

articles.[18] These articles mean, besides horses, elephants, etc., gems, jewelled arms, housings, stuffs and the like, and came to some 5 crores in value. In view of the remark already quoted we can readily understand that this sum included the two crores' worth of pearls and stones given away to princes etc.

These no doubt include the gems and jewels given away on the following occasions, of which only a passing mention can be made here.

We know that from SHāh Jahān's Coronation (8 *Jumāda* II, 1037) to the end of the first Nauroz (beginning of *Sha'bān*)—in seven weeks odd—jewels, dresses and arms, and horses, elephants and cash to the value of 1,80,00,000 rupees were disbursed.[19] This included 76 lakhs' worth presented to Mumtāzu'z-Zamānī, the empress. Most of this wealth must have reverted to the Treasury on her death. Deducting that amount from the total, we have well over a crore of rupees left. Half of this, we know definitely, was the price of jewellery presented to Jahān Ārā Begum and the Princess. So out of this total we may assume some 60 lakhs to stand for gems and jewels.

Next we may notice the weddings of the first princes of the blood. The amount spent on Dara SHukoh's marriage (1042 A.H.) on the Emperor's side was 22 lakhs of rupees, which included approximately some 10 lakhs' worth of gems and jewels,[20] and the expenditure on the occasion of SHāh Shujā"s wedding (same year) would be in the neighbourhood of 12 lakhs, half of which we may assume to be the price of jewels.[21] Similarly on the weddings of Aurangzeb[22] (end of 1046) and Murād Bakhsh[23] (1052 A.H.) the Emperor gave them Rs. 10 lakhs and 5 lakhs in cash respectively to make the necessary purchases and arrangements. The total expenses therefore would come to some 20 lakhs for the two weddings, half or nearly half of it being represented by the price of gems.

Another large item we can notice is the ornaments and jewelled articles worth 10 lakhs given away to Jahān Ārā Begum and a

18. *Ibid.*, II, 713.
19. *B.N.*, I, i, 192. Author's *History of SHāh Jahān's Reign*, Ch. iii.
20. *B.N.*, I, i, 454 and 460 ; *A.S.*, I, 524.
21. *B.N.*, I, i, 462 ; *A.S.*, I, 540.
22. *B.N.*, I, ii, 267.
23. *B.N.*, II, 304.

similar value bestowed on Princes, Princesses and nobles at the time of the celebration of her recovery (SHawwāl, 1054 A.H.).[24] The latter amount included some cash and animals, so that it will be safer to place the jewels at some 7 lakhs out of this sum. The total value of gems disbursed on this occasion would thus come to some 17 lakhs of rupees.

This feast and the weddings thus account for some 40 lakhs, and with the 60 lakhs disbursed at the opening of the reign, would come to just a crore's value in jewels. But these are only a few of the outstanding items. There was, throughout the reign, a stream of costly presents constantly flowing from the Emperor to the Princes and nobles, and back again to the Emperor. The more valuable presents offered or accepted will be dealt with at some length in the next chapter.

It must not be forgotten that we are considering the treasure as it existed at the end of the second decade of this reign. The third decade was perhaps the most prosperous in Mughal Indian history : the reader will find abundant evidence in the following chapters to support the contention that a larger value in gems and jewels changed hands at the court of Delhi during the years 1648-58 than at any period of Indian history before or since.

Some rough indications can be gathered from the following facts : On the first durbar held in the newly-built Delhi palace, which fell on a Nauroz (Monday, 18 Rabī ' I, 1060, and following days) presents worth 15 lakhs were accepted. Again, the total value accepted from princes and nobles in XXVIII R.Y. totalled nearly 15 lakhs[25] and of those in XXIX R.Y. came to 20,[26] while in R.Y. XXX the maximum of nearly 1 crore was reached.[27] Jewels of course only constituted a proportion of these figures, and yet a goodly proportion.

It is a pity that the total of the collection at the end of the reign is not recorded either by Muḥammad Wāriṣ or by Muḥammad Ṣāliḥ, the prime contemporary authorities for this period. Nor is there available an estimate of total disbursements either during the third decade or during the whole reign.

24. *B.N.*, II, 397.
25. *B.N.*, III, P.U.L. MS., f. 99*a*.
26. *B.N.*, III, P.U.L. MS., f. 108*a*.
27. *B.N.*, III, P.U.L. MS., f. 123*b*.

All that we can offer the reader is the following: According to Khafi KHan, SHāh Jahān left in the Treasury uncoined gold and silver, and gold and silver vessels and jewels worth 15 or 16 crores.[28] The price of bullion is not separately given, but, taking KHāfī KHān's account of Akbar's treasure[29] as our guide, and allowing for the higher price of gold at this date and for, acquisitions in SHāh Jahān's reign, we can guess that it would be somewhere near 2 crores.

The items that go to make the remaining 14 crores are not given, but this total of the treasure in 1658 comes so close to the De Laët-Manrique total for 1605 that we are tempted to square off the two and declare that all these documents corroborate each other, and we have at last arrived at a reliable grand total of the Mughal jewel treasury.

But then we are assuming that the prosperity and resources of the Mughal empire were marking time during the palmiest half-century of its history—which is contrary to known facts. One is inclined to look for a great advance on the previous figures towards the latter end of SHāh Jahān's reign. Judging from the wording of KHāfī KHān's statement, one would confine his total to gold and silver vessels and gems and jewelled things, which he actually names, so that the value of such items as porcelain, books, stuffs, tents, weapons and housings, which are included by De Laët-Manrique will have to be added to KHāfī Khan's estimate before we can place the two totals side by side. These latter come to nearly six crores, and should be well over 7 crores at the end of SHāh Jahān's reign. This would bring the total value of SHāh Jahān's wealth (about the year 1658) to a figure in the neighbourhood of 23 crores, besides 24 crores of coined money. To this grand total of 47 crores is to be added some 3 crores, more or less, spent by that emperor on his programme of building operations; and another 5 crores as a rough valuation of animals and birds in the royal stables, menageries, aviaries, etc., and of carts, carriages, boats and similar articles, which were not costly enough to be included in the inventories already given.

This amount of 55 crores, measured in purchasing power, is equivalent to some 250 crores to-day, which compares very

29. *M.L.*, I, 243 and Chapter on Cash Treasury above.

favourably with the gold reserve in the issue department of the Bank of England on November 2, 1927, which was 149.7 millions[30] or, roughly, just over 200 crores of rupees at £. 1=Rs. 13-8a.

AURANGZEB

For the actual contents of Aurangzeb's jewel treasury we have no official or non-official record to guide us. Of course we know that the priceless gems and rarities of the age, which SHāh Jahān's well-known discrimination and patronage attracted from far and near and which he sedulously gathered and cherished during thirty years of unexampled prosperity—all this and all that had descended to him from the times of Akbar and Jahāñgīr passed peacefully into Aurangzeb's hands.

To the inherited treasury Aurangzeb must have added considerably during the long reign of nearly fifty years, in which the frontiers of the empire were extended and the revenues increased. It is true that the royal patronage for this class of goods diminished in this period and the efforts for artistic creation missed the incentive they had received during the preceding three reigns; but it is also true that Aurangzeb was thrifty and sound administrator and, although large cash gifts were frequent in his reign, he was not nearly so lavish of jewels as his father; so that we may be sure that the contents of the existing jewel treasury were sedulously guarded, while the customary stream of presents continued unabated to swell the total hoard. In particular, the conquest of Bījāpur and Golconda (in 1686-87) must have meant accession to the treasury.

This monarch inherited the major portion of his father's treasury at the time of his accession. But quite a large number of valuable items remained outside, and came in at subsequent dates.

As the reader will see in the following chapters, many costly jewels, arms and ornaments were bestowed on Dārā SHikoh on various occasions during SHāh Jahān's reign. The climax was reached when during the latter's fateful illness ornaments and jewelled arms and articles to the value of some 35 lakhs of rupees were bestowed on that prince on a single occasion (1068 *A.H.*).[31] The accretion of wealth in the hands of Dārā SHukoh by this time must have been immense.

30. *Encyclopaedia Britannica*,[14] III, p. 54.
31. See below, and *B.N.*, III, 141*b*-142*a*.

KHāfī KHān states on the authority of an assistant *mushrif* of the Jewel Treasury, whom he describes as a 'reliable witness', that Dārā SHukoh, before the battle of Samūgarh, left jewels and pearls worth 27 lakhs of rupees belonging to the ladies of his haram[32] in the *maḥal* jewel-house in Agra fort. SHāh Jahān was privy to it, but Dārā SHukoh, after his defeat, got no time in his precipitate flight to get possession of them. Aurangzeb came to know of it and insisted on the restoration of the valuables to the Treasury. After some unpleasantness between father and son, SHāh Jahān had to surrender them; and, what is more, the messenger who carried them to Aurangzeb was also the bearer of the deposed monarch's letter pardoning Aurangzeb for his undutiful conduct. KHāfī KHān quotes in full Aurangzeb's letter acknowledging the "pardon" and the gift (*M.L.*, II, 104-6).

At the time of the battle at Deorāi (near Ajmīr) we catch a glimpse of Dārā SHukoh's treasure, and gold and silver vessels and other movables loaded on elephants, camels and horses, with ladies of his haram on elephants,[33] all left under a guard of cavalry and infantry on the banks of the Anā Ṣāgar tank near Ajmīr (*'Ālamgīrnāma*, 409). Much of this was plundered by the guards themselves after the defeat of the unfortunate prince (*Ibid.*, 410).

Most of Dārā SHukoh's jewels probably found their way into the state treasury sooner or later. Aurangzeb appropriated them, says Tavernier, 'after he had caused his [Dārā SHukoh's] head to be cut off' (I, 317).

SHāh SHujā' also had his collection of valuables, which he carried about with him in his adversity and wanderings. On 7 Muḥarram, 1071, Ikhlāṣ KHān KHweshgī brought to court his ladies, cash and jewel treasure, and other goods (*'Ālamgīrnāma*, 573).

Jahān Ārā Begum was SHāh Jahān's favourite daughter and had been constantly receiving presents during the thirty years of her father's illustrious reign. She must have built up quite a tidy collection of valuables, which remained with her during her self-imposed incarceration with her father.

32. In an earlier part of the passage the author describes them as belonging to Dārā SHukoh's dress (p. 104).

33. See also *M.L.*, II, 72-73 and 80-81.

Towards the end of 1070 Jahān Ārā Begum paid a visit to Aurangzeb and offered a string of pearls and 5 rubies worth Rs. 2,80,000 (*'Ālamgīrnāma*, 568) ; and again sent some jewels and jewelled articles to him in SHawwāl, 1072 (*Ibid.*, 743).

Tavernier, talking apparently of the course of events before Aurangzeb's coronation, remarks nonchalantly that Aurangzeb 'took possession of all the wealth which she [Begum Sāhib] had received from her father's liberality' (I, 274). But only on the next page, where the author is speaking of the happenings immediately after SHāh Jahān's death, we read, 'The Begam Sāhib also had a quantity of precious stones, which he had not taken from her when he placed her in the fortress, as he was then satisfied with securing the gold and silver with which her chests were full' (P. 275). So 'all the wealth' in the first passage does not include the 'quantity of precious stones' in the second. Tavernier's vague and inexact ways of talking do not enable us to feel any confidence even where he makes a perfectly definite and precise statement. The reader doubtless remembers the many occasions, on which this author has been judged and found wanting.[34]

Bernier's remark is entitled to more respect, though it does not carry us far: He tells us that when, after the death of SHāh Jahān, Aurangzeb visited Agra fort, Jahān Ārā Begum received him with much courtesy and 'presented him with a large golden basin, full of precious stones—her own jewels, and those which belonged to *Chah-Jehan*' (P. 199). This may, and probably does, refer to only a small proportion of the treasure which had been in possession of the late emperor and his daughter.

As for the division of Jahān Ārā Begum's belongings after her death Manucci has the following: 'At the time of her death this princess divided her property and jewels among her nieces, leaving to each a good deal of money and jewels. Nor did she overlook her beloved Jānī Begam, to whom she bequeathed her finest jewels and a greater share of money'. (*Storia*, II, 256).

Now we come to the gems and jewels in SHāh Jahān's possession in Agra fort.

We know that SHāh Jahān sent to Aurangzeb (1 Rajab, 1072) jewels to the value of 16 lakhs by the hands of Fāẓil KHān, *Mīr*

34. Give all instances.

Sāmān, who had been sent to Agra (presumably for the purpose) by Aurangzeb a month earlier (' *Ālamgīrnāma*, 660-62 ; *M.L.*, II, 129-30). It is possible that these were the precious stones mentioned by Bernier (on p. 166) in the passage quoted below.

KHāfī KHān reports that SHāh Jahān had a rosary of 100 round pearls all of the same colour and weight, which was worth 4 lakhs of rupees. The pearls had been got together after much care and research. Besides there was an *ārsī*[35] of diamond which he always wore round his neck. Aurangzeb sent a eunuch with the message asking for these ornaments. The aged monarch was furious : he gave away the *ārsī*, but concerning the rosary sent back the reply that it was used in his devotions, and it could only be surrendered after it had been pounded in a mortar. It was never asked for again (*M.L.*, II, 106-7). This reminds us of the following passage in Bernier, though it refers apparently to a different occasion.

Aurangzeb once asked his father for some precious stones, which he wanted he said, to complete a piece of workmanship that he was adding to the peacock throne. 'The captive Monarch indignantly answered that *Aureng-Zebe* should be careful only to govern the kingdom with more wisdom and equity : he commanded him not to meddle with the throne; and declared that he would be no more plagued about these jewels, for that hammers were provided to beat them into powder the next time he should be importuned upon the subject' (Bernier, 127).

But later, we are informed, the relations between father and son improved. Aurangzeb paid the aged monarch every attention, indulged all his wishes, and afforded him every facility consistent with close confinement. 'Indeed, *Aureng-Zebe's* behaviour was throughout kind and respectful, and he paid attention to his aged parent in every possible way. He loaded him with presents, consulted him as an oracle, and the frequent letters of the son to the father were expressive of duty and submission. By these means *Chah-Jehan's* anger and haughtiness were at length subdued, insomuch that he frequently wrote to *Aureng-Zebe* on political affairs, sent *Dara's* daughter to him, and begged his acceptance of some of those precious stones, which he had threatened to grind to powder if again importuned to resign them' (*Ibid.*, p. 166).

35. An *ārsī*, as we know it today in India, is a ladies' thumb-ring set with a small mirror. We hope there is no misprint in the text.

Tavernier has a different version of this matter: Aurangzeb begged SHāh Jahān, 'as he was about to ascend the throne in a few days, to have the kindness to send some of his jewels to be used on that day, so that he might appear before his people with the same magnificence as the other Emperors, his predecessors, had done. SHāh Jahān became so enraged at this demand of Aurangzeb, which he regarded as an insult levelled at him in his prison by his son, that for some days he was like a madman, and he even nearly died. In the excess of his passion he frequently called for a pestle and mortar, saying that he would pound up all his precious stones and pearls, so that Aurangzeb might never possess them. But the Begam Sāhib, his eldest daughter, who had never left him, threw herself at his feet, and besought him not to proceed to such an extremity, and as she had full power over him in consequence of the intimate relations which existed between them, she appeased him, rather with the object of keeping the precious stones for herself than to give pleasure to her brother, her mortal enemy who might one day become their possessor. Thus, when Aurangzeb ascended the throne he had only one jewel on his cap (*toque*); but if he had desired more he did not lack them, as I have elsewhere said, and he asked for the stones from his father only with the intention of retaining them permanently.' (295-96).

Probably every statement in the latter half of this passage is historically incorrect. From the points common to the two accounts we are disposed to think that the passages already cited from Bernier constitute an accurate record of events as they occurred, and Tavernier has mistaken the occasion on which the dispute took place, and mixed up things in general. Knowing Tavernier as we do, this is not surprising.

Of course we can guess that all valuables which remained with the imprisoned monarch were, on his death, restored to Aurangzeb's Treasury, even if Tavernier did not tell us, as he does, that 'as soon as Aurangzeb had news of it [his father's death] he came to Agra and seized all the jewels of the late King, his father, which he had not secured during his life' (I, 275).

Although we possess no inventory of Aurangzeb's Jewel Treasury, we happen to have a somewhat detailed list of the Delhi treasure plundered by Nādir SHāh. Nādir's invasion came only 32 years after the death of Aurangzeb, and nobody will think that any appreciable addition was made to the store during those years. So the quantity and value of Nādir's plunder may be safely taken as the measure of the treasury left by Aurangzeb.

The following passages from James Fraser's *History of Nadir Shah* are extremely interesting :

'*Nadir Shah*, after his Victory, and having established his Power, had demanded of *Nizam al Muluck*, twenty *Crore*[36] of *Rupees* (exclusive of the Jewels, Gold Plate set with precious Stones, and other fine Goods, seized of the King's, and other *Omras*) to be collected in the best Manner he could out of the King's Treasury, his own Effects, and all the other *Omras*, wealthy People and Inhabitants. Such a Sum was not to be raised out of the King's Treasury, or the *Omras* Effects ; for, in the King's, the Gold and Silver Coins did not exceed three Crores :[37] But, in the inward Vaults (which had been shut up and sealed for many years, nobody knowing by whom they were sealed, or what they contained) there was found of Gold and Silver to a much larger Amount than the Money in the Treasury' (P. 192-93). Later on, summing up the situation, he says : 'Since the Battle of *Karnal*, until *Nadir Shah's* Departure from *Shahjehanabad*, the Loss sustained by the Emperor and the People within and without the City, in Jewels, Treasure, Goods, Effects, and destroying of Fields, setting aside the Loss of the Buildings, amounted to very near one *Arrib*[38] of *Rupees*, out of which *Nadir Shah* carried away to the Value of 70 *crores*[39] in Jewels and other Effects ; and his Officers and Soldiers 10 *Crores*.[40] The Charges of his Army, while he continued there, the Arrears, Pay and Gratuity advanced them, with what Goods were destroyed by Fire, and Fields laid waste, made near 20 *Crores* more.[41]

36. 'Twenty *Crores* are 25 millions Sterling' (Footnote).
37. '3,750,000 *1*' (Footnote).
38. '125,000,000 *1*' (Footnote).
39. '87,500,000 *1*' (Footnote).
40. '12,500,000 *1*' (Footnote).
41. '25,000,000 *1*' (Footnote).

The Particulars of what *Nadir Shah* carried away with him :

		Crore.
Jewels from the Emperor and *Omras*, valued at	..	25
Untensils and Handles of Weapons set with Jewels, with the *Peacock* Throne, and nine others set with precious Stones	..	9
Money Coined in Gold and Silver *Rupees*	..	25
Gold and Silver Plate which he melted down and coin'd	..	5
Fine Cloths and rich Stuffs of all Kinds	..	2
Household Furniture, and other valuable Commodities	..	3
Warlike Weapons, Cannon, etc.	..	1
	..	70

(P. 219-21).

Hanway (*Travels*, II, 383) only copies, and slightly condenses, these details, and is therefore no independent authority.

Granting this estimate of Nādir's booty to be substantially accurate, while money and bullion (with gold and silver plate) amounted to 30 crores, the jewel treasure was valued at 40 crores and comprised 25 crores' worth of jewels (including the blackmail from the nobles), the rest being jewelled arms, articles, furniture and stuffs. Out of this 70 crores the value of some 5 to 10 crores may be the levy on the nobility, while the balance came from the *khāṣṣa* and the state treasuries.

These details of the treasure and their relative proportions are credible. There is just the advance on SHāh Jahān's treasure under all heads that one would expect after Aurangzeb's 50 years of careful management and simple habits.

In Mīrzā Mahdī KHān's *Tārīkh-i-jahānkushā-i-Nādirī*, however, we read that Nādir SHāh obtained the equivalent of 15 crores from the state treasuries and through presents from nobles and governors from far and near (Edn. of 1265 *A.H.*, p. 207). This brief statement claims to give the total value of Nādir's booty, including the contributions from the aristocracy. In view of the low total figure and of the fact that no details are attempted we are disposed to attach more credit to Fraser's report, which has the air of an original and authoritative record.

While on the subject of Nādir SHāh's spoils we may remark that although a historian has no business to deplore transfer of

wealth from one country or nation to another, and in fact may grant the spoils of war, yet when a great country's entire artistic output extending over some two centuries of its best period is taken away at one blow, not to find a place in the secure vaults or show-cases of a palace or a museum, but the gold and silver articles of vertu to be melted into ingots, and the thrones, crowns, and jewelled furniture to be broken to pieces and distributed among the wild and hungry hordes of wandering shepherds and their descendants, not to speak of books, pictures, etc., which were probably used to feed the melting furnace or else thrown out on the streets as unworthy of the space they occupied—then the scandalized annalist may perhaps be forgiven if the limit of his patience is reached. Political vicissitudes have their horrors even for the denizens of the sequestered vale of art and letters.