

ALCHEMY AND ITS FUNDAMENTAL TERMS IN GREEK, ARABIC, SANSKRIT AND CHINESE

S. MAHDIHASSAN

SD-34 - Block A, North Nazimabad, Karachi 33

This is the first attempt which, in a sense, tries to consider different systems of alchemy, at one and the same time. We must, however, decide the minimum attributes which characterize alchemy. They can be divided into three categories. First would be the purpose for which alchemy really exists. Here it is supposed to make gold as also prepare panacea. To solve its dual nature has been a problem which persists to this day. Taylor¹, being himself unable to do so, wrote, as late as 1951 that, "alchemy still remains an unsolved problem". Some found it expedient to ignore its dual-nature and have arbitrarily reduced it to the art of synthesizing gold. But even then no one ever made gold so that alchemy would be an art that never had a real beginning. This obviously requires an explanation.

Every art or craft has its own theoretical basis and we want to know what considerations went to support alchemy. Hopkins² assumed that, Greek philosophy applied to Egyptian technique of metallurgy resulted in a dark coloured metal which turned red and finally became gold. He accordingly entitled his book, "Alchemy, the Child of Greek Philosophy". The third principle is the substance which transforms a base metal into gold. According to some it can also transform a dottard into a youth in prime of life.

The active principle is ignored, but its mechanism of action is recognized as growth. The alchemists called this substance elixir. It is supposed that it enters a base metal and induced it to grow, much like the word of God which caused a clod of earth to develop into the embryo of Adam. And when the metal grew to perfection it became immune to all deterioration, which means it became gold. It is obvious that Growth = Life, and if a metal has grown it has been enlivened into a live-metal. Now when a substance can grow and increase itself it is called Ferment. Then live-gold would be properly termed Ferment-gold. This means that the craft, alchemy, started with Elixir and ended with Ferment-gold.

It can be easily granted that there would be different substances which can donate growth-energy. They, therefore, would share a common active-principle with growth as the real mechanism of action. Now an agency that confers life, with its two properties of growth and reproduction, is called soul. In fact we

can say that, what we know is life and what we conceive, is soul. Then the active principle of elixir can only be soul. Now elixir is a loan word from the Chinese. The actual term is *Ek-Chhi*, the One-Soul, the Universal soul, from which arise all forms of matter, be it stone, or man, and all forms of energy, like heat and light. The etymology of Iksir³ has already been explained. Then we can equate Elixir = Soul. It explains how alchemy is a play of soul for it depends upon elixir and this is soul. Nevertheless Taylor (See ref. 1, p. 66) informs that, "the principal feature that is lacking in Greek alchemy, is that of the elixir or the philosopher's stone". On the contrary we find in Arabic, alchemy is not defined as the art of making gold, but as "the art of *Kimiya* or the art of elixir", for, in Arabic *kimiya* and Elixir are synonyms. And once there is elixir to make gold is child's play. Hence it is most probable that the Greek terms for elixir have been misunderstood and I have explained that the terms for alchemy as art, were also the names for elixir.⁴ It is inconceivable that alchemy could exist with its precursor, as elixir, having been absent.

Admitting that Elixir is a substance rich in soul-content the question arises how it is to be recognized. This, in turn, raises the question "what is soul". The earliest idea takes us to the cave man who established that, Blood = Soul, and further that, Redness = Soul. He found red-ochre to be red enough which he took as drug of longevity and being rich in soul-content, or in redness, he interred the same with the dead to resurrect him. Otherwise stated, Drug of longevity = Agency of resurrection. Now both these uses of red-ochre have survived to this day. The Maoris of New Zealand finally bury the bones of the dead smeared with red ochre. In India and Pakistan for diseases like piles and dysentery, where there is loss of blood and has to be replaced, red-ochre is still used as the remedy. We can positively affirm that red-ochre is undoubtedly the most ancient drug that exists today. Then looking out for substances as close to blood as possible in its redness the Chinese finally found it to be cinnabar. Waley⁵ informs that, "bronze vessels excavated from tombs dated sixth century B. C., according to Pelliot, showed remains of a red pigment which was cinnabar". He points out that, "cinnabar being valuable could not at any time have been used except in the burials of important people". This would account for the occasional use of cinnabar but nevertheless the findings do go to prove that cinnabar was looked upon as conferring resurrection. We have identified the drug of longevity with the agency of resurrection. Accordingly, we want confirmation that cinnabar was also used orally. Here Waley (ref. 5, p. 21) points out asking, "where outside China do we first meet with the idea of eating the product of alchemical fusion", or synthetic cinnabar, which is vermilion, prepared by subliming mercury and sulphur together. Now just as red-ochre continues to exist as drug so does cinnabar to a far greater extent. In India its main preparation is called *makara-dhwaja*, Cupid's Hallmark, or elixir of youth, and a panacea. In as much as no substance could be discovered as red as blood, other than cinnabar, this has remained as the best donor of soul or as elixir of life. This realization marks the stage of proto-alchemy and is

typically Chinese for no where else cinnabar had been the drug of longevity and of resurrection.

We must now turn to the founder of alchemy. He was an ascetic, an aged solitary denizen of a forest. What he needed most was an energizer that can put strength into his weak limbs. He had to search all over for forest produce as food-stuffs. And he did discover the ephedra plant as energizer. An energizer is also an euphoriant and anti-somnolent, unlike an intoxicant or a narcotic. Having made himself an addict to an energizer, like ephedrine, he dreamt of the good old days when he was young so that he could battle against life single handed. Thus arose out of real urge the idea of a drug of rejuvenation. Now this required, in the first instance, an agency which could bestow physical strength. On the principle that, like makes like, nothing suggested better than gold. It is the one substance on earth that never tarnishes. Hence the aurelian principle can also keep the human body fresh for ever. Such an idea, which appears naive to us, was taken seriously. In Babylon and ancient Iran, pomegranate was looked upon as the agency of longevity-cum-resurrection. Lloyd⁶ tells us "that, Egyptians later made it a custom to place pomegranate in the graves of their dead, specimens of which are preserved to this day". As regards pomegranate functioning as the drug of immortality, Dhabar⁷ cites a legend, according to which "one seed of pomegranate given to the son of King Gushtap so transformed his body that no deadly wound can have any effect and he was known as Ruin-Tan, Bronze (Copper) bodied warrior", or briefly metal-man. Thinking in these terms, gold, as drug, would make its consumer immortal, as Golden-Man, who would always be as fresh as gold which is tarnish-proof. Gold then was taken to prolong life and golden objects have also been interred with the dead. Then the ideal drug of rejuvenation-cum-immortality would be cinnabar-gold, Cinnabar for prolonging life and gold for conserving the body. In Chinese *Chin*=gold, and *Tan*=Cinnabar, whence *Chin-Tan*=Cinnabar-gold, which is a recognized product in Chinese alchemy. It is no fabulous drug but Red colloidal gold. It is brick red as powder but blood-red as solution. Calcined gold is available in India to this day. The question now arises how red gold was prepared.

The procedure must be so simple that it could be produced with the most primitive equipment. It requires gold being pulverized with a herbal juice. Calcination is not necessary but is usually employed to reduce time. All this has been explained at length before⁸. The herbal juice must be rich in reducing substances and in India *Phyllanthus emblica* and *Terminalia chebula* were employed for the purpose. Then the herbal juice, by its effect, would be red-gold-making juice, or briefly gold-making-juice, since the alchemist recognized only alchemical gold, or live-gold, as gold, and bullion gold as dead-gold or no gold at all. In Chinese the term *Chin-I*, dialectal *Kim-Iya*, literally means Gold-juice, but signifies Gold-making-juice, such as has just been explained above. The herbal principle incorporates growth-energy, as herbal-soul, and this enlivens dead or yellow-gold

into live or red-gold. We must therefore accept that alchemical gold results on its resurrection and, as such, it represents resurrection-body, which means matter with sublime properties as characterizing a soul. The gold-making-juice would accordingly be called Elixir-of-gold.

Now in Sanskrit an elixir of life would be *Rasa*, as *Soma-Rasa*, the juice of ephedra. It started as an energizer, next as the drug of rejuvenation then as agency of immortality and resurrection and finally as god *Soma*, the moon-god, in charge of the vegetable kingdom. It was later substituted by *Rasāyana*. *Rasa* = juice and *Ayana* = Abode. This makes *Rasāyana*, the Abode of juice, the fountain of juice, or juice-incorporate. Now Monier Williams⁹ translates both *Rasa* and *Rasāyana* as Elixir. It is to be noted that there is no word of Greek⁴ or Latin origin to render *Rasāyana*. This because neither Hippocrates nor Galen considered rejuvenation as possible. On the contrary Caraka¹⁰, the master of Indian Medicine, divides medicines into two categories, the first to which he assigns priority is *Rasāyana* and he defines it as drugs of rejuvenation as also the art concerned with it. What can transform a doltard into a lusty youth can only be growth-energy such as is donated by soul, being an all-changing and all-becoming agency. When it is incorporated in a metal this also grows to perfection as Ferment gold. Then if the target before alchemy was to prepare Red-gold, the agency to be employed was a herbal juice, literally *Chin-I*, Gold-juice. It is usually translated as potable gold, when *I*, according to any dictionary means "juice", like *Rasa* of Sanskrit and by no means signifies the quality potable. The Chinese equivalent of Potable gold would be *Chin-Tan*, Cinnabar gold. That *Chin-I* connotes a gold-making agency, rather than gold in some form, there is its Greek translation as *Chrusozomion*, gold-making-ferment, where juice = ferment, an improvement upon the original Chinese designation. Waley (ref. 5, p. 12) records the word *Chrusozomion* and Liddell and Scott¹¹ give it in their Lexicon as "gold ferment". All this is ignored by those who otherwise translate *Chin-I* as Potable-gold. Then if *Chin-Tan*, Red gold, was the drug aimed at, the craft alchemy depended upon *Chin-I*, gold-making-juice, for gold otherwise was quite enough. It now makes it clear that with the coining of the term *Chin-I* began alchemy proper. Having had gold-making-juice as elixir of gold, and Red-gold as elixir-incorporated-gold, the latter becomes the drug of longevity, or potable gold. We have seen how Dhabar explains the transformation of Copper-man. Correspondingly potable gold can produce a gold-made-immortal man, or briefly, Golden-Man. These two words in Chinese would be *Chin-Jen*. And as term it has been correctly rendered into Greek as *Chrusanthropos*, Golden-Man. Waley (ref. 5, p. 13) records it but regrets its meaning as uncertain. Only when alchemy is accepted as the art primarily aiming at rejuvenation that it makes it easy to follow how the three fundamental terms in Chinese alchemy are interdependent to constitute a unity, and they are :

Chin-I = Gold making herbal juice.

Chin-Tan = Cinnabar-gold = Red gold = Juice made gold.

Chin-Jen = Golden Man = gold made Immortal.

To become immortal using drugs would be exoteric alchemy. By spiritual exercises man can generate creative energy within himself. This is esoteric alchemy. It means man allows his soul to produce impacts upon his corporeal system and according to a mystic, like Philo, impacts of soul upon matter makes it soul-like. Such an immortal is called *Chen-Jen* in Chinese. It means True-Man, Real Man, or Perfect Man. A mortal has an ephemeral existence, as good as no existence. On the contrary an immortal is always there to assert his presence. He then is the real man, or Perfect Man, eternal like the Perfect Metal, gold. For our purpose *Chin-Jen* = Golden Man = *Chen Jen* = Real Man. And Waley also records the Chinese term, *Chen-Jen*.

II

We now turn to Indian alchemy. It clearly began with herbalism, with *Rasa* or *Soma-Rasa*, the juice of ephedra. It was an energizer, next drug of rejuvenation, thirdly an agency of immortality and finally god *Soma*, the moon god, in charge of the vegetable kingdom. In India where ephedra was not available it was replaced by *Rasāyana*, herbal drugs of rejuvenation, the term being also used for the art of rejuvenation. Something similar also applies to the Chinese term, *Pen-Tshao*. Nakayama¹² writes that, "the Chinese term *Pen-Tshao*, which is equivalent to pharmacology, originally meant the study of medicines for longevity or immortality. Later it was applied to the study of *Materia Medica* in general. The primary goal of Chinese alchemy was to find a recipe for immortality rather than obtain noble metal from base metal". On reflection it would be evident that the seeker of such drugs, being an ascetic he would require an energizer to meet his immediate demands. Once he derived some benefit he could imagine that youth was returning and life would be everlasting. We must emphasize the realistic basis of such dreaming. In the case of *Soma* it was ephedrine, an energizer and an euphoriant. Red-gold or calcined gold was actually a drug for it exists even to this day. If *Pen-Tshao* were drugs of longevity, as Nakayama has it, *Rasāyana*, as Caraka defines it, would be Indian drugs for rejuvenation. Accordingly we can equate *Pen-Tshao* = *Rasāyana*. That Indian *Rasāyana* or alchemy began with herbalism is not generally recognized. The greatest master of Indian alchemy has been Nāgārjuna. And Fillizot¹³ informs that, "Nāgārjuna was well versed in the science of medicinal herbs. This made him a master of *Rasāyana*, the science of elixirs of life". Mastery over herbalism was essential for one who was to exploit it in preparing alchemical drugs as calcined metals, or metal colloids, like red colloidal gold, or ferment gold.

Following the importance assigned to cinnabar and mercurials these became more

popular in China than any where else, which leaves us in no doubt that alchemy arose in China. But there is Nakayama to reveal that Chinese medicine started with *Pen-Tshao*, which were herbal drugs of longevity comparable with *Rasāyanas* of Indian Medicine. Moreover if *Pen-Tshao* were drugs of longevity the Chinese god of longevity emerges from the peach. And peach has been selected as emblem of longevity because it is deep red at the core. Once peach became a drug of longevity it continued to retain its position or otherwise the god of longevity should have preferably emerged from a furnace where cinnabar or vermilion was being synthesized.

Returning to Indian Medicine there are two indigenous terms, *Rasa* as exemplified by *Soma-Rasa*, the *Soma* juice and *Rasāyana*, juice-incorporate. With the impact of Chinese alchemy there came calcined metallic preparations. In as much as calcination depended upon selected herbs, calcined metals were really herbo-metallic preparations. This necessitated a couple of terms being coined. Such herbs that were used for calcination were called *Mahārāsa* = Super-juice, in contrast to mixture of herbs as *Rasāyana*. Nāgārjuna¹⁴ uses it for "preparing with great care the powder of projection which transforms a ten million times its weight of base metals into gold". *Mahārāsa* is clearly the main ingredient of elixir of gold. We have learnt that Elixir = soul, the all-changing agency. In *mahārāsa* again there was a herbal "soul" which could donate growth-energy. But any substance can deliver its soul and none can do better than cinnabar. The essence of cinnabar is mercury. Accordingly Nāgārjuna (ref. 14, p. 131) further writes that, "*Darada*, cinnabar, when sublimated (heated to decomposition) yields an essence (soul) identical with mercury", and the word he uses for Essence, is *Satva* (ref. 14, p. 314). Now Monier Williams translates, *satva* = Vital breath, which is a sophisticated term for soul. Monier Williams had rendered *Rasa* = *Rasāyana* = Elixir. And Elixir is Chinese with its main word, *Chhi* = Soul = Vital breath. Thus *Satva* = Elixir = Soul. But being mercurial it is inorganic-elixir. Briefly Nāgārjuna uses *Mahārāsa*, for herbal elixir, and *Satva*, for inorganic elixir. These run parallel to the two kinds of elixirs also found in Greek alchemy, as *Chemeia* and *Chumeia* for herbal elixir (ref. 4), and *Xerion* and later *Ios* for the inorganic.

We have now to decide the feature which characterizes a mineral elixir. A classic on Indian alchemy, of eleventh century A.D., entitled, *Rasārṇavakalpa*, so ably translated by Roy¹⁵ states that, there is a mineral from which "red blood-like extract comes out". If there is something which I have emphasized most is that alchemy is dependent upon the idea of soul and soul is qualified as Redness. The above statement fully confirms such a view. The term used for this blood-red elixir is *Sarva-Sātvika*, signifying a general elixir which would transform anything into gold. This becomes meaningful when we have confirmation to this effect from Hopkins¹⁶ writing that, "just as gold, could, as ferment, change base metals into gold, so *Ios* (the violet coloured mineral) could change not only metals but all things into gold. This is the philosopher's stone". Postans¹⁷ narrates a legend

current in Cutch according to which, while a herb with blood red juice, was burnt along with a man whose body turned into a figure of gold. Here then is *no* base metal but human flesh that turns into gold. But what is interesting is *that* the golden figure, when mutilated, could repair itself. This is exactly what, alchemists believe, alchemical gold can do. Being Ferment-gold it can grow and increase and donate its virtues to its consumer. Finally the Indian terms would be *Rasa* = *Raṣāyana* = Herbal Elixir of life. *Mahārasa* = Herbal Elixir of gold. *Satva* = Inorganic (mercurial) Elixir of gold. *Sārva-Sattvika* = General mineral Elixir of gold = Philosopher's Stone.

The last is characterized as blood-red in colour. There is no term for Ferment - gold, or Red-gold, nor a proper term for Golden-Man.

Alberuni¹⁸ however mentions the term *Kim-Puruṣa* and otherwise refers to golden coloured people who are long lived. I have interpreted *Kim-Puruṣa* with *Kim* = Gold in Chinese, *Puruṣa* = Man, in Sanskrit, when *Kim-Puruṣa* would be the Sino-Sanskrit term for Golden-Man. But *Kim-Puruṣa** exists in ancient Sanskrit literature and Max Muller, among others, understand by it some wild tribesmen. *Kim*, in Sanskrit, only means "How". Then *Kim-Puruṣa* as "How-man" carries no sense. This problem has to be reconsidered by Sanskrit scholars.

Datta¹⁹ renders, Philosopher's stone = *Lapis philosophorum* = *Sparsā Maṇi*. This he defines as, "Noble tincture that purges base metals of their dross turning them into pure gold". Moreover he (p. 815) equates, Red-dragon = Deified Man = *Hiraṇya Śmaśru*, *Hiraṇmya Keśa*, *Apranākhāt Suvarna* (Golden to the finger tips), of the *Upaniṣads*. He is the only author who mentions this term and I reproduce it for the sake of completion. One well versed in Sanskrit literature alone can do justice to it. It requires comparison with Golden Man, the Chinese term for drug-made-immortal.

III

Alexandria was founded in about 300 B.C. It became a world market by 200 B.C. The neighbouring Arabs brought Chinese silk to Alexandria. While visiting China they found "pavement pharmacists" selling herbal drugs claiming

*A note of dissent expressed by Prof. R. S. Singh, Department of Rasasastra, Institute of Medical Sciences, B. H. U: "In the Sanskrit literature the epithet *Kim puruṣa*, though primarily has a mythological connotation suggestive of the tribal people inhabiting interior and trans-Himalayan regions and the basis of the term has anthropological sense. It is now a historical fact and not merely a myth. There is the district of 'Kannaur' in the H. P. and the inhabitants are the *Kinnaras* of the old texts. The terms *Kimpuruṣa*, *Kinnara*, *Aśvamukha* are all synonymous and categorised in the class of demi-gods or demi-human beings. Due to the broad checks and narrow chins, these people at a glance look like having faces similar to the horse face. I am not very sure about the contention of al-Bīrūnī as depicted by the author."

them as imparting virility and rejuvenation. They could even turn a base metal into gold and the Chinese term was *Chin-I*, dialectal *Kim-Iya*, already considered. It was Arabicized as *Kimiya*. The Arabs handed over their term to Bucharic speaking copts, being Egyptians of the same social status as themselves. Thus was introduced Chinese alchemy into Alexandria. That Greeks were not the initiators can be confirmed by what Taylor (ref. 1, p. 28) informs stating that, "although the earlier alchemists wrote in Greek they were not Greeks but in all probability Egyptian or Jewish". The author has explained that the Arabic word, *Kimiya*, was transliterated as *Chemeia*, and was pronounced exactly as the Arabs did, and this transliteration reveals the author to be a Copt, speaking the Bucharic dialect. The interested reader can consult the above article for further details. Now in Arabic *Kimiya* is first, Elixir or a substance, and next alchemy. In as much as *Chemeia* is identical with *Kimiya*, the former was likewise both, elixir of gold as also alchemy, the art of making gold. It thus explains how Greek alchemy did not lack a word for elixir (ref. 4).

Later on when Alexandria became more famous, Indian merchants also went there taking *Rasāyana* drugs of rejuvenation. Even in Sanskrit *Rasāyana*, like *Kimiya*, in Arabic, is first a substance, a drug, and next the art of rejuvenation. *Rasāyana* means Abode of juice, juice-incorporate. With the help of Indians it was translated into Greek as *Chumeia*. Like *Rasa*, *Chumos* means juice. And *Chumeia* has been etymologized by Gildemeister as "Medium containing juice". It can be maintained that *Rasāyana* = *Chumeia* as perfect equivalents. Here again the original article (ref. 20) gives all details. With *Chumeia* again there came a word first meaning Elixir and next alchemy.

Finally the Chinese visited Alexandria bringing their own silk. Being there the term *Chin-I*, dialectal *Kim-Iya*, could be translated as Chrusozomion, gold-making-ferment. Here ferment is a more expressive term than juice which the original Chinese term contained. When Chrusozomion specified gold-making-elixir, the word *Chumeia*, being Greek, was retained to signify the art alchemy. With these two terms there remained no necessity to use *Chemeia* a word with unknown etymology which became obsolete. Nevertheless for a while both were current when *Chemeia* = *Chumeia*. In this light there remains no problem in assigning priority to *Chemeia* and in admitting that there was at least one specific word for elixir of gold and it was Chrusozomion. It is recorded by Waley who equates it with the Chinese term, *Chin-I*. Chrusozomion is found in the Lexicon of Liddell and Scott (ref. 11) who translate it as Gold-Ferment, or the Ferment which makes gold, the synonym of gold making juice. In Chinese the resultant of gold making juice is Red-gold, or *Chin-Tan*, literally Cinnabar-gold. We have now to find its equivalent in Greek. I. E. S. Edwards, as the Keeper of Egyptian Antiquities at the British Museum, kindly wrote on 14 May 1973 that, "Cinnabar was unknown to the ancient Egyptians". With such a past the Alexandrians would show preference to Coral as a red gem. Accordingly Cinnabar-gold was translated

into Greek as Coral-gold, or *Chrusokorallion*. Ruska²¹ gives this Greek term along with two Arabic as synonyms (on p. 35) but being unable to take them to Chinese original, considers these terms as pseudonyms. For the sake of convenience I may reproduce the Arabic term or Coral-gold literally translated as, *Dahab bussad* = Coral-gold. Its synonym is *Dahab farfir* = Purple gold, clearly as equivalent of Red gold.

It has been explained that Alchemical gold = Ferment-gold and further that Ferment-gold, being itself a ferment, is endowed with the power of growth and reproduction, and as such is also, seed of gold. Accordingly Ferment-gold = Gold-ferment. Now Gold-ferment can be best conceived as Gold-Yeast, for which there is the Greek term, *Aphroselenon*, Correspondingly there is the Arabic literal equivalent *Khamir-dahab* = Gold-yeast. The above Greek and Arabic terms are given in Ruska's two publications^{21, 22}. We may here recall Hopkins (ref. 16, p. 64) remarking that, "gold could as a ferment change metals into gold", whence Alchemical gold = Ferment gold = Gold yeast. And he (ref. 16, p. 63) further quotes Zosimus, the alchemist of Alexandria that, "the Water, like yeast, must determine the fermentation destined to produce the like by means of the like. Just as yeast taken in small quantity ferments a great mass of dough so also this *little mass of gold* makes the whole ferment" into gold. This power of increase characteristic of yeast and attributed also to yeast-of-gold is independently maintained in a Buddhist work translated in Chinese about 660 A.D. and mentioned by Waley²³. We read there that "it took Śanaka (Cāṅakya) and the minister Huai-Yueh, Moon-lover (Candra) twelve years to learn to make gold. They produced a speck not larger than a grain of corn (or yeast). But they said at once, "There is nothing now to prevent us making a mountain of gold". This "speck of gold" can be easily identified as "gold yeast" which has been mentioned above. By now we have all the fundamentals terms in Greek alchemy as a system which makes it complete in itself. It starts with a gold making juice, *Chrusozomion*. Elixir of gold produces Red-gold, or Coral-gold, *Chrusokorallion*. As live-gold or ferment-gold it is also Gold-ferment for which the Greek term is *Aphroselenon*, gold-yeast. And on taking potable-gold or *Chrusokorallion*, the consumer becomes immortal as Golden-Man, or *Chrusanthropos* in Greek. In Chinese there was a synonym of Golden Man, as True-Man, or Perfect Man. The Greek term for such a Super-immortal has also been given by Nicholson²⁴ as *Anthropos teleios*.

The other terms in Greek would be *Chin-I* (Mandarin) = *Kim-Iya* (dialectal) = *Kimiya* (Arabicized) = *Chemeia* (Coptic-cum-Greek) = Herbal Elixir, and also alchemy. *Rasāyana* (Sanskrit) = *Chumeia* (Greek translation) = Herbal elixir, and also alchemy. *Ek-Chhi* (Chinese) = *Iksir* (Arabicized) = Xerion = Inorganic Elixir = *Ios* (Purple) = Inorganic Elixir²⁵. The one term specifying elixir was *Chrusozomion*, the translation of *Chin-I*, with which alchemy began in China. *Chin-I* is *kimiya* and with it began alchemy among the Muslims.

IV

The main Arabic terms have been already discussed. *Chin-I* (Mandarin) = *Kim-Iya* (dialectal) = *Kimiya* (Arabicized) = Herbal elixir. *Ek-Chhi* = the One-soul (Chinese) = *Ik-Si-R* (Arabicized) = Inorganic elixir. *Kimiya* = *Iksir* or elixir in general. Elixir is the initial substance, it produces next : *Chin-Tan* = Cinnabar-gold = *Dahab bussad* = Coral gold. This is synonymous with Purple-gold = *Dahab farfir*, also identical with Gold-Yeast = *Khamir dahab*. When taken as potable gold man becomes Golden-Man, *Insanul Dahab*, Waley (ref. 5, p. 11) cites a Chinese authority claiming that, the "duration of life becomes everlasting when golden-powder (Cinnabar-gold), which does not decay, enters the entrails. The old dottard is again a lusty lad and the decrepit crone a young girl. His title is True Man. Metals subjected to the purifying processes of alchemy also become true" or gold. Here True Man = Perfect Man, just as True-Metal = Perfect gold, when perfect gold can go on increasing for ever and Perfect Man himself immortal can make another like himself. In Arabic, Perfect Man = *Insanul Kamil*. In Greek it would be *Anthropos teleios* recorded by Nicholson (ref. 24, p. 82). We finally find the three basic terms in Chinese for which the Arabic would be :

1. *Chin-I* = *Kimiya* = Elixir of gold.
2. *Chin-Tan* = *Dahab-bussad* = Coral-gold = Elixir of life = Potable gold.
3. *Chin-Jen* = *Insanul-dahab*, Golden-Man = Immortal.
4. *Chen-Jen* = *Insanul Kamil*, Perfect Man = Super-Immortal.

DISCUSSION

Chronologically speaking the founder of alchemy should be the first to be considered, and then he should reveal the urge for founding it. All that literature informs here is what Hopkins (ref. 16, p. 38) states that, "in the beginning alchemy was just an ordinary art like that of blacksmith". Then it can only be a mere brain-wave on his part that by mixing some magical substance in an alloy, this would change into gold. On the contrary we have to start with nomads who could ill afford to support an infirm old member as a parasite. He was accordingly excommunicated as a solitary denizen of a forest. Here he needed an energizer to put strength into his infirm limbs. There are regular energizers, (ephedra being one.) Its juice was *Soma*. Caraka (ref. 10, p. 181) writes that, as its substitute, *Rasāyana* drugs enabled "Cyavana and other sages to regain their youth and acquire the capacity to bear all hardships". This is precisely what an energizer can do and the ascetic needed it from day to day to be able to battle against life single handed. An energizer is also an euphoriant. Having thereby acquired the feeling of well-being he imagined that the energizer could confer rejuvenation and even immortality. That the ascetic dreamt of rejuvenation would really be an

expression of his having found a drug as energizer and euphoriant. Let us now consider an aged member of a family which can afford to support him. What he would desire would be longevity, to be able to continue enjoying domestic happiness. It is this difference between an old man as ascetic hankering after the robust health of youth and as a family member aspiring to live as long as possible. Here Hopkins²⁶ observes that, "the real quest of the Semite is for life immortal, of the Hindu for renewed youth." This was written in 1905. Later came Commaraswamy who, as given by Knipe²⁷, repeated the above idea in 1931 stating that, "in the Semitic and European conceptions of the Waters of life the drought of life is conceived as bestowing immortality for ever. In India we meet with a more sombre concept of repeated rejuvenation". This is inevitable if the ascetic became a drug-addict which he would easily be taking ephedra. Even Elide (ref 27, p. 355) repeats to the same effect when he states that, "the Semites thirsted for immortality; the Indians sought for the plant that would regenerate and rejuvenate them". The real comparison is not between a Semite and an Aryan, but between an ascetic, the solitary denizen of a forest and an aged supported by his family. Altogether I find that the role of the ascetic as contributor to our civilization is very much ignored.

It was such an ascetic that tried ephedra a perennial plant bearing red berries. The Chinese ascetic took to red cinnabar. It became the drug of longevity. Later came gold to strengthen the corporeal system. Then cinnabar to prolong life and gold to preserve the body, cinnabar-gold, became the ideal drug of rejuvenation-cum-immortality. For preparing such a drug was founded alchemy. Now cinnabar-gold means Red-gold and this is Colloidal gold. It was made in ancient times and is available on the market to this day. Those who mistook Red-gold for bullion gold and tried to make the latter naturally never succeeded. What is worse they misdirected others to equally fruitless attempts. To differentiate between red colloidal-gold and yellow fossil-gold is to understand real alchemy which continues to exist as the art of making colloidal metals and false alchemy which never had a real beginning.

SUMMARY

In Chinese three terms are inter-connected constituting a system of alchemy, they are :

1. *Chin-I* = Gold making juice = Herbal Elixir of gold.
2. *Chin-Tan* = Cinnabar-Gold = Red-gold = Elixir of life.
3. *Chin-Jen* = Golden Man = Gold made immortal.
4. *Chen-Jen* = True Man = Perfect Man = Immortal.

In Greek the above three terms exist as translations :

1. *Chrusozomion* = Gold making ferment = Herbal Elixir of gold.
2. *Chrusokorallion* = Coral (red) gold = Elixir of life.
3. *Chrusanthropos* = Golden Man = Gold made immortal.

In Arabic :

1. *Kimiya* = Arabicized *Kim-Iya*, which is the dialectal form of *Chin-I* = Herbal Elixir; both of gold and of life.
Iksir = Arabicized *Ek-Chhi*, the One-soul = Mineral elixir, both of gold and of life.
2. *Dahab bussad* = Coral gold = *Khamir Zahab* = Ferment-gold = Gold-yeast = Elixir of life.
3. *Insanul Zahab* = Golden Man = Drug made immortal.
4. *Insanul Kamil* = Perfect Man, translation of the Chinese term *Chen-Jen*, True Man, a synonym of *Chin-Jen*, Golden Man.

In Sanskrit :

Rasa = Juice = Elixir of life. *Rasāyana* = Herbal drugs of rejuvenation = Elixir of life. *Mahārāsa* = Super-juice = Herbal elixir. *Satva* = Vital breath = Mineral elixir. There is no term for alchemical gold and no term for drug made immortal other the *Kim-Puruṣa*. Indian alchemy arose as herbalism and ended as such. The impact of Chinese alchemy introduced metals and mercurials. *Rasāyana* aimed at rejuvenation and so did Chinese alchemy with the final result that *Rasāyana* = Alchemy. Indian *Rasāyana* and Chinese alchemy were both founded by ascetics who needed robust health and the drugs they sought were energizers which were imagined as conferring rejuvenation. Chinese Alchemy had its precursor in the use of cinnabar as drug of longevity. Later arose the idea of cinnabar-gold or Red-gold which is colloidal gold. This was exaggerated as the drug of rejuvenation-cum-immortality. To produce metal colloids, preferably red coloured became the art of alchemy and as such it continues to exist upto date.

REFERENCES

- ¹ Taylor, F. S., *The Alchemists*. 1951, p. 16.
- ² Hopkins, A. J., *Alchemy, the Child of Greek Philosophy*. 1934.
- ³ Mahdihassan, S., Elixir its significance and origin. *J. Asiatic Soc. Pak. Dacca*, 6, p. 39. 1961.
- ⁴ —Early terms for elixir hitherto unrecognized in Greek alchemy. *Ambix*, 23 (3), 1976. p. 129
- ⁵ Waley, A., Notes on Chinese alchemy. *Btn. School Oriental Stu.*; London. Vol. 6. 1932. p. 18.
- ⁶ Lloyd, J. Uri, *History of Pharmacological, Vegetable drugs*. Vol. 1 : p. 157. 1921.
- ⁷ Dhabar, B. N., *Essays on Iranian Subjects*. Bombay. p. 184. 1955.

- ⁸ Mahdihassan, S., Colloidal gold as an alchemical preparation. *Janus*; 58 (1), p. 112. 1972.
- ⁹ Monier-Williams, Sanskrit-English Dictionary. 1899.
- ¹⁰ *Caraka Samhitā*, Tr. by Gulabkhunverba Ayurvedic Soc. Jamnagar, India. Vol. V. pp. 479-494.
- ¹¹ Liddell, H. G. and Scott, R. *A Greek English Lexicon*. p. 2010. 1953.
- ¹² Nakayama, S., The empirical tradition of Science and Technology in China. In A. Toynbee's *Half the World*, London. p. 146. 1973.
- ¹³ Filliozat, J., *The Classical Doctrine of Indian Medicine*, Tr. by Dev Raj Chanana. M. Manoharlal, Delhi, p. 12. 1964.
- ¹⁴ Ray, P. (1956), *History of Chemistry in Ancient and Medieval India*. Calcutta. Nāgārjuna quoted on p. 133 and p. 131.
- ¹⁵ Roy, Mira and Subbarayappa, B. V., *Rasārṇavakalpa*. Indian National Science Academy, New Delhi. 1976. p. 110.
- ¹⁶ Hopkins, A. J., A Modern theory of alchemy. *Isis*, 125, p. 7, p. 64, p. 61.
- ¹⁷ Postans, M. (1830), *Cutch*. London, p. 197. 1830.
- ¹⁸ Sachau, E. C., *Al-Beruni's India*. 1888. Vol. 1. p. 188.
- ¹⁹ Datta, Hirendra Nath., Alchemy, Medieval and Modern. *Acharyya Ray Commemoration Volume*, Calcutta, pp. 600 and 615. 1932.
- ²⁰ Mahdihassan, S., Alchemy in the light of its names in Arabic, Sanskrit and Greek. *Janus*. 59, 93. 1961.
- ²¹ Ruska, J., Arabische Alchemisten. 1. *Chalid Ibn Yazid*. p. 20. 1924.
- ²² ———— *Turba Philosophorum*. p. 35. 1931.
- ²³ Waley, A., References to alchemy in Buddhist Literature. *Bin. School Oriental Stu.*, London. 1102. 1932.
- ²⁴ Nicholson, R. E., *Idea of Personality in Sufism*, Ashraf. Lahore. 1922. Reptd. 1964. p. 82.
- ²⁵ Mahdihassan, S., Elixir of Mineral origin in Greek alchemy. *Ambix*, 24 (3), pp. 133-142. 1977.
- ²⁶ Hopkins, E. Washburn, The Fountain of Youth. *J. A. O. S.*; 26, 34. 1905.
- ²⁷ Knipe, D. U. (1967). The heroic theft : myths from Ṛg Veda and the ancient Near East. *Hist. of Religions*; 6 (4) : 355. Knipe quotes Coomarsawamy. via Bosch, and also Eliade.