

## Chinese Alchemy in the Light of Its Fundamental Terms

S. Mahdihassan

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

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**Abstract:** Chinese alchemy is briefly but effectively revealed by three terms all constituted of the word *Chin*, meaning "gold," but signifying everlasting quality. *Chin-I* is "Elixir of gold" which is used to make a preparation of gold; *Chin-tan* is "Elixir of life," potable gold, the real drug. Its consumer is *Chin-jen*, "golden-man," the drug-made-immortal. The three terms discussed are *Chin-I*, *Chin-tan* and *Chin-jen*.

**A** SCIENTIFIC COMMUNICATION first presents the problem; then it explains the method of choice in solving it; the solution then follows automatically. The problem has been: What is alchemy and here, particularly, that in China? The best approach to the subject is that of comparative study. It should be extensive insofar as it should show what is in common among the Chinese, Indian and Greek systems; it is to be intensive insofar as it should particularly reveal what terms are specific to a given system and how they are interrelated. This, in essence, is the same as the principle which two prominent biochemists in America have maintained. According to Schneider (1) and Hogboom "All cell fractions must be studied to obtain valid information on any one fraction." This lays great emphasis on internal evidence which, in our case, can be offered by any system of alchemy.

Alchemy, being an art, has its own claims, but also achievements to its credit. Some of its claims are indeed impressive and have attracted undue attention while whatever can be otherwise credited to it has been ignored. According to the *Oxford English Dictionary* alchemy is a dual-natured art. It tries to make gold and to prepare a panacea. Obviously neither was ever achieved so that alchemy could never have had a beginning. Nevertheless we have to accept that the art did linger on for centuries and died surprisingly late. I am, however, one who maintains that alchemy is still alive; it prepares the original drugs perhaps better than before, but has labelled them so that the credulous would easily fall into a trap of advertisement. To give an example, a preparation of vermillion, really calcined or colloidal vermillion, is known in India by the impressive

name *Makara-Khwaja*. An effective translation would be “Cupid’s hallmark” (2, p. 88) and the propagandist claims it to be a panacea, a rejuvenator, and what not. That it has been available on the market shows that some benefit has been derived from it. We then approach the alchemist as the manufacturer of some preparations and it is our further concern to discover what they are, be it a preparation of gold, a panacea, or anything else. This would be a sound, common sense approach to the subject.

As craftsman the alchemist did have theories to guide his experiments. They are, however, most simple, in fact naive. His main theory is that like makes like. A perennial plant can make human life perennial. Gold, which never tarnishes, can keep the human system always strong and young. Another doctrine which also appeals to the alchemists is that of animism. Every plant, stone or spring has a soul, and soul is the active principle of life. What we know is life and what we think is soul. Now soul is transferable. Just as vitamins can pass from a fruit into the system of man, a drug rich in soul-content can strengthen a man’s life, transforming him from a dotard into a youth with robust health. He was then required to discover a source rich in soul-content which could be exploited. The caveman had equated Blood with Soul and he had also substituted it by Redness = Soul. He had already discovered red-ochre as the drug of longevity and even as the agency of resurrection. Now, at least in India and Pakistan, red-ochre continues to be used in diseases like piles and dysentery where blood is lost and has to be replaced. Then following red-ochre the Chinese discovered minium, or red oxide of lead, as the redder substance. On purifying this they got lead. This accordingly became, as it were, the soul of minium and, as such, soul in a mineral form. Lead was taken as the drug of longevity and moreover gave the first theory that even gold owes its origin to it (3). Since animism accepted soul as mono-elemental, lead alone could be the substitute of soul.

But later came Dualism when even soul was expected to be dual-natured. Then, looking out for redder and redder minerals, they unwittingly collected a mixture of minium and cinnabar. From such ores they got lead, as before, and now mercury. Then lead and mercury became subsouls and both became drugs of longevity. In India and Pakistan, even today, there is a classical medicine called the “Mercurial Pill.” It is an amalgam of lead. The pill is dipped in a cup of boiling milk which, on becoming cold, is taken as medicine. Thus lead and mercury are used as trace-elements to prolong life. Turning to theoretical alchemy there arose the second theory, supported by Dualism, that all metals are incarnations of two subsouls, lead and mercury (3). Then one could believe that on mixing lead and mercury, in ideal proportion, gold could be synthesized. Meanwhile the alchemist continued to believe that life can be prolonged by using the former two metals. Finally the Chinese found no substance on earth so close to blood in its redness as cinnabar. This, by now, could be clearly differentiated from minium. Meanwhile the technique of purifying ores had also improved so that controlled heating of cinnabar ores gave mercury, as before, but now also sulphur. Moreover, sulphur is also taken internally. Just as a potter makes small vessels there are corresponding vessels molded from sulphur. Water is kept during the night in these sulphur vessels and taken as the first drink in the morning. Turning to alchemy, there arose a third theory that sulphur and mercury are the subsouls of metals and can produce any metal, including gold. Since no other substance was discovered superior to cinnabar, alchemy did not advance further. This crucial fact, limiting the further progress of alchemy, is invariably overlooked. The important point is that lead, mercury and sulphur, though in traces,

are all being taken orally even today.

Inasmuch as his preparations were accepted as drugs of longevity, the alchemist did not feel his labors were lost. That gold was not made he attributed to want of persistence and he could easily forgive himself for it. If one wishes to call alchemy a fossil-science even this is a misnomer, for it never made gold. But employing the same craft and with the same substances alchemy did make drugs which are popular and accepted as panaceae even today.

We can now confirm this conclusion by comparing Chinese alchemy with the Indian Rasayana system. Charaka (4), who is the Hippocrates of Indian medicine, defines *Rasayana* as the drug of rejuvenation and the same word further signifies the art of rejuvenation. It would be admitted that copper never became gold and no dotard ever became a youth, yet Indian medicine accepts rejuvenation as possible. Alchemy has likewise been preparing drugs with identical claims. Alberuni (5) lived for over ten years in India around 1000 A.D. He found Rasayana to be a branch of medicine trying to rejuvenate the aged and prolong human life. *He never hints at any art of making gold.* The difference between Indian Rasayana and Chinese alchemy may also be explained. Rasayana drugs were the drugs that alchemy made as pharmaceutical chemistry. Later on the Indian Rasayana system was extended to incorporate mercurials. But since the aim remained, as before, for rejuvenation, the addition of mercurials and of metallic preparations to Indian Materia Medica only strengthened the objective, finally equating Rasayana with alchemy.

Here Nakayama (6, p. 146) writes that "The Chinese term *Pen-Tshao*, which is equivalent to pharmacology, originally meant the study of medicines for longevity and 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 to obtain a noble metal from base metal." Thus *Pen-Tshao* was the original term for the study of medicines of longevity in Chinese and *Rasayana* is the Sanskrit word for it. It signifies drugs of longevity and also the art of rejuvenation. Now B. Mookerji (7, p. 318), who is an Ayurvedic physician and an alchemist describes Rasayan as "medicines which cure and prevent senility and diseases." It is no medicine which does not cure some disease, but the one which cures senility and which rejuvenates is called *Rasayana*. Thus we have documentary evidence to equate *Pen-Tshao* = Alchemy = Rasayana = Art of Rejuvenation-cum-longevity.

We have now come to the point where we are required to explain how exactly alchemy began in China. People all over the world crave immortality. But it was the ascetic of China who was inflicted with the urge to energize himself and as a solitary old man he had to be his own grocer and his own cook. He needed in the first instance an energizer and a euphoriant. He then began to search for such drugs; from herbal drugs he came to try minerals and finally metals. In this intermediate stage he found jade was a hard stone. Then on the principle like-makes-like, he tried jade as a drug. It was powdered and taken orally. And what was a drug of longevity later became an agency of resurrection. The Chinese placed pieces of jade in the mouths of the dead to expedite resurrection. The caveman had also smeared the remains of his dead with red-ochre which was to him a drug of longevity. Then ignoring an herb like ephedra, which was for the Aryans a corresponding agency, both as conferring longevity upon the living and resurrection upon the dead, we find the Chinese have used all three—red-ochre, jade and cinnabar.

And jade meant a substance that does not tarnish. Now came gold as the only substance that is even fire-proof. The discovery of this property enabled gold to become an agency conferring longevity and also resurrection. It is the living who offers his drug of longevity to the dead as his agency of resurrection. Then gold, as the latest acquisition, remained a drug of longevity in China and did not completely replace jade as the agency of resurrection. It may be pointed out that in China cinnabar, like jade, was also both a drug of longevity and an agency of resurrection. At any rate gold became a drug of longevity and in this sense was accepted as superior to jade. This conclusion has now to be confirmed.

It has been pointed out that internal evidence is the best evidence. We must therefore allow the character *Chin*, for gold, to reveal its make-up. Karlgren (8) is the best authority on ancient Chinese script. He unfortunately considers the character number 652, *Chin*, gold, as "uncertain." But we cannot proceed further unless we overcome this difficulty. A Chinese character is usually constituted of two components, a phonetic, merely imparting sound and a radical suggesting some sense. In the final character *Chin*, gold, character number 652 in Karlgren, has, as its phonetic, another word as *Chin*, meaning "now," character number 651. This phonetic has been selected because it is constituted of only a few strokes. The fraction that functions as the radical is *Yü*, jade, character number 1216. Thus gold, the drug of longevity, is made up as a character, primarily of jade, previously recognized as the drug of longevity. Gold thus appeared on the scene as a drug and not as a metal. To a geologist jade is a stone and gold is a metal. But to the Chinese each was a drug of longevity. In fact gold came to be looked upon as "Super-jade." As simples there had been, among others, jade and cinnabar, and now there was gold. What could, however, prove to be the ideal drug would be one combining the virtues of cinnabar and gold which by now had replaced jade. Man has a body and his corporeal system can be strengthened by jade, but gold is even superior. Man has life and life-essence is soul. But Redness = Soul and as such Cinnabar = Soul. Then with gold to strengthen the body and cinnabar to strengthen the soul, nothing can supercede them. The ideal drug then could be legitimately designated Cinnabar-Gold, or literally in Chinese as *Chin-Tan*. Its proper translation would be "red-gold" but the most appropriate rendering would be "Golden Elixir of Life, with *Chin* as gold and *Tan* as Elixir.

Now if a mixture of powdered cinnabar and gold were to be given their effects had to synchronize in order to be effective. Even earlier a mixture of jade and cinnabar could have been used if they were conceived as capable of operating in full harmony. Theoretically a mixture of cinnabar and gold would be no more effective than either as simple. Then gold itself had to be red or cinnabar had to be gold. The Chinese tried both. That they did so is not generally recognized. What is easy to trace was the attempt to transfer cinnabar into gold. This idea is very well known. To cite one source Waley (9, p. 2) refers to the time of the Han emperor, Wu Ti. There a sage told him that "By sacrificing to the god of stove you can summon Spirits and you will be able to change cinnabar into yellow gold. With this yellow gold you may make vessels to eat and drink. You will then increase your life span." Waley rightly discovered for himself that for the alchemist such gold was "super-cinnabar," the equivalent of *Chin-Tan*. And when Cinnabar = Soul, *Chin-Tan* would be "super-soul" or the Elixir of Life. In contrast to cinnabar or mercury becoming gold and thereby Red-Gold or *Chin-Tan*, the possibility of gold becoming red has received very little attention. On the other hand no one transformed cinnabar into yellow-gold but yellow-gold can be changed into red-gold. It is colloidal gold. One documentation is

as good as any other and Jabir, the Master of Islamic alchemy, as mentioned by Taylor (10, p. 85), tried to “convert gold into elixir.” His starting material was yellow-gold when elixir must be a gold preparation. Jabir converted gold or *Chin* into *Chin-Tan*, Red-Gold, the ideal drug of longevity, the Elixir of Life.

Now comes the question of how the alchemist proceeded to prepare Red-Gold. I have written an earlier article (11) on the subject and will summarize it here. Gold is granulated and rubbed in a granite mortar with herbal juices having strong reducing properties. Heating is not necessary but time is prolonged. With calcination, never omitting to use a pulp of herbs at the same time, and pulverization combined, time is reduced. The final product becomes a brick-red powder or Red-Gold. This is colloidal gold. It is red, being thus comparable to cinnabar; that it was gold there is no doubt. Thus it was an herbal juice that made Red-Gold. Then alchemy depended upon the “Red-Gold-making-juice” that made Red-Gold. Inasmuch as Red-Gold was the drug and yellow-gold a fossil metal or crude material, it was useless to speak of gold to the alchemist except as Red-Gold. Then, “Red-Gold-making juice” could be briefly designated as “Gold-making-juice.” This literally would be *Chin-I* in Chinese, which in another dialect would be *Kim-Iya*. It was Arabicized as *Kimiya* and became in Arabic a generic term for a red-gold-making substance as also the art of making red gold. Thus *Chin-Tan*, the Golden Elixir of Life, depended upon *Chin-I*, or *Kimiya*.

Now what happens when *Chin-Tan*, the Elixir of Life, is properly consumed? A Chinese source, quoted by Waley (9, p. 11), informs us that “the old dotard is again a lusty youth and the decrepit crone is again a young girl.” This is precisely what Rasayana drugs would also claim and is indicated by Alberuni (5) in such terms. The Chinese authority continues to say that the title “of the immortal would be true man” (p. 11), *Chen-Jen*. He also has a synonym implying a “Golden-elixir-made-immortal,” simplified as “Golden-man,” *Chin-Jen*. This has been translated into Greek as *Chrusanthropos* but Waley (p. 111) considers its meaning “uncertain.”

By now we have three fundamental terms in Chinese alchemy, each so dependent upon the others that without any of the three the sense remains incomplete. Firstly there is “Gold-making-juice,” *Chin-I* in Chinese, *Kimiya* in Arabic and *Chrusozomion* in Greek. It is given by Waley but properly rendered in the *Greek Lexicon* of Liddell (12) and Scott as “Gold Ferment.” A “Gold-making-ferment” is an even more expressive term than “Gold-making-juice.” It is a proper catalyst and no gold. Anyone who hesitates to equate *Chin-I* = Gold-making juice should try to interpret the Greek synonym *Chrusozomion*, which is a ferment and no gold. As the second term we have “Juice-made-red-gold,” *Chin-Tan*, Elixir of Life, which have been sufficiently discussed. In Greek *Chin-Tan*, Cinnabar-Gold, would be *Chrus-korallion*. Thirdly there is the final result, the immortal, the Golden-Man, *Chin-Jen*, or in Greek *Chrusanthropos*. A mortal has an ephemeral existence, while an immortal is always there to assert his presence. Then the mortal is no “genuine man” while the immortal alone is the Real Man, or *Chen-Jen*. Thus arose the synonyms *Chin-Jen* (Golden Man) = *Chen-Jen* (Real Man) = Immortal = *Chrusanthropos*. There are even other synonyms, one being *Hsien*. Davis (13) equates it with the Arabic *Jinn*, while I have shown that Edkins found the word pronounced as *Jinn* in some Chinese dialect. On this I have published an article (14) before and another has recently appeared (15). Thus we have three indispensable and coordinated terms, *Chin-I* (Gold ferment), *Chin-Tan* (Red-Gold), the Elixir of Life, and *Chin-Jen* (Golden Man),

the Drug-made-immortal. These three items would represent the initial starting material, the resultant product and the finally transformed consumer, *Chin-Jen*, Golden-Man, the immortal. All the terms incorporate the word *Chin*, gold. No such series of interdependent terms is found in any other system and explains how China has been the proper home of alchemy. The great problem of how can alchemy make gold and also prepare a panacea is easily answered by alchemical gold itself being identified as the panacea. Then to the riddle that alchemy made gold, there is the solution that it made Red-Gold, or colloidal gold, as the Elixir of Life. To those who imagine alchemy is dead and buried there is the surprising fact that colloidal gold and other calcined metals are being regularly prepared. Alchemy then has to be redefined as the art of making colloidal forms of trace elements as medicaments.

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