Chinese Alchemy

Taoism, the Power of Gold, and the Quest for Immortality

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In memoriam

Francis Clive-Ross

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ORIGINS

There is little in Chinese alchemy that cannot be associated with Taoism and although the exact origins of that alchemy may still be in dispute in the light of present incomplete evidence, it is not questioned that it grew and was nourished in the soil of popular and religious Taoism. It is also recognised that there are two distinct branches of Taoism: the classical *Tao Chia,* the mystical, metaphysical aspect, stemming from Lao Tzu and Chuang Tzu, and the popular, religious, magical, alchemical side, the *Tao Chiao,* which arose traditionally with the Yellow Emperor and his Three Immortal Ladies, or Maids, who taught him magic, mysticism and love. Lao Tzu and Chuang Tzu probably represented a movement against these earlier animistic-magico practices and founded the *Tao Chia* as a protest, or rather a correction, at a time when such practices had lost their original meaning and become loaded with superstition.

Yet another viewpoint is that classical Taoism was original but was too austere and rarefied for the general populace and later, meeting the shamanism which flourished in the tribes of the regions north and west of China proper, absorbed shamanistic-animistic lore and degenerated into the religious, ritualistic, magical and alchemical branch, the *Tao Chiao,* which fulfilled the day-to-day needs of the people and which still exists in modern times as a popular religion. Thus, from being abstract philosophy, it became a concrete religion with a ceremonial Church, having a priesthood, liturgy and theology, a Pope, and a Trinity known as the Three Pure Ones. From the original non-theistic mysticism it became not only theistic but polytheistic, adopting the pantheon of popular Buddhism.

While the origins and dates of Chinese alchemy are still being researched and debated (there are literally hundreds of Taoists texts as yet untranslated) it is known for certain that it flourished well before 144 BC, for at that date the Emperor issued an edict which ordered public execution for anyone found making

counterfeit gold. The making of counterfeit cash was also proscribed. However, in the year 60 BC the then Emperor appointed a well-known scholar, Liu Hsiang, as Master of the Recipes so that he could make alchemical gold and prolong the Emperor's life. He failed to make the gold and so was disgraced. This points to an already well-established and widespread practice in alchemy. It was also said to have been practised in the fourth century BC by Tsou Yen, who had a reputation as a miracle-worker and a following among the aristocracy. He was also reputed to have been the first alchemist to combine the search for the Elixir with the search for gold.

The Later Han dynasty (AD 25–220) was a time of great interest in science, astronomy, botany, zoology and medicine and in this period there appeared the first book on alchemy, the *Ts'an T'ung Ch'i* of Wei Po-yang. Its date was about AD 142 and its title is translated as 'The Book of the Kinship of the Three,'but it was written in terms which were too difficult for the understanding of all but initiates. But most of the alchemical texts derive from the T'ang dynasty (AD 618–960), which maintained this interest, especially in the alchemical branch of Taoism.

The language of the *Ts'an T'ung Ch'i* being too complicated and esoteric to be of general use, it is to Ko Hung that we must turn for the earliest complete treatise. He lived about AD 260 to 340 and is regarded as the most famous of writers on Chinese alchemy. He is supposed to have written several hundred books but his known work is the *Pao P'u Tzu nei p'ien,* usually referred to as the *Pao P'u Tzu,* though this was, in fact, a pseudonym he adopted and can be translated as 'The Master who preserves his pristine simplicity,' which has also been rendered as 'Old Sobersides.' The work is in two parts, the *nei p'ien,* comprising some twenty scrolls, and the *wei p'ien,* some fifty. He says: 'My *nei p'ien,* telling of gods, genii, prescriptions and medicines, ghosts and marvels, transformations, maintenance of life, extension of years, exorcising evils and banishing misfortune, belongs to the Taoist school. My *wei p'ien,* giving an account of success and failure in human affairs and of good and evil in public affairs, belongs to the Confucian school.'[1]

It was Ko Hung who was responsible for the delightful definitions of classical Taoism and Confucianism. He was asked: 'Of Confucianism and Taoism, which is the more difficult?' He replied: 'Confucianism is difficulty in the midst of facility; Taoism

is facility in the midst of difficulties; in it all annoyances are lifted with an inner harmony that grows of itself; perfect freedom of action and thought; no fear, no grief.' Taoists 'reject specialization in worldly matters, wash away all trickeries, forget wealth and neglect honours, block repression and encourage free expression, are not concerned about the loss of anything, do not glory in success and are not saddened by denigration and take no delight in praise.'

Ko Hung regarded the existing scrolls for medicines as incomplete, confused and often lacking in treatment for many critical illnesses. He said that they employed expensive ingredients only available to the rich, whereas his scrolls would be found to mention all the medicines and give full treatment for all serious illnesses: 'Any household possessing this book can dispense with the services of a physician. Further, it is not always possible to find a physician at a moment's notice and when you do find one he may not wish to come immediately.' (This strangely modern passage was written nearly 2000 years ago!)

Chinese alchemy, being more concerned with longevity and immortality than with the making of gold, was naturally involved with finding the Elixir of Immortality and with prescriptions for prolonging life. When challenged that he was attempting the impossible in trying to overcome mortality in this life, Ko Hung replied that although the deaf could not hear thunder or appreciate music, and the sun and the splendour of the Emperor's robes were invisible to the blind, it did not mean that these things did not exist. His recipe for long life was the use of appropriate medicines, breathing exercises and philosophical thought. Alchemy, like all esoteric lore, had to be learned from an adept and Ko Hung's master, Cheng Yin, at over eighty, had black hair, a 'full cheerful face' and could draw a strong cross-bow and shoot a hundred paces; he walked hundreds of miles and could drink two demijohns of wine without becoming drunk; he climbed mountains with agility and crossed precipitous places and dangerous heights which daunted younger men. He ate and drank the same things as anyone else, but could go for unlimited days without food and without feeling hunger.

In his writings Ko Hung maintained that alchemical change was only one facet of the universal transformations in Nature. 'It is clear, therefore, that transformation is something spontaneous in Nature. Why then should we demur at the possibility of

making gold and silver from other things? Look at the fire obtained from heaven with the burning-mirror, and the water got at night [dew] from the moon-mirror; are they different from ordinary fire and water? … I guarantee that mercury can vapourise and that gold and silver can be sought successfully … the Manuals of the Immortals tell us … that it is in the nature of gold and silver that one can make them.' In his time there were treatises which contained recipes and formulae for 'melting jade,' 'transforming gold' and making 'talisman water.' But these obscure and probably esoteric terms notwithstanding, Professor Needham, the great authority on the development of Chinese science, says that Ko Hung's *Pao P'u Tzu* 'contains some scientific thinking at what appears to be a high level.'

Ko Hung disapproved of the recluse-alchemists seeking their own immortality to the neglect of their dependents, as so many did: 'To turn one's back upon wife and children and make one's abode in the mountains and marshes, uncaringly to reject basic human usage … is hardly to be encouraged. If by some good fortune they can become immortal and still go on living at home, why should they seek to mount specially to the heavens?' Once the preparation of the divine Elixir has been achieved successfully 'you and your whole household, not just you alone, will become immortals.' He also says that this state of immortality cannot be attained without good deeds, loyalty, friendliness and trustworthiness.

This condition of immorality was known as that of the *hsien,* the genie or immortal, and the alchemist aimed at achieving *hsien*-hood, of which there were several grades, as will be seen later. Strangely, Ko Hung's death was said to be consistent with the lowest grade, the *shih chieh hsien,* the 'corpse free,' one whose corpse disappears, leaving only the clothes or some identifying object behind. At his death he was encoffined but later it was found that his body had disappeared, only his clothes remaining.

While Ko Hung, Wei Po-yang and other early alchemists can be traced in historical records, many of the early names and the stages of alchemy are found only in legend, for which the Chinese have the delightful phrase 'wild history.' The most important of these legendary characters is undoubtedly the Yellow Emperor, Huang Ti, who traditionally reigned from about 2704 to 2595 BC. He was regarded as the first and greatest of Taoist immortals and alchemists and was said to have learned,

not only from his Three Immortal Maids, but also from an Immortal who lived on a mountain, who, after considerable persuasion, instructed the Emperor in the understanding of the Tao, of sciences, meditation and medicines. Huang Ti was reputed to have written the Inner Classics. He became an Immortal, or *hsien,* himself and after reigning for over a hundred years he ascended to heaven on the back of a dragon, taking with him some seventy members of his domestic household and court, in full view of the populace. Others of his retainers, anxious to go heavenward with him, hung on to the whiskers of the dragon, but they gave way and the hangers-on, together with the Emperor's bow, fell to the ground. The people gazed at the Emperor and dragon until they disappeared into the heavens. The fallen bow was collected and venerated. Although there was a tomb and a shrine built for the Yellow Emperor it was said that it was later found to be devoid of a corpse and contained only a sword and shoes.

Chang Tao-ling founder of the popular Taoism and the first Taoist pope

Another legendary character was the Emperor YÜ the Great, traditionally known as 'the happy miner.' He was a smelter who 'pierced the mountains' and 'made the earth healthy.' He knew the difference between male and female metals and employed the *yin-yang* principles in all his work, dividing his cauldrons into *yin* and *yang.* There were nine of these, four *yin* and five *yang.* Here it is of interest to note the early appearance of the *yin-yang* doctrine, the importance of the number nine, which runs through all alchemy and Chinese lore, and the division of the number into even (*yin*) and odd (*yang*) numbers. As we shall see, the *yin-*

yang symbolism is employed right through Chinese alchemy as the two powers of mercury and sulphur, the lunar and solar.

The legendary accounts of the origins of alchemy are not confined to the Chinese 'wild history;' in the West there is the story that fallen angels were responsible for teaching the science of alchemy to the women they married on earth. Another tradition claims that alchemy owed its inception to Hermes, the Egyptian Thoth, God of Wisdom, or that Isis won the secret from an angel in return for sexual favours, and handed it to her son Horus. Yet another legend is that God revealed the secrets of alchemy to Moses and Aaron, both master magicians.

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ALCHEMY EAST AND WEST

Chinese alchemy, while often running parallel with that of the West, and showing considerable similarity with Indian beliefs, for example the idea of a drug which could prolong life, the Elixir of Immortality, which appears in India a thousand years before Christ, holds no definite proof of common origins, but much of exchange of thought. The same argument rages over the beginnings of alchemy as over symbolism: whether such ideas and symbols 'migrated' from one country to another in trading and cultural contacts, or arose spontaneously in different civilizations and widely separated parts of the world.

In view of the universal similarities in the content and types of dreams and in the workings of the subconscious mind, as demonstrated by Jung's work, it is reasonable to suppose that in waking life the same types and ideas also rise spontaneously in the human mind. In mythology, religion, symbolism, fairy tale and folklore and such early sciences as alchemy and astrology, while the local colouring of dreams and thoughts is naturally different, the basic contents, symbolism and psychological implications appear to be universal; but while there are similarities, there are also differences in East and West. The answer to the question of migration versus spontaneous growth lies probably in a degree of both. Military conquests, trade and cultural exchanges obviously spread ideas and knowledge, while, on the other hand, it is only natural that people the world over should have asked the same questions about their environment, the cosmos in which they lived and their relationship with it.

There seems to have been a considerable exchange of knowledge between China and India; it is known that alchemical practices were prevalent in both countries well before the Christian era and there was definite evidence of exchange when a Chinese Emperor of the T'ang dynasty sent an envoy, Wang Hsüan-ts'e, to India between AD 643 and 665; there are

indications that he made two visits during this time. He was a specialist in prolonging life – that is to say, an alchemist – and a noted magician. He brought back with him an Indian Brahmin, Narayamasvamin, who was an alchemist and physician, while another Indian magician came over from Kashmir in 664–5 on the orders of the Emperor Kao Tsung: this magician was thought to have possessed the drug of longevity. Waley maintains that there is no doubt that 'a definite give and take went on between China and India during the T'ang dynasty,' but that Chinese techniques were already well developed long before any known contact with India.

Other branches of early alchemy were established in Babylonia and Chaldea; the Persians were skilled in magic, alchemy and medicine, while from Egypt came the great Hermetic tradition which passed to Greece, Greek culture being spread widely later by the conquests of Alexander the Great. Arabian alchemy also rose from the Alexandrian School in Egypt but was, at the same time, in touch with Chinese thought. From Greek and Arabic culture alchemy spread into Europe, but showed a direct inheritance from Hermes/Thoth. Arabic and Byzantine alchemy were, like the ancient Hellenic practices, a mixture of magic, astrology and mysticism touched with the tradition of Hermes Trismegistus.

Some authorities have maintained that all alchemy came from China originally and spread westward later; others believe that it arose in Egypt. Babylon has also been suggested as the source, while others again, as has been said, have propounded the theory that the same ideas and concepts arose spontaneously and existed simultaneously in different countries. However, the idea most basic to Chinese alchemy, the Elixir of Life, did not appear in the West until the twelfth century AD, when it was introduced there from China by the Arabs.

Similarities between eastern and western alchemy are seen in the concept of polarity and the universal symbolic reverence for gold as the great solar power, with its counterpart in the lunar silver. The Sol and Luna theme, presented in various guises, runs through all alchemy: Fludd, for instance, expressed this polarity as the Sun, the father, the heart, the right eye, with the left eye as the Moon, the mother, the womb, as well as the basic duality of sulphur and quicksilver. All branches of alchemy reverenced the Earth, the Great Mother, in whose womb were nourished the metals and from which they were born.

The essential difference between Chinese alchemy and that of the West was that while the latter was always associated with gold, whether in the transmutation of base metals into gold or the transformation of the base metal of unregenerate man into the pure gold of the spiritual life and realization, Chinese alchemy was primarily concerned with the finding of the Elixir of Immortality – again, either at the lower level of prolonging physical life for its own sake, or for finding personal immortality, or, on the spiritual side, prolonging life in this world in order to gain more time to spiritualise the soul or to gain immortality as the enlightened being, the 'True Man' at one with the Tao.

The Chinese approach was through the fundamental doctrine of *yin* and *yang;* the influence of, and dependence on, the *I Ching,* the Book of Changes; and the teaching of the Five Elements School of thought, the whole outlook being more on a mental-spiritual level, even in its lower branches, than the gold-seeking slant of western alchemy. Materialism came later as a decadent growth in Chinese alchemy at certain periods; but, as Waley says, the work with metals and elixirs had practically ceased by AD 1000 and given place to the mystical path, which still used alchemical phraseology and symbolism. Of this stage he says that: 'Whereas in reading the works of western alchemists one constantly suspects that the quest with which they are concerned is a purely spiritual one; that they are using romantic phraseology of alchemy merely to poeticise religious experience, in China there is no such disguise. Alchemy becomes there openly and avowedly what it almost seems to be in the works of Böehme or Thomas Vaughan.' Chinese alchemy, with its emphasis on longevity and immortality, is much easier to account for than that of the West. Serious western scholars and alchemists often had to cover their spiritual quest with the trappings of the laboratory and the search for material gold for fear of persecution as heretics; but the Chinese searcher after the Tao could reasonably study and follow experiments in which he 'spiritualised' himself: he did not need to make concessions to the material gold cult. A further difference between East and West lay in the theistic attitudes adopted in the Work. The western alchemist, if he were involved in the esoteric, spiritual branch of the Work, invoked the God of monotheism. His eastern counterpart in classical Taoism was non-theistic, living in accord with and working for Nature and the impersonal Tao and calling on no god; but the 'bellows blowers,' as the exoteric,

personal seekers were called, invoked a host of gods, spiritual beings and powers and were closely involved with spirits and demons, repelling the latter and depending on the aid of benevolent spirits.

There is no doubt at all that alchemy operated in two distinct branches existing side by side: the physical and the metaphysical. The true alchemy was the realm of the mystic, its aim being the transmutation of base man into perfection; but at the same time there existed the materialistically motivated gold seekers together with the seriously scientifically-minded knowledge seekers and experimentalists, of whom Paracelsus said: 'They do not give themselves up to ease and idleness … but they devote themselves diligently to their labours, sweating whole nights over fiery furnaces. These do not kill time with empty talk, but find delight in their laboratory.'[1]

Chinese alchemy, embedded in Taoism, was probably mystical in character before it became a science or art; it was sacred before it became profane, so that in a sense the scientific-chemical aspect was a decadent stage. The two branches could have little in the way of contact or mutual understanding, since the esoteric, mystical side could engender no desires, for these do not exist in the Tao; the reverse was true of the gold, or elixir, or longevity seekers. Ko Hung, in the *Pao P'u Tzu,* wrote that the adept in Taoism regards 'a peerage as an execution cauldron, a seal of office as a mourning dress, gold and jade as dirt, a splendid hall as a prison. How different from those pseudo-alchemists who, clenching their fists, mouth empty phrases and wait for good luck, or who lead a leisurely life in a gorgeous room, endowed with countless grants, appointed to high office, and still are discontented with their power and wealth!'

The Chinese made a crucial distinction between external, inorganic, laboratory alchemy and the internal, philosophical side; the former was concerned with the Elixir, or Pill, of Immortality, with ingredients and recipes using minerals or plants, a work which incidentally gave rise to the experimental, metallurgic, chemical and material aspects; the latter, which operated within the adept's own body and soul, was concerned with the psychological and spiritual side, with immortality and the spiritual transformation into the True Man. The one was the exoteric 'outer elixir,' in Chinese the *wei tan*; the other the 'inner elixir,' the esoteric *nei tan*; the one was material, the other

as Liu An of the Han dynasty, to humble beggars; from high officials to peasants; but the manner of their departure followed the same patterns. Sometimes the 'death' was followed by an amazing revivification such as happened when a *hsien* had been deliberately killed by some ill-disposed person; but more usual was the spectacular ride heavenwards, for example, as already quoted, Li Po departing on a whale. He, no doubt in consonance with his gamin sense of humour, would choose so incongruous a mount to go heavenwards! Lao Tzu himself travelled to the West; one account says he was borne away on a yellow buffalo, another that he disappeared into the heavens in a chariot drawn by a black ox. Ma Shih Huang, who was a horse doctor in the Yellow Emperor's reign and who also treated an ailing dragon, was later taken up to heaven by the dragon. Lü Shang, after living 2000 years, was placed in his coffin by a son, but when the son set about performing the funeral rites the coffin was found to be empty except for a jade seal and six bamboo manuscript tablets.

The beautiful girl Kou-i Fu-jen, who became the mother of the Emperor Chao Ti, was a *hsien.* She was murdered but her body did not grow cold in death and emitted a wonderful fragrance. Later, her coffin was found to contain nothing but a silk slipper. Yü Tzu, on the other hand, never died; he climbed a mountain and was seen to take off heavenwards in broad daylight.

The powers exercised by the *hsien* are fully illustrated in the story of the Eight Immortals who visited the Prince Liu An, a noted patron of alchemists. They were refused admittance by the Prince's gatekeeper when they appeared as old men, so they immediately changed into boys of fifteen with black hair and peach-blossom cheeks; this so frightened the gatekeeper that he ran to Liu An who in turn hastened to greet his visitors without even pausing to put on his shoes. He conducted the Immortals indoors and established them on furnishings of silk, gold and jade and burned incense of 'a hundred ingredients harmoniously compounded.' The *hsien* then changed back into old men and the Prince took up the position of a disciple, facing North, with hands raised in salutation.

Introducing themselves the *hsien* said:

> One of us can cause wind and rain by sitting down, can raise clouds and fog by standing up, can make rivers and lakes by drawing lines on the ground and can create mountains by piling up sand.

One of us can crumble heights and fill up deeps, can control the tiger and leopard, and can catch the dragon and the snake and can master gods and ghosts and make them serve him.

One of us can separate his form and change his appearance, can cause life by sitting down and death by standing up, can cover a complete army from sight and can turn broad daylight into darkness.

One of us can ride in space and walk on emptiness, can go into the sea and the deep, can go in and out through any partitions and can breathe a breath of one thousand miles.

One of us can go into the fire without being scorched, into water without getting wet, can be stabbed without being hurt, can be aimed at but never hit by an arrow and is not cold in freezing water and does not sweat in summer.

One of us can perform thousands of changes at will, can bring forth birds and animals, weeds and woods, in a moment, and can move mountains, heights and rivers.

One of us can prevent havoc, reclaim from dangers, dispel evils, do away with harmful things and can cause longevity.

One of us can boil mud to get gold, assay lead to get silver, can fuse the eight minerals of the alchemist into a liquid form from which pearls flow and can ride the dragon and harness the clouds to travel afloat in the Great Clearness.

They then offered gifts to Liu An who made obeisance and served wines and fruit to them with his own hands. The abilities of the *hsien* were tested and confirmed and the Prince was given the Book of Medicines. The elixir was made up, but Liu An did not take it until later, when a jealous courtier informed falsely against him. The courtier persuaded the Emperor that Liu An had plotted against him and the Emperor, believing the informer, sent to bring the Prince to justice. The eight *hsien* then said: ‘You must go now, this is a heaven-sent message for you to depart.’They all went together to the mountain, Liu An took the medicine and they all made a ceremonial offering, burying gold in the earth; then all rose heavenwards in broad daylight. Liu An’s dog and the chickens in the courtyard picked up some of the pills and were immediately transported to heaven with him.

A different version of Liu An’ s end is that, when the Emperor ordered him to commit suicide, he simply disappeared, ascending to heaven complete with his family and all his domestic animals, who had all taken the elixir. The same happened with Huai-nan Tzu, who wrote a treatise on alchemy

Chuang Tzu to a utilitarian and popular religion, having in it the seeds of Chinese alchemy.

Chinese religion and philosophy did not have the otherworldly outlook of the Mesopotamian-Mediterranean beliefs, since in Chinese thought spirit and matter were not sharply divided; both were held to operate together in the world of Nature, so when the body had been sufficiently purified and etherealised it could continue to exist in this world, or in the heavens, or both. Thus, having reached this state, some of the Immortals ascended to heaven while others chose to remain on earth. In the Mesopotamian-Mediterranean religions this conquest of death took the form of the perennial theme in mythology of the cult of the Dying God who dies only to come to life again; such are Osiris, Dionysos, Attis, Odin and all the messiahs and culture heroes.

In the *Pao P'u Tzu,* Ko Hung argues the case for immortality from observations of metempsychosis: 'Creatures which fly and run, and creatures which crawl, all derive a fixed form from the Foundation of Change. Yet suddenly they may change the old body and become totally different things. Of those changes there are so many thousands and tens of thousands that one could never come to the end of detailing them.' In his autobiography he also argues that:

> The shallow-minded ... merely say that because they see no genii in their world it is not possible that such things exist But what is so special about what our eyes have seen? Why should there be any limit to the numbers of marvellous things that exist between sky and earth, within the vastness of the Unbounded? All our lives we have a sky over our heads but never know what is above it; to the end of our days we walk the earth without ever seeing what is below it. Our bodies are our very own, but we never come to understand how our hearts and wills become what they are. An allotment of life is ours, but we never understand how its actual measure is achieved; and this is even more true in the case of the more abstruse patterns governing gods and genii ... isn't it a sad spectacle to see people relying upon the surface perceptions of eyes and ears in judging the existence of the subtle and the marvellous?

The famous Eight Immortals or Genii, the most celebrated of all the *hsien*, seem to be a later form of the Eight Worthies of the Early Han dynasty, since they do not appear until the thirteenth century, though most of its members are associated with the T'ang dynasty. They are immensely popular figures in Chinese art, being portrayed in every medium: painting, embroidery,

scrolls, fans, jade and wood carvings, on vases and all ceramics. They represent a complete cross-section of the people, as has been said, male and female, rich and poor, old and young, military and scholarly, noble and peasant and they also cover a wide historical range, though only three of them can be identified as historical figures; the others are the stuff of legend and fable, ‘wild history;’ but all are subjects of a huge volume of romance, legend and popular veneration. They are said to be ‘the embodiment of the ideas of perfect but imaginary happiness which possess the minds of the Chinese people.’

Candelabrum with stylised Longevity and Happiness characters.

There are also traditions and records going back to the third century BC of Emperors sending expeditions to search for the Palace of the Immortals, which was believed to be situated in the mountains of northern Tibet. The dwellers in this region lived in both worlds at once, the natural and the spiritual. Here we have an echo of the theme of Shangri-la. Ssu-ma Ch'ien, the great historian (163–85 BC) wrote of these Mountains of the Immortals as being the Land of the Blessed where the elixir is found and where all things are white and the palaces are gold and silver.

While the *hsien* could live either in the earthly or celestial realm, the real goal of the alchemist was to reach the Isles of the Immortals, the Fairy Isles where the herb of immortality grew. These floating isles – five originally – were reputed to be situated a great way off in the Po Sea, to the East of China. One of the

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THE ELIXIR

The Elixir, the Golden Pill or the Pill of Immortality was for the East what the Philosophers' Stone was for western alchemy; both are ill-defined but were basically a substance of which a small portion could transform a much larger quantity of base metals into gold, or could confer immortality. Both had the property of transforming one thing into another, both could cure diseases and restore youth; the same phraseology is used to describe either. Many a Taoist account tells of the restoration of youthfulness, or grey hair turning black, and of a man of a hundred years old looking as if he were in the prime of his life. In the West, Solomon Trismosin said that by taking a grain of the stone his wrinkled skin became smooth and white, his cheeks rosy, his grey hair black and his bowed back erect. He also said he restored youthfulness to ninety-year-old ladies and that the stone was a universal panacea.

All sorts of extravagant claims were made for the transmuting powers of the elixir and the stone. Ma Hsiang, a *hsien,* always paid for his wine by turning all the iron vessels in the wine shop into gold. Albertus Magnus was reported to have brought to life a bronze statue made by Thomas Aquinas, who made use of it as a servant; unfortunately, it was somewhat talkative and noisy and had to be kept in order with a hammer.

There is, however, a sharp division between the aims of the exoteric 'bellows blower' or 'charcoal burner' and the esoteric searcher for wisdom and enlightenment, and the elixir itself was named in various categories as exoteric or esoteric: the 'inner elixir,' the *nei tan,* of meditation and spiritual practices developed the qualities of the soul and was the esoteric aspect; the 'outer elixir,' the *wei tan,* of taking medicines, herbs and the pill of immortality was the exoteric side intended to bring about physical regeneration. There were also the *hsien tan* of the Immortals and the divine elixir, *shen tan.*

travel great distances; stepping over fire, he is not scorched; dropped into water, he does not get wet. He is able to appear and disappear at will. He will be happy for ever.'

Careful preparation is necessary before attempting the work of making the elixir. In the first place, both eastern and western alchemy depended on astrology in calculating the propitious times and seasons for experiments and for compounding medicines and the elixir. Then the alchemical work required abstinence from certain foods, notably cereals and meat, for one hundred days, and a ritual purification which involved the use of perfumes in washing the body and hair. The preparations should be carried out in an uninhabited place, usually a sacred mountain. This need for solitude in the work is insisted on universally; it was a *sine qua non* for success. In China it was the retreat to the mountain; in India to the forest 'far away from all unclean presence;' in Babylon the alchemist had to work alone, 'a stranger shall not enter,' while in the West the same applied to the alchemist in his laboratory. Ko Hung attributed the failure of the earlier alchemists, employed by the Emperor Wu, in making gold and finding the elixir to the fact that they attempted the work in the palace and at court instead of the solitary retreat in the mountains.

It is necessary to pay reverence to, and invoke, the proper divinities and powers; to have faith and to be blest by being born under the right stars. These ritual preparations, and the condition that only initiates or disciples are present during the work, are evident in all branches of alchemy. 'Common people or anything that soils' must be avoided and no disbelievers may be told of the plans, for, if they blaspheme the divine medicine, the preparation will not be successful. It is also necessary to avoid any possibility of the evil eye. 'Even a doctor … will avoid being seen by fowls, dogs, children or women … lest his remedies lose their efficacy.'This last, however, is at variance with the vital help given by wives who had the necessary knowledge or 'fate' in cases where the man was unsuccessful in his experiments. The Yellow Emperor, for instance, was dependent on his Immortal maids and much of the work needed the help of the yin female balance; in the West this was given by the 'sister' in the work.

For the 'inner alchemy,' the esoteric side, to quote from the *Ts'an T'ung Ch'i,* 'Attention should be turned to the well-being of the inner self so as to attain the state of perfect calmness and freedom from matter. The primordial substance, shining forth

unseen, will illuminate the insides of the body … Cessation of thought is desirable and worries are preposterous.' The concluding chapter of the work makes it clear that immortality in its true sense, not mere longevity, is to be achieved, for even a small quantity of the elixir is enough to 'confer tranquillity on the *hun p'o* [soul], give it immortality and enable it to live with the immortals.'

Chinese alchemy is full of accounts of the Pill of Immortality, which is one of its chief distinctions from the western branch with its emphasis on gold. The pill or elixir has, though, close associations with the Persian *haoma* and Indian *soma* in that they, like the elixir, also cured diseases as well as conferring immortality. According to the *Rig Veda,* to drink *soma* was to become immortal. There is also a connection with the sacred mushroom, the *peyotl* of the Mexicans. The cult of all these substances was based on the belief that it was possible to achieve immortality, either by the concoction of a drug, whether from mineral, plant or animal sources, which could both rejuvenate and preserve the physical body, which became so refined that it developed the qualities of the *hsien;* or, alternatively, to reach the same results by yogic techniques in breathing exercises, diet, sex and meditation. This gave two ways of attaining immortality suitable for different temperaments.

In preparing the elixir there are instructions as to the control of the heat, always an important point in eastern and western alchemy:

> The flame at the start should be weak as to be controllable and should be made strong at the end. Close attention and careful watch should be given so as to regulate properly the heat or cold. There are twelve divisions to the cycle. On completion of the cycle a closer watch should be accorded. As the breath expires, life is ended. Death expels the spirit. The colour changes to a purple. Behold! Returned medicine *[huan tan]* is obtained. This is then made into pills. These are extremely efficacious, although their individual size is so small that they occupy only the point of a knife or the edge of a spatula.

If the compounding of the elixir is not properly carried out 'law and order will be upset' and failure is inevitable, 'for this is just as absurd as attempting to repair a cauldron with glue, or to get rid of cold with ice, or as reports of flying tortoises or dancing snakes.'

On the esoteric level this control of the heat symbolises the need for a slow pace, within the capacities of the pupil, at the

beginning of the work; it warns the alchemist not to try and run before learning to walk.

The ‘Returned Medicine’ or ‘Reverted Elixir,’ the most prized and efficacious of all, is the ‘nine-times cycled elixir.’ This was placed in a reaction vessel and exposed to the sun after the summer solstice. When the container became hot a pound of cinnabar was put under the lid and ‘even while you are watching, with the full power of the sun shining upon it, the whole content will suddenly glow and sparkle with all the colours of divine light. It will immediately turn into reverted elixir.’ After taking a spoonful of this you will unquestionably rise straight up to heaven in broad daylight.

In the refining process the highly significant number nine is constantly employed. There was the Divine Nine Turn Method: putting the cinnabar through nine different processes in order to refine it to the highest quality. It was ‘nine times subjected to the fire at nine regular intervals of time.’ This nine-times cleansing also appears in western alchemy. The essential method in Chinese alchemy appears to have been repeated conversion from a solid state to a vapour, by heat in a sealed vessel, then allowing solidification again, this process being cyclic or a ‘turn.’

In the process of obtaining the elixir there are the stages of ‘red and white,’ familiar to both East and West. ‘You must wash it until it becomes white and beat it until it becomes red, then you will have an elixir which will endow you with ten thousand years of longevity.’ This symbolism appears universally in alchemy and is bound up with the idea of the alchemist as midwife assisting the birth of the ore from the womb of the Earth Mother. This is the white of water and the red of blood in the birth. Also the white flower is silver, the feminine; the red flower gold, the masculine; both are contained in the elixir and in the philosophers’ egg and grew out of it as a symbol of creation. In the West the white rose, or lily, is the Queen, the red rose is the King. The white, as water, and the red as fire are the two great powers of creation and destruction in the world. In Arabic alchemy Senior said that in purifying the mind every black thing is made white and every white thing red, ‘for water whitens and fire gives light.’

On the exoteric plane there was much in common between the elixir and the magic potions or powers of fairy tales, such as the magic table, already referred to, which appeared when summoned to provide food and drink and, in alchemy, cups of

jade and plates of gold; also the power of seeing events hundreds of miles distant, being immune from all natural forces and of being served by the fairy world. There were alchemical recipes for potions or ointments which made it possible to perform all these wonders. These were also the *siddhi* powers of the yogins in all eastern religions. On both the exoteric and esoteric levels the elixir was recognised as a time-controlling substance. Ko Hung says on this: 'once one's immortality has been assured one is never again concerned about the fleeting of time.'

Sun Ssu-mo, who had made a study of alchemy, wrote: 'The formulae I have studied are by no means few. On the whole they are obscure and enigmatic. Those who dip into them become increasingly bemused, and amateurs only more addled … that is surely not because the ancients have spoken deceiving words. It must be that students of the Way themselves have been unable to reach the essential meanings.' For these 'essential meanings' one might quote Titus Burckhardt in saying that the elixir 'unites in itself all the powers of the soul and thus acts as a transmuting "ferment" on the psychic world, and, in an indirect fashion, on the outward world also.'

The elixir is, at any level, the passing from death to life.

superb ceramic glazing techniques. The value of drinking certain medicinal waters was known as a cure for rheumatism and other ailments, pills were used to activate the kidneys, and there were powders which benefitted the circulation. The nutritional properties of the soya bean, as protein, now a popular item of diet in the West, were known from ancient times in China. Acupuncture, laughed out of court some years ago, is now seriously studied and practiced. One might add that gunpowder was also discovered, though it was not used for aggression or destruction but for entertainment and fireworks.

With the herbal lore of the Taoist-alchemist naturally went the practice of healing and it followed that many of the *hsien* were practising doctors. Such a one was Hua T'o, of the Later Han dynasty, who was known to have discovered and used anaesthetics. He had a 'hemp-bubble-powder,' mixed with wine, which first made the patient intoxicated then unconscious. He also had a 'marvellous ointment' which caused surgical wounds to heal in four to five days. He was apparently a skilled surgeon, removing 'morbid growths and contaminating matter which caused infection.' He was reputed to have met two ancient Sages in a cave in the mountains and humbly besought them to impart their lore to him. This they did on condition that he 'took no account of the vicissitudes of fortune and was indifferent to poverty and wealth alike, high rank, or humble station, if moneymaking were not his aim and if his urgent desire were to bring comfort to old age and sympathy to the young.' They left him a huge volume of lore and disappeared, the cave became enveloped in swirling mists and the mountain collapsed. It was said of Huo T'o that when he was a hundred years old he had the complexion of a man in the prime of life. There is evidence that heart transplants were carried out: Ko Hung states that he had seen doctors graft on a severed finger and that trepanning took place, the cranium being opened 'to re-arrange the brain;' he said he had seen this done.

The most astounding of all, however, was the discovery in 1972 of the preservation of a corpse, for some two thousand years, by methods not known to modern science. To quote Professor Needham's account:

> An unprecedented finding showed that the ancient Taoists knew how to achieve an almost perpetual conservation. A large tomb excavated by Ma-wang Tai, near Ch'angsha, proved to be that of a Lady of Tai, apparently the wife of the First Lord of that ilk … enfeoffed in –193. She

would have died about –186 and the painted outer coffins were filled with a great variety of rich and beautiful objects, then sealed tightly with layers of charcoal and a kind of sticky white clay. So far nothing unique, but when the body was finally uncovered it was found to be like that of a person who had died only a week or two before. The elasticity of the subcutaneous tissues was conserved in an extraordinary way, for when the skin was pressed it at once returned to the normal when the pressure was released. Similarly, preservative solutions when injected raised swellings which after a short time subsided. The body was partly immersed in a brown aqueous liquid, which contained mercuric sulphide, the atmosphere in the coffin was largely methane under some pressure, the temperature had been constant at about 13°C and the coffin complex had been airtight and watertight.

Other experts suggest that the Lady might have been a consort of the Emperor Wu, who took an intense interest in alchemy. Chinese scientists, X-raying the body later, came to the conclusion that she had died of a heart attack, but also had tuberculosis, gallstones and rheumatism. Also in the tomb were some herbal medicines such as are used in cases of heart disease today.

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MINERALS AND PLANTS

The elixir and medicines were made from either vegetable, mineral or animal elements, but mostly from the first two; there were also recipes that combined these ingredients. Herbal medicines and drugs play a more important part in Chinese alchemy than in the western branches. Plant-produced drugs were supposed to give quick but more transient results, while those from minerals were slower but surer. 'Refined pine, cypress and thistles can be taken but they are inferior to the great medicines [gold and cinnabar] and last only ten years or less,' Ko Hung maintained. It was argued that gold and jade were better ingredients than herbs since herbs decayed when buried, softened when cooked and turned to ashes when burned; if they could not maintain themselves, it was argued, how could they give lasting life to others? But although authorities like Ko Hung assert that metals produce better results in this world, it must be remembered that the Immortals on the Isle of P'eng lai used herbs, since the herbs of immortality grew there and it was to obtain these that the various expeditions were mounted.

Amongst plants, the pine and peach are the most frequently mentioned. Pine needles, roots and resin were considered highly efficacious. One lady *hsien* lived entirely on a diet of pine needles and dew. The peach, like the Tree of Life in the Western Paradise, is a fairy fruit, one bite of which automatically confers immortality. There was also the unidentified plant called *chih,* the most desirable of all; it is referred to as 'the divine herb,' the 'plant of immortality.' It grew in the Isles of the Immortals but could also be found by mortals 'in steep and dangerous places, and on high mountains and in deep valleys.'

One of the most famous pills of longevity was the Fo-ti Ting, which was said to contain kolo nuts, meadowsweet and *hydrocotya asiatica minor.* This was the medicine which the herbalist Li-chung claimed as the source of his longevity – and

he should know, having lived 256 years and outlived twenty-three wives. He is an historical person and his authenticated dates were 1677–1933. He was said to look like a man in the prime of life and could outstrip young men in walking. He practised Taoist yoga and advocated 'inner quiet' as the chief means of attaining a long life.

The mushroom, the 'magic fungus,' the *ling-chih,* is the most important of plants and pre-eminent for its rejuvenating qualities. It is frequently referred to, which is not surprising in view of the known psychedelic and hallucinogenic properties of some fungi. These fungi were widely used in Chinese art, together with the crane and butterfly, as symbols of longevity and immortality.

Asparagus appears to impart considerable powers; it will 'strengthen people and cause them to walk twice as fast as would thistle or knot-grass if taken for one hundred days.' These powers became positively miraculous in the case of one man, Tzu-wei, who took asparagus 'with the result that he had eighty concubines, sired a hundred and thirty sons, and walked three hundred miles a day.' Knot-grass, also called hare-bamboo, is a restorative, but it is difficult to obtain sufficient quantities of the flowers, and 'to derive great benefit from taking it requires at least ten years.' Thistle 'makes men sleek and good carriers,' but it is not as easy to take as knotgrass, though in time of famine 'it can be given to young and old in place of grain; those not knowing the difference think it is dried meat made of rice.' There were also cassia or cinnamon and a sort of root like ginger, while sesame 'prevents senility and repairs the ravages of old age.' Pine has already been mentioned for its needles, roots and resin; but the resin is of particular importance in a diet in order to 'render the body light and prevent the onset of old age.' The durability of the pine as well as its believed preservative properties made it a symbol of immortality; all evergreens have the same symbolism, giving them value as the wood for making coffins and accounting for their presence in cemeteries. In addition to this there are 'more than three hundred uses' for the pine.

There were also strange and obscure plants and animals and birds mentioned, some of which appeared to be able to change places, for example, one unidentified plant which grew on a sacred mountain by the sea, or on an island, could assume the shape of a luminous animal with head, four limbs and a tail; this,

used in the right manner, would enable the consumer to live one thousand years, occasionally for ten thousand.

Nor is it merely longevity that could be conferred by these plants or creatures; they could also impart the *hsien* qualities. The sap of juniper, if spread on the soles of the feet, enables one to walk on water, or if smeared on the nose gives the ability to stay under water without drowning; it also makes the body invisible if painted on the skin, while wiping it off restores visibility. It is a universal panacea against disease, either internal or external.

Naturally, in accordance with Taoist principles of harmlessness, animals were not supposed to be used in compounding medicines, only their by-products such as dung or urine. One of the famous early physicians and researchers was T'ao Hung Ching, who had a pupil who became a *hsien* before his master. T'ao Hung Ching then enquired the reason and was told that he had been advocating and writing on experiments which used animals and so caused harm to them. He revised his work and only used herbs thereafter and became an immortal.

While herbs were used extensively, most alchemists, as has been seen, regarded metal-based drugs as more potent, on the grounds that plants were perishable while metals endured. This was particularly true of incorruptible gold, but there is some dispute as to whether any value was set on actual gold in Chinese alchemy. While gold and cinnabar are called the 'Great Medicines,' it is more likely that by 'gold' is meant the golden cinnabar, or artificially made gold. The query arises from the fact that the word *chin,* used for gold, can equally be translated as simply 'metal.' Gold was a latecomer to Chinese alchemy as it was scarce in China and only found in any quantity in early times in the one district of Kiangsi. Most of it had to be imported from remote places such as Siberia, where it was exchanged for silk. The Chinese native precious substances were originally cinnabar and jade. It is probable that much of the symbolism, ritual and magic associated with gold was imported with it from its native sources. While all other metals had specific names, the term *chih* usually referred to copper or bronze, so it may be assumed that gold was of less importance; the fact that it is not mentioned in early Chinese classics or writings before the end of the fourth century BC would appear to confirm this. It was not until Han times that gold became distinguished as the 'yellow metal.' The word is used in the *I Ching* in hexagram 21, but here

it is the colour yellow that is important, rather than the metal, since yellow was symbolic of the Centre, the Earth, power and dignity, implying that man should be like gold in this respect.

Nor was gold used as a general currency, although it did appear in one of the proto-feudal states. It was its value as an imperishable substance, not its intrinsic worth, which gave it its place in alchemy, the argument being that it would impart its imperishability if taken internally as a medicine or elixir, or if fashioned into plates or drinking vessels, from which it would transmit its qualities. The same applied to cinnabar and jade. Gold and jade items were buried in imperial and aristocratic tombs and the corpse was sometimes completely encased in jade mosaics held together with gold thread. Jade was placed in every orifice of the body.

Gold was esteemed principally for its colour, an attitude not confined to China since for the Egyptian alchemist the real quest was for the golden colour which embodied the 'spirit,' so that to achieve the colour was sufficient in itself. Any goldcoloured metal contained that 'spirit,' which was also perfection; hence the Egyptian gods had bodies of that colour. In fact all metals were conceived of as having spiritual power, thus the solar yellowness of sulphur sublimates the earthly and purifies it, 'washing away its sins': a religious viewpoint echoed later by the Gnostics and Christians in the conflict between the powers of good and evil in the world. Egyptian wealth depended largely on gold-mining and the making of gold was the Royal Art, the secret being imparted to only the priests and royalty; it was, as in China, a sacred matter and not a question of producing wealth. Hermoupolis, the town of Hermes, was the 'town of the holy technique,' i.e., alchemy. Gold was also used ritually in India: 'By means of gold they cleanse themselves, for gold is life immortal.' Gold was called 'mineral light.' 'For gold is light and fire is light, gold is immortality and fire is immortality.' Gold, with silver, also had a cosmological significance as the colours of the Sun and Moon.

Chinese culture did not set store on wealth as money, while the Taoist scholar in particular regarded it as an encumbrance, 'fetters and hand-cuffs' in the words of Chuang Tzu; at best it is a necessary evil. The real wealth was scholarship and the scholar was always valued above the merchant money-maker who was, in fact, looked down on and occupied an inferior social status. The scholar adopted a sublime indifference to money, so

for the scholar-alchemist the use of gold was purely for an elixir or medicine. ‘As to the True Man, he makes gold because he wishes by its medicinal use to become an Immortal … one becomes an Immortal, the object is not to get rich,’ as Ko Hung wrote. The alchemist’s riches are ‘contentment and learning … the properly balanced man is beyond profit and loss.’ The Confucian school also showed contempt for material riches and adopted a highly anti-commercial attitude, regarding merchants as social parasites and calling them’ reprobated persons,’ subjecting them to restrictions and excluding them from official positions which were reserved for scholars. The only honourable vocations were the scholar and the farmer. The pursuit of gain was considered low and vulgar, and although officials obviously enriched themselves, such activities were not recognised and were swept under the carpet, just as the alchemical making of gold for riches took place but was not mentioned in alchemical works. The true science/art, however, was followed by intelligent men unlikely to be devoted to material wealth; to attain to the True Man was only possible for those of rare quality. So, for the scholar-alchemist the use of gold was purely as an elixir or medicine. ‘When men make gold they wish to take it in order to bring divinity or *hsien*-hood upon themselves, not riches.’[1]

was better to go to the trouble of making it instead of using real gold, Ko Hung replied: 'Gold created by transformation, being the very essence of a variety of ingredients is superior to natural gold.' 'The gold which is made by transmutation embodies the essences of many different chemical ingredients so that it is superior to natural gold.' Artificial gold was considered to have the added value of being obtained only in difficult conditions, needing 'seclusion in some famous mountain range, isolation from profane unbelievers and critics, religious ceremonies, purifying rites, abstention from pungent flavours and fish, to say nothing of fasting, long heating under exact conditions of temperature, needing taxing watch, and finally the indispensability of oral instructions from a genuine adept teacher.'[2] Artificial gold could be made so hard that nails could be made from it and there are various recipes and instructions as to the means of softening or hardening the metal, such as 'if too hard, heat it with lard, if too soft, with a mash of white plums.'

Silver was also sought and made artificially, but it was considered inferior to gold and jade as a medicine. 'To make silver put mercury in an iron vessel and insert three inch-square spoonsful of litharge. Fire to fusion. Pour into water and it will become silver at once,' according to Ko Hung, but he also adds that taking silver can only make you an earth *hsien*; it can be made edible in barley water or in vermilion grass wine, or in raspberry juice. Silver can also be taken when it is dissolved with large pearls from oysters; this, too, is inferior to potable gold, but the preparation of gold is not always possible since it requires the usual necessity of retirement to a mountain, fasting, avoiding certain conditions and so on: all this limits the number of those able to set about making gold. Another, and even more limiting, factor was the need for ample funds. Both eastern and western alchemists warned against attempting the work without sufficient reserves. Ko Hung emphasised this when he wrote:

> You may wish to mount to heaven by preparing gold or elixir, but you discover that the important ingredients all require so much money that you cannot afford them all. It is then necessary to go back to seek resources through farming, herding, business or trading for years and years, expending much effort. Only after that can the concocting be undertaken … Even then it is necessary to fast again and purify oneself: foregoing all human activities. To all these things must be added concentrated thought of the gods, preservation of unity, dispelling of evils and protecting one's own person.

Both gold and silver can be considerably debased and still look like the real metal, and various types are called ‘false’ and ‘true.’ The Greek alchemists called ‘gold’ all that glittered, even if it were only some veneer of gold-seeming metal, but their Chinese counterparts called this ‘artful deception’ (*cha*) and made their artificial gold and silver of the same substance all through. One of the side results of this exoteric alchemy in transmuting metals was the discovery of, and concern with, the making of alloys which were later used in making bronze for the superb objects in Chinese art, for both secular and religious use.

Alloys were capable of having the appearance of gold and silver without actually containing either of those metals; such alloys were bronze and brass, nickel, zinc and tin; there were also complex combinations of metals. There is evidence that zinc was used as far back as the second century BC and there are also accounts of ‘yellow and white metals’ which the Chinese introduced into other lands; these metals were not necessarily gold or silver but, from the records of their usage, may have been complicated alloys. Professor Needham writes of ‘the remarkable fact that 2 per cent of arsenic can confer upon copper a beautiful golden colour, while 4.6 per cent makes it shine and glow like silver.’ The Chinese had a ‘white copper’ which they exported to the West in the seventeenth century; it was used for fire grates, candlesticks and ornaments, did not tarnish and looked like silver. It was known as *pak tong* and is, in fact, now almost universally employed in modern coinage and electroplating. Professor Needham points out that the modern world owes this debt ‘to the alchemical adepts and technicians of ancient and medieval China who first studied and made use of nickel.’ It is also believed that the Chinese used aluminium.

Various methods and mixtures can produce endless variations in colour, from olive-green brass to brass looking like gold; copper can be anything from red-brown to silvery-white. ‘Tanyang copper’ looked like gold and a Chinese expression for being duped is ‘to buy brass for the price of gold.’ Artificial gold-making was a considerable industry and lumps of gold from alchemists’ furnaces were regarded as highly valuable by foreign merchants who paid a good price for them. There were fourteen different types of gold listed in alchemy in the T’ang dynasty. The most prized was the ‘purple-sheen gold.’ Gold leaf was used extensively in gilding images of gods in the Taoist-Buddhist pantheon.

quicksilver. In this case quicksilver is roasted and becomes returned cinnabar, the cinnabar returns to its original substance. That is why it is called “returned cinnabar’.” In the *Pao P’u Tzu* he also deals with two kinds of elixir, the Golden Cinnabar, (*chin tan* – the Philosophers’ Stone of the West) and the Gold Juice, the latter being simpler but more expensive to make. These are distinguished from the yellow and white art of transmuting base metals into gold and silver: again a purely scientific exoteric work. His recipe for making cinnabar solution is to

> prepare and insert one pound of cinnabar into a green bamboo tube; add two ounces each of copper sulphate and saltpeter above and below the cinnabar; close the tube openings and seal them with hard lacquer, which must be allowed a time to dry. Place the whole in strong vinegar and bury it three feet deep in the earth. After thirty days it will have liquified and become red in colour and bitter in taste.

The red colour of the natural cinnabar and the vermilion of returned cinnabar made it of value in itself. In China, as elsewhere, red is the zenith of the colour representing the sun, fire, royalty, energy. It has always been a highly auspicious colour in China, being the brightest of all and therefore associated with, and attractive to, good spirits; evil spirits fear all light and brightness. It is also the bridal and good-luck colour, so that any red-coloured stone, and cinnabar in particular, shared this virtue. It had a particular alchemical significance in the white-to-red transformation, the powers of water and fire, opposing but complementary, in the Work. Cinnabar was *yang* to the *yin* of quicksilver; in alchemy the two were spoken of as ‘the fire of the heart is red as cinnabar, the water of the kidneys is dark as lead,’ and ‘as medicines we value the kinds which are as red as a cock’s comb and have a brilliant lustre.’

Red pigment was painted on images and sacred objects, such as buried bones, and the lettering on the bamboo tablets of the *hsien* was red in colour. This sacred-magic quality of red is not confined to China but is found in many other cultures, both primitive and advanced. It is also the sacred colour of the life-blood and this attribute was easily carried over into the notion of giving ‘life’ to the baser metals and to the idea of life being contained in the red cinnabar.

Initiation is the archetypal pattern of transition from one state to another, from life to death to rebirth, the return to the darkness of the womb before rebirth into the light. In alchemy the 'death' of the metals, the black, *nigredo* stage, is not only the death-experience of the initiation rites; it is also psychologically the descent into the chaotic, undifferentiated realm of the unconscious, again, to return to the womb, the embryonic state from which the new person is born. To go through the initiation rites, both physical and mental, often so severe as to amount to torture, is spoken of in alchemy as the 'torture' of the metals, or of the vermilion bird, the phoenix of Chinese alchemy. For the ordeal, rigorous dedication and strength of character were required. Indian alchemy held the adept must be 'intelligent, devoted to his work, without sin and master of his passions.' Initiation is essentially a ritual confrontation with death that vouchsafes the knowledge of immortality and kills fear of death.

Two of the artificers most concerned with alchemy and necessary for its work were the miner and the smith. The miner operates in the early stages, bringing forth the ores, helping and hastening the process of birth. That he was involved in the sacred aspect of the work is shown by the fact that the opening of a new mine required a religious ceremony and elaborate ritual; fasting, prayer or meditation, incantation, ritual cleanliness and sexual abstinence were necessary as in any other branch of alchemy. To interfere with the Earth Mother is to tread on dangerous ground, indeed, in some cultures, such as the Tibetan and Amerindian, it was altogether prohibited by sacred scruples. Even on the lower folk-level, mountains, mounds and the underworld are treated with extreme caution as the homes of spirits, fairies, dwarfs, trolls and gnomes. These underground workers were always mysterious and feared for being in touch with underworld and dark powers.

'There is a vast background of myth which incorporates all transformers; among these the smith occupies an important but extraordinarily ambivalent position; he can be venerated as a god or royalty, or despised as an outcast. In some cases he is the First Ancestor who came down from heaven to found civilization. Like Prometheus, he brought the secret and use of fire to humanity and had a close association with the sky and thunder gods. These were the white smiths. Among shamanistic tribes these smiths were also descendants of a celestial smith who came to earth to teach men the use of fire and metals. The

credited with other magical powers, such as prophecy and healing.

Another reason for the fear of the smith was the practice of blood sacrifice, both human and animal, in the smelting of metal, although sometimes the sacrifice was voluntary. Also he was constantly surrounded by evil spirits, menacing him and against which he had to take every precaution and there had to be absolute silence accompanying his movements, all of which made him worth avoiding. Then, again, his tools, the hammer, anvil and bellows have magic powers of transformation, while the stove, cauldron and furnace all have the function of dissolution and death. Smelting is a work of fusion, the abolition of individual identity, the return to primordial chaos. The ores, regarded as male and female, *yang* and *yin,* became one in union. This has a sex symbolism which is further accentuated by the 'heat' involved; a symbolism also present in the hammer and anvil, the hammer being the formative, masculine force in nature, with the anvil as the passive feminine. The hammer is the weapon of the Thunder Gods, the Divine Smiths, with the anvil as the earth, matter. The striking of the hammer on the anvil bringing down fire from heaven, represents divine justice and power; this is why oaths were taken on the anvil, a practice which continued until recent times when marriages over the anvil, at such places as Gretna Green, perpetuated the smith's ancient religious functions.

The power of fire is also associated with the stove, oven or athanor, in which transformation took place. In Chinese alchemy the Deity of the Stove was frequently appealed to for help in bringing about a successful transmutation, especially when the recipe entailed roasting the mixture for as many as five hundred times. The stove was one of the five annual objects of sacrifice. A Controller of Recipes advised the Emperor Wu:

> You should worship the Stove and then you can make spiritual beings present themselves; when spiritual beings have presented themselves, cinnabar powder can be metamorphosised into gold; when the gold has been made, it can be used for vessels for eating and drinking and will increase the length of your life, when the length of your life has been increased, the Immortals of P'eng lai in the midst of the ocean can thereupon be given audience; when they have been given audience, by making the sacrifices of *feng* and *shan* [fire and earth] you will never die.

— 9 —

ASTROLOGY

From its earliest stages Chinese alchemy was associated with astrology and it is impossible to study the one without the other. Having developed under popular Taoism, astrology advanced to such a degree of importance that it became part of the government of the country in the Han dynasty and was used not only for prediction to avoid unfortunate influences, or to take advantage of fortunate times and seasons, but was also adopted by courtiers as a powerful way of restraining the Emperor from doing anything they found undesirable, since they were able to persuade him that such actions were unpropitious.

At court there was the office of Grand Astrologer, held at one time by the famous historian Ssu-ma Ch'ien and his father before him, under whom there were thirty-seven 'expectant appointees.' They were responsible for making the calendar, divining by the tortoise-shell, divining by yarrow-sticks from the *I Ching,* looking after all apotropaic matters and watching the sun and the seasons. The Court Astrologer was concerned with the state rather than with personal portents and influences. The Emperor was the Son of Heaven, its delegate on earth, and therefore under its rule, with which he must be in total conformity; to achieve this the Heavens must be consulted on all matters of state and the Emperor himself must embody the qualities of Heaven: any deviation from these rendered him unfit to rule and he could then be replaced.

The conduct of all court and state affairs was monitored by the astrologers, who read the portents and interpreted the events. Comets, eclipses of the sun and earthquakes were dire warnings that all was not well in the kingdom. Lunar eclipses, however, were regarded as being less dangerous. All this gave the astrologers immense influence at court; they were high in the official hierarchy and it has been suggested that they were sometimes, in the manner of bureaucrats, not above manipulating their astrological readings to suit their own interests

at court and in the state. In the interests of security (and often of the astrologers' own!) astrological readings were kept secret, since they affected the policy of the state and foreign relationships. For example: 'When Mercury appears in company with Venus to the East, and when they are both red and shoot forth rays, then foreign kingdoms will be vanquished and the soldiers of China will be victorious.' Incidentally, as Professor Needham points out, the careful and detailed records kept by this astrological bureaucracy has been the source of much interesting and valuable information in modern times. It is also of interest to note that some of the lunar eclipses recorded were not visible at the time and place of record.

Just as Chinese alchemy differed from that of the West in searching for immortality rather than gold, so Chinese astrology differed in its emphasis on national rather than personal forecasts. Both, though, had their Court Astrologers; in fact it was said that in the West in medieval times even every great lord had his own astrologer. Early Chinese astrology was more concerned with the destiny of the state, with peace and war, the political situation and the prospect of good or bad harvests. The casting of individual horoscopes came later, probably introduced under Indian influence in the T'ang dynasty with the translation of Buddhist texts. Such horoscopes were actually discouraged at first, agreeing with the western Hermann of Dalmatia that it was superstitious to 'account for the entire life of man by astrological reasons … or to … try to explain conceptions and nativities, character, prosperity and adversity from the courses of the stars.' But when the casting of personal horoscopes became established later it took so strong and popular a hold and became so widespread that no important move could be made without consultation and all marriages were based on the compatibility of the individual horoscopes and auspicious aspects, together with the *yin-yang* balance. If one were born at night, one's fate was *yin;* if during the day, it was *yang.*

earthly matters and the fates of individuals, but in China every star had its corresponding god and metal, while every herb used in medicine had its planetary affiliations.

The planets are also linked with the *I Ching:*

> The eight *kuas* [trigrams] are distributed among the planets. They never fail to operate properly. The mystical essence is exquisite but difficult to observe. It can be guessed on the basis of the heavenly sign. The heavenly signs should be observed carefully so as to ascertain their proper expressions ... orders are to be issued according to the proper seasons ... look above and observe the signs of the Milky Way, look down and note the lay of the land, and look in between to learn the human mind and heart.[1]

The stars held an archetypal position and the *I Ching* calls them the heavenly images of earthly forms, their movements controlling the whole of Nature.

Stars could be either baleful or beneficient according to the deities or demons with which they were associated, so their influences had to be either counteracted or encouraged. Elaborate and endless rites were employed to send off malefic stars and their demons and to invoke the aid of the auspicious star-deities. Comets were particularly sinister portents of disaster. Nor was this belief confined to China; it was almost universal and frequently referred to in literary symbolism. In the West, the Bayeux Tapestry shows a comet presaging the death of Edward the Confessor. As has been said, solar eclipses were also highly inauspicious; in fact any change in the sun foretold calamities, general misfortune or the death of an Emperor, and if an eclipse had been predicted and did not appear the Emperor was congratulated on his good fortune; an unpredicted eclipse meant certain disaster. This belief carried over into modern times; I can remember, as a child, the pandemonium that broke out when an eclipse occurred: rockets, fire-crackers, squibs soared and banged all over the place with people shouting to frighten away the mad dog that had taken a bite out of the sun. A general air of fear prevailed.

The stars, as living beings, were also portrayed as people; for instance, the Pole Star was represented by a Buddha-like figure seated on a lotus, with a wheel held in his hands to symbolise the hub of the heavens, the star remaining static while the universe revolved round it.

The Dipper, called the Bushel in China, is particularly revered as it points to and revolves round the Pole Star and acts as a

and seven *p'o* souls, symbolizing the different attributes of the human being. The *hun* controlled the intelligence and the *p'o* the emotions. Some of the souls can leave the body during illness and should then be brought back again. In pathological states the soul escapes from the body and a priest, shaman or magician must be employed to bring it back; it can be captured and ensnared with nets or knots and then re-bound to the body. In the case of trance, the shaman or medium deliberately dissociates the soul and sends it out to gather information from afar or from the spirit world. All souls leave the body at death, but if the body is preserved the souls could remain together, hence the prevention of the decay of the body was of great importance in attaining earthly immortality. Preservation of the body took two forms, firstly, in this life, a self-mummification was sought in rendering the body decay-resistant by a diet entailing total abstinence from meat, fish or fowl, or cereals, living on nuts, pine resin, honey and dates, and practising austerities, yoga and the elixir. Secondly, there was mummification after death, preserving the body by burying it in suits of jade, with jade in all the orifices; this preservation enabled the soul to continue living with the body on earth and, as we have seen in the case of the Lady of Tai, it was achieved with a success beyond the knowledge of modern science.

The three *hun* souls and the seven *p'o* souls of an individual in plenary session.

The Chinese concept of the soul differs radically from that of the West not only in its multiplicity but in that it came under the cyclic, rather than the linear, view of time and the cosmos. Maspero wrote that 'The Chinese never separated Spirit and Matter, and for them the world was a continuum passing from the Void at one end to the grossest matter at the other, hence "soul" never took up this antithetical character in relation to matter. Moreover there were too many souls for any one of them to counterbalance, as it were, the body.' In alchemy the soul is

the alchemist Cheng Wei who devoted his whole life to alchemy and obtained a servant from a magician to help him in his work. His efforts at making gold from recipes contained in an ancient treatise, 'The Great Treasure,' were always unsuccessful. His wife watched his futile attempts as he heated the retort which contained the quicksilver and offered to 'show him something,' upon which she threw some of a drug into the retort, with the result that when the drug was absorbed the contents became silver. The amazed Cheng wanted to know why she should have the secret and why she had not told him sooner, to which she replied that 'In order to get it it is necessary to have the proper fate;' that is to say, a favourable horoscope and a favourable time.

This belief in the necessity for right times and seasons was not confined to Chinese alchemy but was tied to the universal association between alchemy and astrology. Zosimus believed that experiments do not necessarily produce results in themselves but must be undertaken at the right astrological moment; the alchemist requires a knowledge of the constellations. He also said: 'It is necessary that we determine what are the opportune times … I have heard it said by certain ones that an operation can be carried out under any circumstances, and I hesitate to believe it.' Albertus Magnus wrote that the alchemist 'should observe the time in which the operation is performed and the proper hours for sublimations, solutions and distillations.' Geber wrote of the influence of the seven planets as the key to alchemy and maintained that the adept can find the mixture of the four elements in animals, plants and minerals by astrology. Arabic astrology says that the stars are 'in accord with all mundane creatures in all things … by secret institution of divinity and by natural law.' This obtained not only in alchemy proper but also in its off-shoots, in such things as talismans and magic. Roger Bacon maintained that charms and images, when made under the proper astrological influences, became endowed with power and stored the energies of the stars and the human spirit. Ko Hung wrote: 'In divining the mysterious actions of heaven and measuring the various motions of the sun, moon and five planets, we discuss their trespasses in the realms of the constellations in order to determine prosperity or decline for the future. We look upwards for signs in the skies;' 'Our kings established the office of Grand Astrologer. For appointments, establishings, worship in the

is the Great Yin; the planets are the Lesser Yin and the fixed stars the Lesser Yang; these, in turn, are associated with the Five Elements, the purified essence of each rises upwards to the heavens to become the five planets: Mercury, water; Venus, metal; Mars, fire; Jupiter, wood; Saturn, earth, while the fixed stars contain their various essences. Methods of fate calculation were not entirely astrological since they also depended on the Five Elements principle, the Twelve Terrestrial Branches and the cyclic sixty-year periods; systems which were as much numerical-mathematical as astrological-astronomical.

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THE FIVE ELEMENTS

In an early treatise, written about 135 BC, we read:

> Earth has its place in the centre and is the rich soil of Heaven. Earth is Heaven's thighs and arms, its virtue so prolific, so lovely to view, that it cannot be told at one time of telling. In fact Earth is what brings these Five Elements and Four Seasons all together. Metal, wood, water and fire each have their offices, yet if they did not rely on Earth in the centre, they would all collapse. In similar fashion there is a reliance of sourness, saltiness, bitterness and sweetness. Without that basic tastiness the others could not achieve 'flavour.' The sweet [the edible] is the root of the Five Elements, and its *ch'i* is their unifying principle, just as the existence of sweetness among the five tastes cannot but make them what they are.

This shows clearly the difference between the doctrine of the Elements in the East and West. The Earth, which is only one of the four elements in western tradition, is, in China, the central and most important on which all the others depend and from which they derive their vital energy *(ch'i).* The western teaching, following Aristotle and Empedocles, has four elements: earth, air, fire and water. For Aristotle, they proceed from the *prima materia,* a basic matter on which all forms can be imposed or imprinted, though itself remaining changeless. Matter and form interact to produce the four elements, which give rise to all things by simply changing the proportions of the elements, so that any one substance can be changed into another by varying the contents of the different parts, provided the right proportions are discovered. All things are, therefore, interchangeable: they are different forms of the same matter. This is the very essence of alchemical belief and work: that transmutation from one state to another is possible, that the principle of transmutation is inherent in Nature, so that the lead of base metal can be transformed into the purity of gold and the lead of the human situation transmuted into the gold of divine perfection. Or, as Marco Pallis phrases it: 'It implies the possibility of converting whatever is base and polluted into something pure and noble.' So, then, the Five

FIRE produces EARTH (ashes)	WOOD destroys EARTH
EARTH produces METAL	EARTH destroys WATER
METAL produces WATER	WATER destroys FIRE
WATER produces WOOD	FIRE destroys METAL

This is known as 'the cyclic conquest.' The five *yin* and five *yang* elements make up the Ten Celestial Stems (a cycle of ten characters or ideographs). Tung Chung-shu, a second-century neo-Confucianist, wrote:

> The Five Elements move in a circle in proper order, each of them performing its proper functions. Therefore Wood is located in the East and characterises the *ch'i* of Spring. Fire is located in the South and characterises the *ch'i* of Summer. Metal is located in the West and characterises the *ch'i* of Autumn. Water is located in the North and characterises the *ch'i* of Winter. Earth dwells in the Centre and is called the Heavenly Nourisher … Water is that which soaks and descends; Fire that which blazes and ascends; Wood that which is straight and crooked; Metal that which obeys and changes; Earth that which is used for seed-time and harvest.

There is also this transforming feature in western alchemy. Alphidius says:

> The Earth becomes liquid and is transformed into Water; Water becomes liquid and is transformed into Air; Air becomes liquid and is transformed into Fire; Fire becomes liquid and is transformed into glorified Earth, and this effect is what Hermes meant when he said in his secret: "Thou shalt separate the earth from fire and the subtle from the dense."

The Emerald Tablet says that all things proceed from the One, the One divides into the elements and then recombines in unity.

In the West, too, the elements maintain the *yin-yang* quality of being contrary but complementary. Their duality exists in the hot and moist and the cold and dry. Fire is hot and dry; Air hot and moist; Water cold and fluid; Earth cold and dry.

The Five Elements are, in every respect, associated with the cyclic view of the universe, which in turn affected Chinese history also, since it was held that the dynasties rose and fell according to the dominance of the Five Powers. The dynasties also followed the Five Elements in taking the Five Colours in turn for use for official dress and occasions. (The last dynasty, the Ch'ing, was yellow.) These five colours also appeared on the pre-communist Chinese flag.

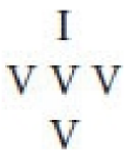
The elements played a vital role in alchemy, medicine and astrology; they were associated with the metals in alchemy; in medicine it stood to reason that they had to be taken into account since they control the bodily organs and each part of the body is affected by the others. Being connected with the planets they related to astrology, which was also closely tied to the cyclic viewpoint. Divinities of stars were also divinities of cycles, each having control of a sixty-year cycle. This 'cycle of Cathay' is calculated from the Ten Celestial Stems and the Twelve Terrestrial Branches. Each stem has a *yin* and *yang* aspect, counting as one: hence *5* × 12. Also the lowest common denominator of 10 and 12 is 60 (the year 1984 starts the next cycle, which continues until 2043). Years are *yin* or *yang* according to whether they are even or odd numbers, but cycles always start with a *yang* number and end with a *yin.* The Ten Celestial Stems with the Twelve Terrestrial Branches together form a cycle of days, months and years.

The cyclic standpoint is fundamental to all alchemy and is symbolised by the Ouroboros as the dragon in the East, the serpent in the West, swallowing its own tail; it represents the whole alchemical work. It is the cycle of disintegration and reintegration, the power that perpetually consumes and renews itself; it is also the latent power of the *prima materia,* the undifferentiated in which the end is implicit in the beginning, or 'the never-ending beginning,' or, again 'my end is my beginning.' The symbol appeared early in both eastern and western alchemy and in Chinese, Egyptian and Greek iconography. In the latter the serpent was depicted as encircling the words 'All is One.' In Chinese alchemy it is expressed thus: 'The ends and origins of things have no limit from which they began. The origin of one thing may be considered the end of another; the end of one may be considered the origin of the next.' The neo-Confucianist Chou Tun-i wrote that there always have been 'successive periods of growth and decay, of decay and growth, following each other in an endless round. There never was a decay which was not followed by a growth.' A Taoist doctrine maintains: 'There is no real creation or destruction, only densification and rarefication.'

Great importance has always been attached to the number five, known as the Magic Quintet, in all things Chinese and especially in alchemy and magic. In alchemy the significance of the number rests on its astrological associations with the five major planets (later discoveries of other planets were not allowed

to alter the cosmological importance of the original five) and the five metals, lead, mercury, copper, silver and gold. These were combined in varying proportions and procedures with their five planets. The processes in alchemy were also controlled by the number five; metals should be heated, or roasted, five times, or in multiples of five, up to five hundred.

In ordinary life there were also endless groups of five: the five planets, sacred mountains, social relationships, blessings, virtues, sacrifices, colours, internal organs, tastes, poisons, tones, grains, pungent flavours, directions (North, South, West, East and Centre), spiritual and domestic animals, while five memorial poles were put on graves to represent the Five Elements at rites of the commemoration of the dead. In magical invocation, or as a talisman, the Five Elements are represented as:

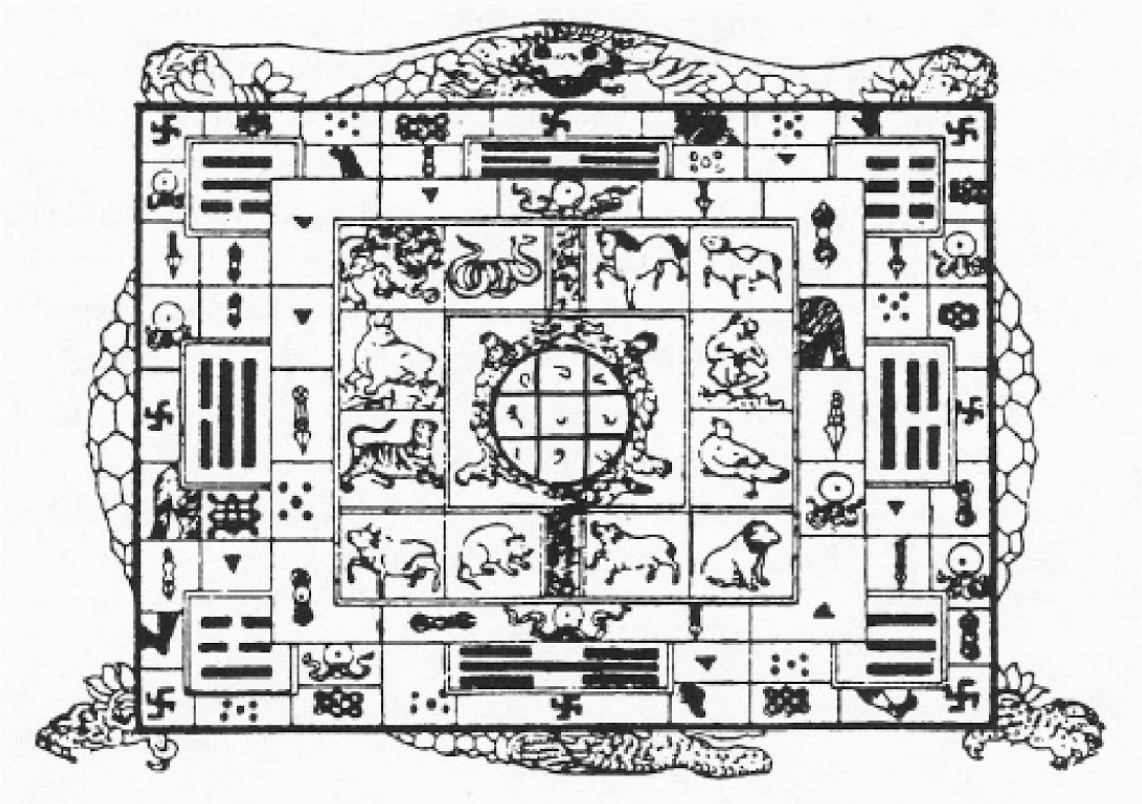


Five also holds sway in alchemical yoga where the five vitalities are used in arousing the kundalini-like circular power in the body; the vitality of the heart, spleen, lungs, liver and kidneys.

Exoteric alchemy was closely associated with magic and use was made of talismans and amulets when heating the mixture for the five or multiple of five times. The chief of these amulets was the magic square, using the digits 1-9 with 5 in the central place. This square was the basis, one might call it the mandala, of the Imperial Temple of Enlightenment, used mainly for the regulation of the calendar, the Chinese years being variable in length, and for other astrological purposes.

4	9	2
3	5	7
8	1	6

The cyclic death and rebirth symbolism is also inherent in the *Pa Kua,* the Eight Trigrams denoting the eight directions, associated also with the numbers 1-9, omitting 5 since it is the centre. The Eight Trigrams were said to have been revealed to Fu-hsi, on the back of a tortoise (the tortoise-shell is universally



Tibetan Mystic Tablet on the back of a tortoise

In the *Shu Ching,* in the chapter on the Great Plan, it is said that the elements were produced by the powers of *yin* and *yang* and their twofold breath, *ch'i,* which must be kept in balance to produce favourable conditions in all things.

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CH'I

Mencius, when asked what *ch'i* was, said: 'It is difficult to express. It is *ch'i,* immensely great, immensely strong. If it be directly cultivated without handicap, then it pervades all Heaven and Earth.' In modern times Fung yu-lan says: 'The tendency in ancient times with regard to any thing or any force which was invisible and intangible was to describe it as *ch'i* … what is called the *ch'i* of Heaven and Earth, may be paraphrased as the basic force of the physical universe;' 'The *ch'i* is something about which we cannot say what it is … *ch'i* is not a "what." It is unnamable.' Ko Hung describes it as the breath or spirit by which all things are vitalized: 'There is nothing which does not require *ch'i* to remain alive.'

So the term *ch'i,* like the Tao and *wu-wei,* is not translated, being too wide in meaning for any one word. It can be used for anything of an 'invisible and intangible' nature, from gas to the vital breath of the universe. It is in this latter sense that it is used in Chinese alchemy, though in between the two extremes of usage it can be interpreted as effluvia, or any kind of emanation. Nathan Sivin writes that:

> On one level it names the air we breathe, the subtle material breath of life. In cosmology it is used for a terrestrial effluence through which the planets move. In chemistry it can refer to an aroma, to fumes, to smoke, or to the activity of a reagent. In medicine the homoeostatic force within the body is *ch'i,* so is any pathological agent which disturbs the balance, so, for that matter, is abdominal gas … In translating, therefore, one must choose between carrying over the larger concept of the particular sense … When an author specifies that the alchemical vessel be tightly luted so that the *ch'i* of the volatile ingredients may not escape, one naturally chooses 'vapours' as the equivalent which makes his intention clearest, but one loses the implication unless it is kept in mind that *ch'i* means 'activity' too.

A modern Chinese philosopher defines *ch'i* as 'the tendency to produce and reproduce, or energy.'

The word *ch'i* is one of those basic to Chinese philosophy and metaphysics and has been in use from the most ancient times. The *Tao Tê Ching* says: 'All things are backed by shade *[yin]* and faced by the light [yang] and harmonised by the immaterial Breath [*ch'i*],' and Hsiung Shih-li wrote: 'When *yin* and *yang* harmonise, all things are transformed. This is called the union of *ch'i.'*

The philosophers of the Han period regarded *ch'i* as the vital breath of the universe: 'the universe produced *ch'i.'* A Taoist treatise said:

> The pure *ch'i* being tenuous and loosely dispersed made the heavens, the heavy, muddy *ch'i* being coagulated and hard to move made the earth. The pure and delicate *ch'i* coming together and making a whole was an easy matter, the heavy and muddied solidification was difficult. The result was that the heavens were finished first and the earth became solid later. The combined essence of heaven-and-earth became the *yin* and the *yang* and four special forms of the *yin* and the *yang* made the Four Seasons, whilst the dispersed essence of the Four Seasons made all creatures.

The *yin* and *yang* are sometimes spoken of as the two *ch'i.*

Confucianists equally employed the term: 'Within the area of heavens and earth there is the *yin ch'i* and the *yang ch'i,* permanently imbuing men as water imbues the fish in it, that which constitutes the difference between water and *ch'i* being that one is visible and the other invisible … although it appears to be nothing, yet it is something. Man is permanently imbued with this stream of the two *ch'i;'* 'When the *ch'i* of the universe is condensed it becomes One; when it is divided we have *yin* and *yang;* when it is quartered we have the Four Seasons; when it is further divided we have the Five Elements. Each element has its own movement. On account of this difference in movement, we speak of the Five Powers.' The elements are spoken of as the *ch'i* of the seasons. Wood is the *ch'i* of Spring, fire that of Summer, metal of Autumn and water the *ch'i* of Winter, with Earth again as the central power, since all the other elements need the *ch'i* of earth as a basis. And it is the *ch'i* of the *yin* and *yang* that makes for the perpetual movement of rise and fall and all the opposites in creation. The concept of *ch'i,* the vital breath, like all energies and forces in the universe, has its alternating states of *yin* and *yang;* in *ch'i* the *yang* is inhaling and the *yin* exhaling; the *yang ch'i* is solar, fiery; the *yin ch'i* is lunar, watery.

The *yin* is spoken of as form and the *yang* as spirit and when they are unified the Ten Thousand Things (i.e., everything in the universe) are transformed: 'This is called the union of *ch'i.'*

Ch'i can refer both to the physical breath and the act of breathing in the practices of Taoist yoga, in which the cleansing power of controlled breathing has always been recognised; but when 'embryo breathing is attained the yogin is said to be "breathing without breath," that is to say he has become one with the primordial.' *Ch'i* as breath is synonymous with life; it is the 'breath of life;' it is the breath that maintains the life of the subtle body. 'It is pure *ch'i* which charges the myriad things; where it condenses it causes life, where it disperses it causes death … the changes occurring in the myriad things are all due to *ch'i,* but whether they are hidden or whether they can be seen, the *ch'i* remains a unity. The Sage knows that *ch'i* itself is One and never changes.'

Ch'i is both a life energy permeating the whole being, physical, mental and spiritual, and a cosmic energy identifiable with the Hindu *prāna*, the Greek *pneuma* and the Hebrew *ruah*: it is the vital breath of the universe. 'Everything must be endowed with *ch'i* before it can have material form.' Forms are the outward and visible expression of *ch'i,* call it what you will: Spirit, breath, cosmic breath, vital energy, material force, ethereal essence; everything in creation must be in accord with it; it is the vital force, condensing and dissolving in perpetual change, alternating between *yin* and *yang* in an endless relationship, interplay and harmony, a constant flow of energy passing between them and uniting them in the cosmos. A neo-Confucianist philosopher said: 'I, along with Heaven and Earth and all things, am a cohering point of one and the same *ch'i.* Therefore I, along with Heaven and Earth and all things, am basically one body.'

A parallel with western alchemy occurs when we are told that the work must be animated by a Breath, which is the same as the Spirit which moved upon the face of the waters at the beginning of the creation of the world. In the 'condensing and dissolving' we also see the *solve et coagula,* the feminine quicksilver, *yin,* and the masculine sulphur, *yang,* being unified by salt, the unifying Spirit.

Always associated with *ch'i* is *li,* usually translated as 'principle' or 'order.' *Li* is the order which keeps the cosmos

together (in Confucianism it also means propriety, ritual, ceremony and social order), the two combined comprise energy and matter; *li* is the directing principle behind *ch'i* and *ch'i* is the force through which *li* is made manifest. 'Throughout the universe there is *li* and there is *ch'i; li* organizing all forms from above is the root from which all things are produced; *ch'i* is the instrument comprising all forms from which all things are produced; *ch'i* is the instrument comprising all forms from below and the tools and raw material with which all things are made;' 'In the beginning, before any being existed, there was only *li,* then when it moved it generated the *yang* and when it rested it generated the *yin* … following a cyclical process it flows on, ever turning and returning. The Tao is the whole cosmos, the *li* the individual pattern in manifestation and the *ch'i* that through which *li* is made manifest;' When *li* is combined with *ch'i* then consciousness arises.'

As de Groot says: 'Taoism is fundamentally a religion of the cosmos … it concerns the universe as one large organism of powers and influences, a living machine, the core of which is the Great Ultimate Principle, or T'ai-chi.' Chinese alchemy, having its origins in Taoism, saw the operations of Nature as reflecting the divine, or spiritual, order of the universe, so the Taoist-alchemist always worked with Nature; he did not attempt to 'conquer' or subdue her. The Tao was responsible for the whole ever-changing cosmos and man; the alchemist, was the mediator, the middle-man through whom the Tao worked. It was for man to work the will of heaven. This attitude ran not only through Taoism but through all ancient Chinese thought and philosophy. Taoism never took a profane view of Nature, which was always sacred in the sense that she is the working of the Tao, the great ruling principle of the universe. Humanity and the forces of the universe interact, drawing energy from each other and pouring back that energy. Not only was there magic inherent in Nature's forces and the interaction of the macrocosm-microcosm, but, in following Nature, the alchemist, using yogic techniques, learned the perfect spontaneity of Nature, *wu-wei.* The Work had to be undertaken naturally, spontaneously, as in child's play; it was a reflection of the divine play of the universe.

Alchemy looked for an understanding of the whole of Nature; it tried to discern her secrets in a universe that embraced all forms of life, a life which was clearly evident in man, animals and plants, but which also existed in the lower forms of the

seemingly inert minerals which the alchemist brought to birth. All have *ch'i.*

down at the aperture of the nostrils and see that it does not move when the breath is expelled.

Breathing had to be rhythmic to harmonise with the rhythms of the universe; processes of inhalation and exhalation were gradually prolonged to produce an even slower and quieter rhythm. The exercises had to be taken in 'live air.' The twenty-four hours are divided into twelve two-hour periods: the six from midnight to mid-day are 'live air' and the six from mid-day to midnight are 'dead air' periods. Any form of anger must always be avoided as it disturbs the rhythmic flow of the breath.

Breathing exercises aimed to transmute the breath into soul-substance and so make it one with the universal breath or *ch'i*. 'Womb breathing' had another association in the esoteric sense in that it helped to develop and bring to birth the embryo of the imperishable spiritual body. In the *Tao Tê Ching* the regulation of the breath is spoken of as becoming 'soft and pliant as an infant.' Ko Hung said that medicines could help in the work but breathing exercises speeded the attainment of the goal, while Chuang Tzu said: 'The pure men of old slept without dreams and woke without anxiety. They ate with discretion, breathing deep breaths; for pure men draw breath from their uttermost depth, literally "from their heels"; the vulgar only from their throats.' Chuang Tzu obviously knew of and accepted yogic practices of breathing, but, with characteristic amusement, rejected the too serious minded and vigorous efforts of the yogins and ascetics.

In Chinese yoga, as has been said, one adopted the posture of sitting on the heels (which always was, and still should be, the correct posture for women) or one might 'lie with the eyes shut and hands closed, keep the breath shut up inside to two hundred, then expel it from inside the mouth.' Ultimately one should be able to hold the breath for one thousand respirations; at this point the pulse practically stops and a state of total serenity is achieved; this is called the 'freezing spirit.' Holding the breath was also used therapeutically. The breath was 'harmonised' then swallowed and held as long as possible, while concentrating the mind on the affected organ. Here we have direct evidence of the theory of the power of thought in influencing physical conditions; the first psychosomatic remedy.

Before starting exercises 'One must withdraw to a retired chamber, shut the doors, seat oneself on a bed with a soft cover and a pillow two and a half inches high, lie down with the body in the right position, close the eyes and keep the breath shut in the

were those, such as the female *hsien* Mao Nü, who, on a diet of pine needles, recommended by a Taoist hermit, became immune from hunger and cold and whose body became so etherialised that she appeared to fly.

There was also a wine which appeared to have the qualities of the elixir in conferring immortality: 'There is a jade rock on Ying Chou Island, about 10,000 feet in height, from which issues a spring resembling wine in taste. It is called Jade-wine Spring. If one drinks several pints of this wine one will immediately become intoxicated. It confers immortality on human beings.'

Many of the rules on diet and hygiene which were recommended for the yogin and alchemist are still recognised today; for example, when Huang-fu Lung met a Taoist Sage riding on a buffalo, the Sage made known to him the following rules concerning 'nourishing the spirit': 'If you desire to keep your body youthful do not work beyond the limits of your strength. Do not eat fat or rich food; use salt and spices with moderation. Abstain from worry, curtail pleasures and wrath, dismiss hurry and bustle. See that your house is well prepared to withstand the cold of Autumn and Winter and is well drained.'

All foods, like everything else in creation, have their *yin-yang* nature and must be kept in balance to maintain health. If that balance is disturbed sickness results; medicine is then a matter of finding the cause of this disturbance and restoring the balance physically or mentally by diet and medicines of the right compensating proportions.

The yogin and *hsien* used massage, and gymnastics were also practised: 'The human body requires toil and exertion, only it must not be carried to excess. It is exercise that enables the food to be properly digested, makes the blood circulate through the veins and prevents the onset of disease, just as the hinges of a door, being constantly in motion, will never get rusty.' This was said by Wu P'u, a *hsien* who was a pupil of the famous physician-surgeon Hua T'o, who himself taught the Five Animal Antics. He wrote:

> The Immortals of ancient days, while performing the inhalation process, passed their time like dormant bears, looking about like owls, twitched and stretched their limbs and joints in order to hinder the advance of old age. I have an art, called 'The Sport of Five Animals,' namely a tiger, a stag, a bear, a monkey and a bird, by which illness can be cured and which is good for the movements of the feet when they accompany the

process of inhalation … Whenever you feel unwell, stand up and imitate the movements of one of these animals.

As for the ancient Taoist yoga of T'ai Chi Chuan, it has swept into the West and is now familiar in T'ai Chi classes everywhere. The T'ai Chi, the Great Ultimate is all-pervasive. 'Every single human has T'ai Chi and every single thing has T'ai Chi … for all things there is only one T'ai Chi … but everything in the world is endowed with it and with the whole of it.' This was said by a neo-Confucianist, Chu Hsi. As the Great or Supreme Ultimate, containing and contained in all things, it is represented by the *yin-yang* symbol representing the perfect balance of the two forces in the universe, the two powers being contained within the circle of totality, of cyclic revolution and dynamism. T'ai Chi yoga uses rhythmic movement and breath control to bring the *yin-yang* forces into harmony with themselves and the cosmos. Like all yogic practices it requires long and persistent application and cannot be properly learned in short 'courses' or weekend 'schools;' nor can it be learned from books; it requires a competent master.

The position adopted for sleep also imitates the natural postures of animals, such as the curved position of a dog or the coiling of a dragon. The correct position for sleep is to lie on one side, it does not matter which, with one arm bent under the head and the other stretching down to the stomach; one leg is straight and the other bent, the eyes should be closed and concentrated on each other. Breathing is, naturally, controlled and rhythmic and slowed down. Although Chuang Tzu speaks of the dreamless sleep of the Sage, in yoga dreams are taken as an indication of progress until the state of perfection is reached. Bad dreams are a sign of imperfection and indicate that something is wrong; the *Tan Ching* says that the True Man is free from them.

In sleep the oblivion of death is experienced and death itself must be understood before the new being can be born. Alchemy in general, and its yogic branch in particular, either aims at death, or total transformation, which is the same thing; it seeks the death of the old life and the birth of the new. In the West this is the *solve et coagula* in which the opposites are dissolved and die before rebirth in the 'body of glory,' or of the 'diamond body' of Buddhism and the 'jade body' of Taoism. The *solve et coagula* can well be translated 'purification and integration.' Reference to

productive of imbalance and neurosis. The yogic techniques are governed by times, seasons, lunar phrases and astrology; they were kept esoteric to a large extent and hidden under alchemical terms, since considerable danger accompanies some of the practices, as it does also with the breathing exercises. In Taoist yoga the woman adept plays an important part, both sexes being necessary to each other; but the *yin* power, as remarked, is the inexhaustible force.

It was believed that the 'reverted sperm' nourished the brain and one of the techniques was to hang upside down so that 'the essence of the sperm flows to the brain;' the generative forces were thus to be translated into vitality in the brain. Sexual techniques, according to Ko Hung, 'may be compared with water and fire, either of which can slay man or bring him to life, depending solely on his ability to deal with them.'

The marvellous powers attributed to the Taoist yogin, the *hsien,* are the same as the Eight Great Powers of the yoga of Maha-siddhi Buddhism. They are: (1) to make oneself small or invisible, (2, 3) to decrease or increase in height, (4) to have the most distant objects at the tip of one's fingers, (5) all wish-fulfilment, (6) perfect body control, (7) the ability to change anything in nature, (8) to be anywhere at will. Included in these are knowledge of the past and future, understanding the language of animals and communication with the dead. In these powers the association with Shamanism and magic is clear.

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MAGIC

There is no land without its magic lore and beliefs in which there occur unexplained phenomena and relationships with invisible powers. These are called occult or arcane because their workings are not understood in the ordinary world of the senses and reason. In China, popular religious Taoism, as opposed to the classical philosophical branch, has always been associated with magic, stemming back definitely to the Han dynasty, and in tradition to such wonder-workers as the Yellow Emperor, some 3,000 years BC, and the *hsien* Ch'ih Fu who became completely rejuvenated after taking the elixir. The proximity of Shamanistic tribes also introduced magical and spiritualistic cults, while magical lore was again widened by contact with Indian thought, brought into China by exchange of culture when Chinese emissaries were sent to study Indian scholarship and when Buddhist missionaries arrived in China

Magic is closely associated with alchemy in experiments and experimental science, with the 'powers' of religious beliefs and with the medicinal knowledge of making potions, poisons and drugs. It concerned all aspects of life, in this world and the next, and was not limited to either. It is probably true of Chinese magic that it was, as E. A. Wallis Budge said of Egypt, 'older than belief in God.' Professor Needham states that science arises out of magic: 'In their earliest steps they are indistinguishable. Taoist philosophers, with their emphasis on Nature, were bound in due course to pass from the purely observational to the experimental … That the mastery of Nature by manual operations is possible was the firm belief of magicians and early scientists alike.' In fact in 'the early sixteenth century in Europe science was commonly called Natural Magic … even Newton has with justice been called "the last of the magicians" … one cannot emphasise too much that in their initial stages there is nothing to distinguish magic from science.'

case and there is nothing to be feared from them; the former are continually intent on doing harm and must be guarded against incessantly. There is no doubt that the Shaman has ‘powers;’ even if his spirit powers are called in question, it is certain that he can carry out an ecstatic dance, in a crowded yurt, with some thirty to fifty pounds of iron discs and other objects attached to his robes, flinging himself about with closed eyes yet never touching any of the audience and able to lay his hands on any object he requires while still in trance.

There have always been two kinds of magic: the ‘black,’ which involves the invocation and co-operation of the demonic world and attempts to coerce and control these dark powers and force them to work in harness, and the ‘white,’ which deals with beneficial spirits and aims at working good and healing. There is also a misty borderland between black and white in the use of talismans, charms and words of power, practices which have endured for thousands of years and are still fully alive in the modern scientific-rationalist climate. People or teams still carry their mascots, have lucky numbers, wear amulets and ‘touch wood’ after any boast.

It has always been assumed that the future can be foretold and accepted that certain people have divinatory power. Oracles and seers were consulted and signs and portents read in such things as the flights of birds, the entrails of sacrificed animals, the throwing of sticks or coins, the markings on tortoise-shells; mirrors, crystal balls, bowls of water, and bones were also used in divination. Many of these practices, though, had an esoteric aspect beyond the outward-seeming superstition. Exoterically, talismans, charms and other means of avoiding or curing misfortune or calamities, both natural and spiritual, were believed actually to encapsulate the spirit concerned; esoterically, they were the means of conveying the idea of psychic balance of the forces of the cosmos and the sense of the mystical unity of all things.

In the East there was no reason why all such powers should not be beneficent provided the necessary precautions were taken, the good spirits were consulted and evil ones kept at bay; but in the West the connection between spirits and humanity was dubious, since magic had been learned from fallen angels who married the daughters of men; as the angels were ‘fallen,’ the arts they taught were tainted with evil.

Magic was practised not only to bring about alchemical transformations but also to summon the Immortals. The court magicians employed by the Emperor Wu were used not so much to produce gold as to call up the Immortals and spirits – particularly, in this case, the spirit of the greatly-mourned favourite, the Lady Wang. The Chinese Festival of the Moon Palace rose from Taoist magic and commemorated the court magician's feat in enabling the Emperor to visit this beautiful maiden who lives in the Moon Palace.

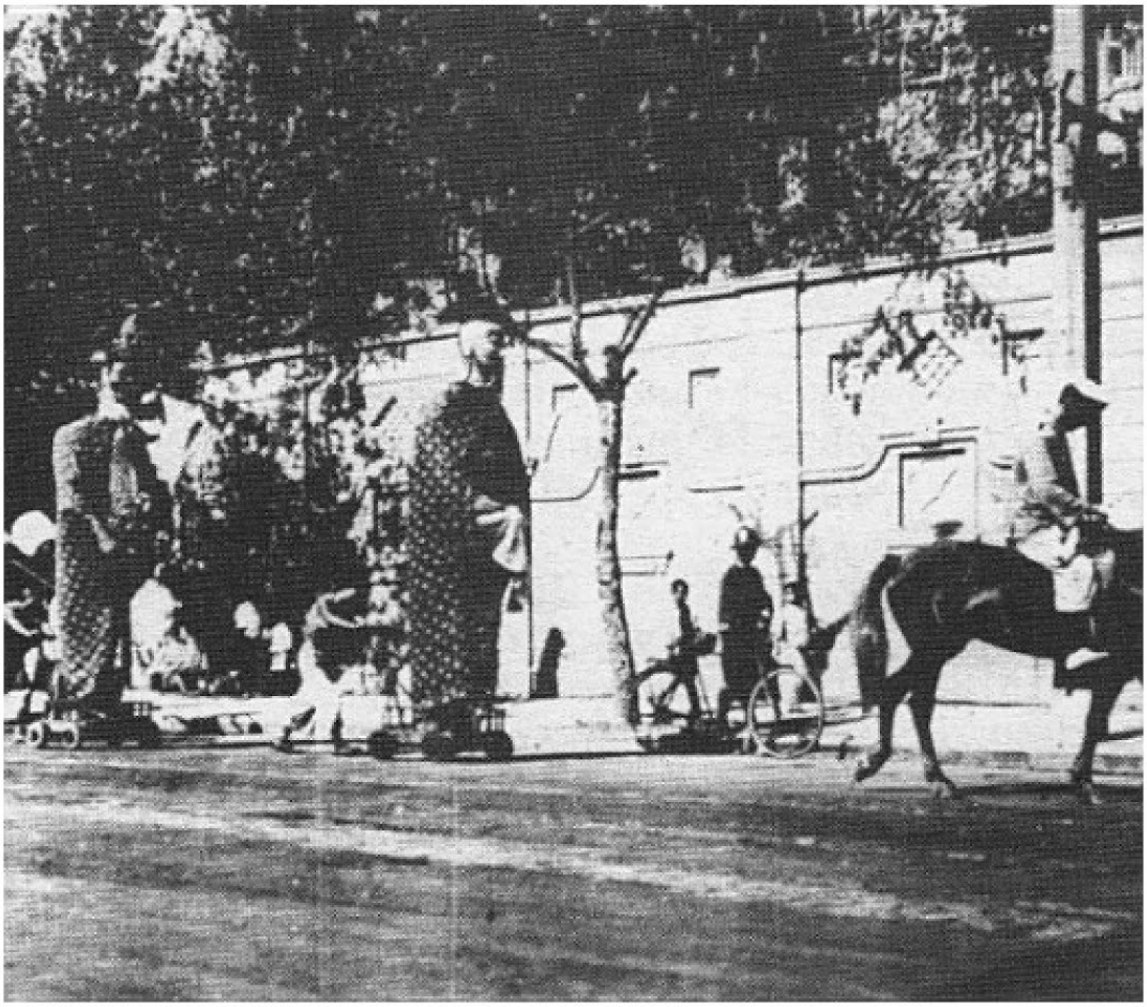
Alchemical altar with offerings

In the realm of the occult, good and evil spirits can be used against each other, but as there is considerable danger in such

an encounter the magician, shaman or alchemist must be under the protection of forces of a superior spiritual order. Hence, the alchemist puts himself under the tutelage of some deity – for example, the God of the Stove or, on a higher level the Great Spirit or the White Light. In Hinduism, the Vedas allow magic to be lawful only for the pure in heart, while, like the alchemist, sadhus and fakirs concerned with the occult must undergo severe discipline.

There are also spiritual visitants who take an interest in operations on the earth plane. As Ko Hung says: 'Spirits and gods frequently cause miraculous and strange things to occur among men. In our classics there is much evidence regarding them.' Among these interested persons must be ranked the dead who, for some reason or other, wish to make their presence felt in the mortal world. A powerful magician or *hsien* could also summon the dead to serve his purpose, as in the case of the noted *hsien* Liu Ken. He was once a court official at the capital of Ch'ang-an, in the Later Han dynasty. He abandoned court life and retired to a cave on the edge of a precipice. He also abandoned clothing and grew a covering of hair a foot long, but when visited, or in company, he could suddenly assume the conventional brocade robes of the scholar-official. He used his magical powers to help the local populace, providing food and healing illness, but a new governor of the province regarded him as a wizard and intended to have him tried and executed. Commanding Liu Ken to appear before him, the Governor challenged him to call up some spirits to his aid in his present predicament. Liu Ken wrote at the Judge's table and there followed an eerie whistling and clanking. The wall of the courthouse fell in and through the gap came a troop of soldiers escorting an enclosed carriage. The wall then closed behind them. Liu Ken then ordered the occupants to be brought out and an old man and woman appeared with hands bound and a noose round the neck. To his horror the Governor recognised his dead parents, who upbraided him for having been of no use to them in his life, since his official preferment had not taken place until after they had died; now, in death, he was causing them harassment and humiliation in persecuting a blameless *hsien.* The Governor immediately prostrated himself before Liu Ken and pleaded that his father and mother might be released. The *hsien* then ordered the chariot away; the wall opened and closed again behind it and Liu Ken vanished. But this was not the end

instantly. In the mountains ghosts are continually creating confusion to make people lose their way.' They also cause illness and disease, but if the right magic is employed they can be controlled and made to serve the living. For this purpose spells, incantations and 'words of power' were used, both oral and written. There is a universal belief in the power of sound in words. In Egypt the cult of immortality was as much of an all-absorbing interest as in China, not only in the preservation of the physical body but also in magical formulas which helped the dead in the next world. Both Isis and Thoth/Hermes held the secret of sound and Isis revivified the dead Osiris, killed by his brother Set, with magic words; the exact pronunciation and understanding of their meaning was of the utmost importance. In Hinduism the sound OM penetrates and sustains the whole cosmos.



Servants for the Dead Effigies following the funeral.

Summoning spirits or demons is universally done by the magic Power of the Name. Spirits serve the magicians, shamans and priests, and are often treated with contempt by the masters who

exercise power over them. Incantations could force demons to leave their abodes and appear before the sorcerer at his will. Divine names were used in incantations and invocations; these were esoteric and a jealous guard was kept on them. There was a constant struggle between the shaman-magician-alchemist and the spirits he needed to serve him; either he obtained the mastery over them or they mastered him and he would become 'possessed.' In Chinese alchemy possession belonged only to the failures who, in consequence, require the rites of exorcism. Wandering ghosts and spirits could also take possession of the body of those making mistakes or trespassing on forbidden ground while insufficiently 'protected.' Possession was taken seriously and in religious Taoism priests were trained in exorcism, while magicians used their powers to expel possessing spirits.

Possession can be voluntary or involuntary. Priests and mediums could be possessed by spirits when in trance. In the lower orders these entities could be demons; in the higher states, gods, goddesses or *hsien* could speak through the medium. It was in cases where demons or ghosts took over against the intentions of the person that the individual became possessed to his or her detriment and so required exorcism. Priests, shamans and mediums, once possessed, had command over all magical powers: they could slash themselves with knives and remain unhurt, swallow fire, walk on live coals, cause objects to fly through the air or levitate themselves; such powers have been examined and attested to in modern times. I witnessed them myself at close quarters when itinerant magicians displayed their abilities in the market place with people crowding round within touching distance. Swords, offered to the crowd to test, were 'swallowed' and coals taken from a brazier were also offered for inspection then put into the mouth and held there and spat out, still blazing hot.

These magic powers were used by the 'bellows blowers' alchemists in their work, but the true *hsien* did not use the mastery of spirits in his work on the spirit; that was done by yoga, self-mastery and by co-operation with Nature to become one with her rhythms.

The Sorceress (*wu*) played a vital part in ancient Chinese magic. She purified herself with perfumed water, donned ritual robes, took a flower in her hand and mimed her journey in search of the gods or goddesses. She danced ecstatically to the

Messages and instructions could be received from the spirit world and from *hsien* through automatic writing, which was known to have been used in early Sung times. It was said that the Immortal Tung Pin, after invocation, communicated through a willow stick held by a blindfolded person over a tray of sand. This method of communication is of considerable interest since it is still in use today. The willow or peach stick, or pencil, can be held by one blindfolded, or it is supported on the upturned palms of the medium's hand, a position in which no muscular control can be exerted. The pencil appears to assume a life of its own, characters are formed in the sand and interpreted either as messages or alchemical instructions. Even books could be so transmitted: the *Secret of the Golden Flower* was reputed to have been written in this way.

As in all things Chinese, absolute courtesy must be observed. A spirit summoned to give aid is offered a chair to sit on and asked to give his honourable name and to identify himself by enumerating his august titles and the period of history he honoured with his presence. The spirit is bowed to and ritually thanked for help given; in return he depreciates his efforts and thanks the company for their invitation.

There were endless schools of magicians, soothsayers, horoscopists, geomancers and those who watched the heavens for portents. There was a huge trade in talismans and charms and, on the less magical side, there also existed a science of physiognomy which studied physical features and characteristics, but also drew from them conclusions as to the fate of the individual.

Associated with both *ch'i* and magic was the practice of geomancy, known as *feng-shui*, literally wind-and-water. It was the science of favourable conditions, climatic, physical and of the spirit world and was used in locating the right situations for temples, houses, graves, or the best places for business transactions. The abodes of both the living and the dead had to be in harmony with the cosmic currents and the breath of Nature, the *ch'i* of the earth. It required the offices of diviners, known as 'professors of divination,' the geomancers, to determine favourable situations which must also be governed by the *yin-yang* features of the scene. For this the geomantic compass was used. At the centre of the instrument there is a mariners' compass, an early Chinese invention, the 'Southpointing needle,' also called the *Tai Chi.* The sixteen

successive circles round the compass depict, first, the *pa kua,* then the twenty-four celestial constellations and after that the various numerical and occult calculations based on the sexagenary cycle, the constellations and the Twelve Terrestrial Branches. Naturally, favourable sites, times and seasons also affected the times and places for alchemical experiments.

Talisman of one hundred forms of the character *shou:* Longevity.

The ability to work magic is not, according to Ko Hung, a special endowment but is acquired through learning from Masters and taking elixirs. These individuals were not born with

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ALLIED SYMBOLISM

The symbolism of alchemy uses a language of its own which, like all symbolism, when understood, opens up hidden meanings. Symbolism is always ambivalent, on the one hand it makes more accessible and universal ideas which transcend the limitations of ordinary language and is the only language which is both international and capable of adaptation to all levels of understanding and experience and of endless expansion; on the other hand, it can be used to veil knowledge, to keep it hidden from those incapable of using it correctly. These are the exoteric and esoteric aspects. It is mainly the latter which is used in alchemy, since much of its knowledge could be dangerous, physically and spiritually, in the wrong hands. Both eastern and western technical terms were disguised under strange and often bizarre names employed for the substances, instruments and methods used; hence, much of the language and symbolism used is incomprehensible to the modern world. For example, an ancient Chinese treatise read:

> Red sand, cinnabar is of wood and will combine with metal [gold]; gold and water live together; wood and fire keep each other company. In the beginning these four were in a confused state. They came to be classified as Tigers and Dragons. The numbers for the Dragon which are odd are *yang,* and those for the Tiger are *yin* and even. The blue liver is the father, and the white lungs are the mother. The red heart is the daughter, the yellow spleen is the grandfather and the black kidneys are the son. The son is the beginning of the Five Elements …

As Holmyard points out, modern science uses signs and symbols, an esoteric language unintelligible to the uninitiated but differing from alchemy in that the latter's symbols are allegorical; in other words, modern science uses signs rather than symbols in the strict sense of the word. He also writes of alchemical symbolism as being of two kinds, the literary and the graphic:

In this connection mercury, or quicksilver, is particularly significant as it contains both the elements of fire and water, being liquid yet luminous. It can be represented as a metal, but because of its 'volatile' nature it is also regarded as spirit. Its dual nature makes it symbolic of the tensions of the complementary opposites, expressed by such symbols as the 'contending dragons' and the caduceus, containing and uniting the opposites. It represents the first and the last as the *prima materia* which divides into the opposites of all dualism, to be reunited in the *conjunctio* and to emerge in the final unity of the spirit. Exoterically, it is the quicksilver of the laboratory alchemist; esoterically, it is the spirit concealed in base matter. Mercury, regarded as a spirit, is volatile and transforming; it 'whitens all metals and attracts their souls … having in itself the principle of all liquidity, when it has undergone decomposition, it changes colours everywhere,' as Synesius said in commenting on the Physics and Mysteries of the pseudo-Democritus. This dissolving power of quicksilver is the feminine in its terrible aspect, its sign is dominated by the feminine lunar symbol as the Earth Mother, the womb of all metals, but it is also the triad in unity ☿ incorporating the cross, circle and crescent symbols; again, it is 'burning water' and 'non-burning fire,' the androgynous.

The alchemist succeeded in joining the two great powers of fire and water; sulphur, the hot and dry, the spirit of fire, was the colour of gold, but gold could be fused and reduced to liquid and so also had the spirit of water, the moist and the cold; the contraries were thus made one in gold. But the fire must be controlled and this introduces the symbolism of the bellows by which the fire was regulated. Fire must not be allowed to burn too fiercely at first; it must be kept steady and quiet in the early stages of the work; nor may it be allowed to die down, this being symbolic of indolent or intermittent effort, and of destruction. Once the fire is fully controlled the 'quick fire' can be brought into play that ignites the bright inner fire of illumination. It is easy to see that the bellows are a natural symbol for the controlled breathing exercises of alchemical yoga. The Patriarch Lu Tzu said: 'Only those who know what fire, cauldron and bellows really mean can use them effectively.'

Flight, which plays a minor role in western alchemy, assumes a major one in the East where powers of flight appear in all yogic traditions: the Rishis of India, the Arhats of Buddhism and the

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THE ESOTERIC AND EXOTERIC

Early alchemists, whose writings were purely personal and never intended for publication, could write as they pleased without fear of giving secrets away to the uninitiated, the merely curious or the grasping, but later, with the invention of paper and printing, the possibility of a wide distribution of knowledge occurred, and with it the need to keep dangerous knowledge secret and out of the hands of the ignorant or evil-minded. Thus there arose the division between the esoteric, or secret, and the exoteric or general knowledge, the one for initiates only, the other open to all. Once written material became generally available, esoteric lore ceased to be written down and was transmitted orally and only to chosen disciples who could be trusted with knowledge that was potentially dangerous or beyond the limited understanding of the ordinary individual. Added to this there were practices, formulas and knowledge which were the result of the experience of those who had made themselves adepts and acquired lore which they deemed could only be passed on to those of sufficient mental, moral and spiritual calibre. Books, then, when they became readily available and in general use, were only for beginners and the uninitiated. A book can be taken up or put down at will, read carefully or skimmed through and no discipline is involved; but esoteric knowledge, imparted by a master, demanded, first, the judgement of the master that the pupil was of the right quality and then serious discipline and dedication on the part of the pupil; these conditions being met, knowledge could be passed on by personal instruction only.

Alchemy is essentially an initiatory science or art and esotericism runs through all initiatory traditions; religions, the mysteries, tribal lore, shamans, magicians, secret societies, all employ a hidden language and symbolism. Though the secrets were reserved for a privileged elite, it was not an elite of chance; it was a matter of quality of understanding and being in the individual, and a matter of choice in the desire for an

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THE TWO GREAT POWERS

The primary theme in creation mythology is the emergence from the One of the Two, the creation of the primordial pair and the beginning of duality. This male-female symbolism is basic to alchemy, since the male sulphur and the female quicksilver must work on and with each other in balanced relationship. They are different but complementary, seeking out each other to bring about the restoration of original wholeness. They must continually stimulate each other. In alchemy everything is growing and divided into sexes; the whole universe is a living being working towards perfection. The eternal reactions of humanity and Nature upon each other, the alternating *yin* and *yang* in growth and decline, the fusion of the objective and subjective, all give rise to the cyclic powers of change and produce the rhythms of the cosmos.

Duality is the very essence of life in the manifest world; the light and dark following earth's turning away from the sun and returning to the new dawn. Its opposite is present in every thing: little is harder or more solid than the flint that gives birth to the spark of fire, the most unstable and volatile of elements. In man and woman the two powers manifest themselves in duality not only in sex, but in each sex. Woman, the *yin,* is negative externally and positive internally; man, the *yang,* is positive externally and negative internally: each incorporate both powers. De Groot says: 'The hard and soft match and contain one another, *yang* gives and *yin* receives. The male and female need one another. It is this need that brings about creation-procreation, so that the essential *ch'i* may have its proper play.' He calls the two powers 'the Great Regulators of the cosmos which cause the phenomena of creation, evolution and destruction.' They are also called the Contraries, the Contending Dragons, the Great Extremes. The breath, vital essence, or *ch'i* of the *yin* and *yang* is necessary for creation of any form. The

Ts'an T'ung Ch'i says that 'creation is dependent on the fusion of the breath of *yin* and *yang* … if a thing does not contain *yin* and *yang* it repudiates its origin. Baby chicks do not come from infertile eggs.'

In alchemy *yin* is coagulation and *yang* is solution; in metals *yin* is quicksilver and silver and *yang* is Sulphur and gold; *yin* the moon and earth, *yang* the sun and heavens, while in the work *yin* represents the esoteric and *yang* the exoteric. The processes of heating and cooling are also related to *yang* the sun and *yin,* the moon; they bring about change by balancing each other with their hardness and softness. In the *Ts'an T'ung Ch'i* the sun and moon are said to reach out for one another; they are 'the two great luminaries which arose from the Great Ultimate, the *T'ai Chi.* The *yang* evolved as air and formed the heavens, the *yin* coagulated to form the earth; particles from the *yang* formed the sun and *yin* particles the moon; between them they begat the stars. Thus the *yang* and *yin* are also known as *T'ien* and *Ti,* Heaven and Earth.'

All metals were regarded as the result of the union of the two powers, male and female, sulphur and quicksilver, spirit and soul; their union produced perfection: cinnabar. There is, however, a dual nature in quicksilver or mercury, which is consonant with the two natures of the feminine power, at once the nourisher of the embryo within the womb, the hermetic vessel, the vase, etc., and the death-dealing dissolvent, so that it brings life or death according to its particular situation. This lunar material is also the 'water of life,' which nourishes in the womb, and the destructive humid dissolution of death; but that which decomposes is also the medium for generation. As Synesius said: 'It is indeed that which decomposes and that which makes to generate.'

Metals were divided into the two sexes in smelting processes and young men and maidens took part in the rituals in which the 'marriage of the metals' was involved. In a memorial ode, on Ch'u Yuan, by Chia I, c. 170 BC, we read: 'Heaven and Earth are like a smelting furnace, the forces of natural change are the workmen, the *yin* and the *yang* are the fuel, and the Ten Thousand Things are the metal.' Fire for the furnace was also produced by the male-female interaction in the two 'rubbing sticks' which brought forth the vital spark; the fire was latent in the *yin* wood but was ignited by *yang* action.

and Earth by the interactions of the dual forces of Nature, the union of the animal and intelligent souls.' Humanity is frequently spoken of as 'a miniature Heaven and Earth,' a product of the powers of *yin* and *yang,* a microcosm which is a reflection of the macrocosm. Like Heaven and Earth, the two great powers cannot be separated; one implies the other, they cannot be thought of in total separation. The two opposites, contrary but complementary, bind and neutralise each other without a diminution of either; together they produce perfection, which is gold in alchemical terms and in classical Taoism 'the Return to the Source,' union with the Tao.

The fact that each sex is only half accounts for the universally expressed need, often amounting to an acute longing, to find the complementary partner, the 'other half,' a completion, the regaining on the personal level of union and wholeness. From the alchemical aspect, the union is spiritual rather than sexual, it is metaphysical in significance, transcending the personal and emotional state and unifying on a higher level. Each individual has also the two powers within; in the unregenerate state of the base metal they are in conflict and are in the position of a kingdom divided against itself. In this disharmony the *yin* and *yang* are out of balance, not only in the individual but in the world in general, which is, naturally, only as good as the individuals of which it is composed. The old, base nature must die and much of alchemical symbolism deals with death; everything must die before it can be renewed, a theme found in all initiatory traditions. In alchemy, the minerals die in the stove or athanor, to be fused and ultimately united; this is also the 'marriage' of the metals and marriage is also associated with death in dying to the old life in which each partner 'gives up' to the other. In the fusion of sulphur and quicksilver each loses its individual identity to take on the united character of both. But death is always a reunion, body to earth, soul to the realm of spirit; it is a transmutation and transformation.

Continuing the marriage symbolism, Burckhardt writes: 'Man and woman, who in natural fashion incarnate the two poles of the alchemical work, sulphur and quicksilver, can by their mutual love – when this is spiritually heightened and internalised – develop the cosmic power, or power of the soul which operates the alchemical dissolution and coagulation;' or, again as Artephius wrote: 'They will embrace in such a way that never again will they be separable one from another. Then indeed will

the spirit unite with the body in perfect harmony, so that together they become an immortal thing.' The male-female symbolism employed is merely a support for the esoteric understanding of what is involved in the work: the supreme aim being that of unity and return to primordial perfection.

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THE REAL ALCHEMY

That the real alchemy was concerned with the metaphysical, mystical and religious life is made abundantly clear in the writings of leading alchemists of both East and West who state categorically: ‘Our gold is not of this world.’ All the exhortations to right conduct, purity and religious observances show that the Work was, for the true alchemist, a spiritual matter.

Writing on yoga and alchemy and discussing the legends and references in Tantrism, Eliade says: ‘We have here no pre-chemistry, no science in embryo, but a spiritual technique, which, while operating on “matter’,’ sought first of all to “perfect the spirit’,’ to bring about deliverance and autonomy … gold is the one perfect solar metal and hence its symbolism meets the symbolism of Spirit, of spiritual freedom.’This is confirmed by John Blofeld who, travelling in pre-Communist China and visiting Buddhist and Taoist monasteries, received from a Taoist abbot the statement:

> Ours is not a religion but a way to the Way … our yogas and meditation begin with the generating of tranquillity, that in the stillness of our hearts we may apprehend the Tao within, around, above and below us. We seek to nourish our vitality and prolong our lives in order to gain more time for the refinement of spirit needed for attaining the higher goals. Then comes the compounding of the Golden Pill which some misguided persons have sought to produce by alchemical processes, whereas in truth it can be compounded only within the body and is therefore known esoterically as the immortal foetus. We Taoists are generally agreed that its creation is the means to immortality, but at this point paths diverge, some seek aeon-long immortality, the attainment of a god-like state, as an end in itself; others strive to Return to the Source, an apotheosis identical with the attainment of Nirvana, though conceptions of the inconceivable naturally differ.

In the spiritual alchemy even the pursuit of longevity had its origins in the idea that the longer the physical life, the longer the time for attaining spiritual transformation into the True Man and

hermetic ‘As above, so below,’ or, ‘In truth, certainly and without doubt, whatever is below is like that which is above, and whatever is above is like that which is below.’ This enunciates the law of correspondences: that all creation is, in fact, a reflection; the phenomenal reflects the spiritual. The hermetic tradition also says that ‘The work … is to be found within you and is enduring: you will always have it present, wherever you are, on land or on sea.’

Meditation was an important factor in Chinese alchemy in developing the ‘inner elixir,’ and the sealed vase was the isolated mountain retreat, hermitage, or meditation room, where knowledge of the inner self was attained, where transformation took place and from which the new man was born; hence the constant reference to the foetus or the seed as also symbolically the birth of this new being. There is pre-natal growth in the seclusion of the closed room or retreat, the womb, before the new being emerges from darkness to light, from dependence to independence, into the life of the spirit. A modern Taoist Master called this foetus ‘an incorporeal manifestation of the union of spirit with vitality,’ and a Japanese professor, visiting the Taoist White Cloud monastery in the 1940s, found the ancient values still alive:

> Little significance was attached to the artificial, so-called cultural, activities. Taking pride in gathering scraps of knowledge, conducting surveys, doing research – those may be efforts to find some satisfaction or self-understanding in the society of men, but they end, as does life, like the flaring out of a candle. It is better to be embraced in the vastness of Nature, to melt into it. Then there is no wasted resistance to life, no useless conflagration. When one’s breathing is in harmony with nature, one becomes identical with its very life-flow.

Alchemists of both East and West state categorically that Nature is their guide and exemplar, that they are working with her and following her laws. In alchemy they may be hastening some of her processes, but never working against her. As a science alchemy aimed at the understanding of the properties and formations of mineral substances; as a spiritual art or philosophy it was concerned with the mysteries of life and the cosmos. It had a cosmological relationship with every aspect of life, human, animal, plant and mineral. One could not go wrong in following Nature. As the Golden Tract says: ‘Nature seeks and demands the gradual attainment of perfection, and a general approximation to the highest standard of purity and excellence.’

The cult of longevity was not considered to be going against living in accord with Nature since she had long-lived creatures whose life span greatly outdid that of the human being; in any case, it would be Nature herself who provided the life-giving plants and substances; the individual had only to find and use them. Moreover, the aim of a long life for the true alchemist was a spiritual one, the gaining of time in the body for the development of the spirit.

Eliade writes that 'Alchemy represents the projection of a drama, at once cosmic and spiritual, in laboratory terms. The aim of the *opus magnum* was at once the freeing of the human soul and the healing of the cosmos.' In ancient India the Master Nagarguna made it clear that the work was a spiritual technique when he said: 'The mercurial system must not be looked upon as a simple eulogy of metal, for it is our means … of attaining the supreme goal, which is deliverance;' and in an ancient Chinese text he is also reported as answering the question: 'It is believed that it is possible to make gold from stones; is that not absurd?' by saying 'It is perfectly possible in the spiritual sense.'

The whole work of alchemy is summed up in the phrase 'To make of the body a spirit and of the spirit a body;' or, variously expressed, it is 'the spiritualization of the body and the embodiment of the spirit;' or, again, it is 'to spiritualise matter and materialise spirit.' In the hermetic tradition this is enunciated as 'We receive not only a new soul with this regeneration but also a new body … it is more spiritual than the air, akin to the rays of the Sun which penetrates all bodies, and as different from the old body as the resplendent Sun is from the dark earth.'

The goal of the Taoist alchemist-mystic was transformation, or perhaps more correctly, transfiguration of the whole body until it ceases to 'be' and is absorbed into and becomes the Tao. The alchemist becomes the True Man, returning to the Source – the Taoist phrase for universal Oneness.

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