

# CREATION, ITS NATURE AND IMITATION IN ALCHEMY

*by*

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1. *The aim of Alchemy.* Before proceeding further it is advisable to take stock of the present position serving as the starting point from which to trace the origin of alchemy. This has been briefly revealed by Taylor(1), who, as late as 1951, records that, "it may be at once said, alchemy still continues to be an unsolved problem". In more than one communication(2) a different picture has been presented to that of the traditional one. Alchemy has been shown as trying to acquire immortality and this by using special herbo-metallic drugs. Now synthetic gold was such a dual-natured medicament so that the art of making gold, as a drug of immortality, was mistaken for that of making gold, as a precious metal. Incidentally it may be mentioned that in ancient times silver, being rare, was even more costly than gold; but alchemy has always aimed at making gold in the first instance.

For making herbo-metallic preparations the important ingredients were herbs. Thus alchemy directly descends from herbalism. But herbalism itself, which incorporated cults like that of Soma, endowing plants with fabulous properties, was an offshoot of mysticism. This makes alchemy directly a product of herbalism and indirectly of mysticism. It will be seen later that the very name, alchemy, incorporates the notion of fresh-plant juice, and the same is true of its Sanskrit synonym, Rasayana. Pharmacy is restricted to the art of mixing, decocting and dispensing drugs

already available. Pharmaceutical Chemistry, on the other hand, signifies the science and art of synthesizing drugs not known to exist. Alchemy then was Pharmaceutical Chemistry in its earliest phase.

2. *The active principle of Soma.* Literature is silent as to the nature of the active principle in Soma. Moreover, there were also others like Ambrosia in ancient Greece and Chih in China. It is natural to expect that all these drugs of immortality shared a common factor among them. Their active principle has been shown to be the soul, or rather the Spirit, the life-essence. And the use of the above drugs was initiated by the doctrine of Animism which assumed the active-principle, even though Spirit, to be transferable.

The early man inquiring into the nature of different objects, founded primitive natural philosophy. He first factorized himself, thereby creating the equation:  $\text{Life} = \text{Body} + \text{soul}$ . The conception of the soul kept on changing, first it was blood, lastly a dual-natured "gaseous" entity. The natural philosophy of the times simply extended the human constitution to explain the make-up of everything under the sun, when a plant and a metal each became the owner of a soul like man. Thus a portion of Soma juice could transfer its soul-content to increase the life-span of man. Just as blood transfusions can keep an anaemic patient alive for some time the regular use of Soma kept on prolonging life for ever. On the contrary alchemy wanted a single-dose of immortality. It therefore became imperative for the alchemist to discover the reasons for the limited powers of Soma and, on the basis of such information, to proceed further to improve upon it.

Such a study meant nothing else than establishing the constitution of the soul which was the active-principle of Soma.

3. *The two souls.* When man inquired into the nature of objects in general he simplified his problem by making everything like himself. Now he wanted to know their origin, including that of the soul. Like the animist he began by inquiring first into his own birth. The animist had previously replied to the effect that a soul enters the womb and a child is delivered; sexual connection has nothing to do with it. This archaic conception still prevails among the aborigine of Australia and even persists in many a legend, all over the world, according to which, a hero is born of a virgin mother. But later on man did realize the joint role of a father and mother in his own make-up.

Reasoning quite rationally man traced his body to two elements, Adam and Eve. These were elements because they could not be analysed further. They were two because neither could be reduced to one. Man thus possessed a bi-elemental constitution and a bisexual origin. The same was applied to everything else by a doctrine which has been called Dualism. The ultimate cosmic elements of masculinity and of feminality were named Yang and Yin in Chinese, meaning Light and Darkness. If our life is magnified into existence the abstract notion of Adam becomes Yang, and that of Eve, Yin. Just as Adam and Eve are the joint progenitors of man, Yang and Yin are the joint-creators of everything that exists. They together are the source of all existence. The theory which propounds this notion is but an

extension of Animism since Animism and Dualism are based on the constitution and on the birth of man respectively.

However, the two creative elements need not be exactly equal in a given constitution or to give birth to one ; their issue however would not be immortal. We know instances where some men are robust males or otherwise dominating, and others positively effeminate or passive; corresponding opposite cases are also found among women. A similar pattern of unbalanced constitution exists among souls. Then their two components are easily separated which explains how no man is immortal and nothing is eternal, gold being the only exception, an observation of great significance to the alchemist.

In the light of Dualism if  $\text{Life} = \text{Body} + \text{soul}$  then, body can be conceived as female, and soul as male. Let us see further the factors which constitute the body.  $\text{Body} = \text{Adam} + \text{Eve}$  (together as donors of the two elements in the make-up of the body). Their sex is self-evident. Being elements they cannot be factorized further. Correspondingly in the equation:  $\text{Soul} = \text{Male-soul} + \text{Female-soul}$ , these two components are the ultimate elements functioning as the "Adam" and "Eve" of the soul. The Yang-soul is called *Ruh* in Arabic, Brahman or Prana in Sanskrit, and Spirit in English. It is responsible for the life-span of a being, brief or long. Being the life-essence it may be properly called the animating or Animogenic principle. When the soul-complex has a large ratio of Spirit the individual, as its carrier, is long lived. The same applied to a plant, like Soma, makes it perennial. The Yin-

soul is *Nafs* in Arabic, Atman in Sanskrit and the Soul (or Soul specific) in English. It is the form-donor, accounting for physique, appearance and individuality. It is the Morphogenic principle. When a man's *Nafs* is strong the individual is well-built, handsome, or intelligent, but he need not enjoy a long life. On comparing a herb and a metal, the latter, being obviously solid, has a powerful female-soul, whereas the former, being delicate, would have a poor one. We may picture the Soul as the gaseous replica of the individual, but then we must not forget to attribute to such a dummy all the virtues and desires that characterized a given personality. In fact the Soul is the abstraction of individuality. The Arabic word, *Nafs*, the Soul, also means the individual, or self. In Sanskrit Atman is its exact equivalent, meaning the Soul, as also self. In fact there it even means the Body, the corporeal self as in the following translation of a text from Brahadranayaka Upanishad, (1.2.3.) which states that, "He (Prajapati) divided his Body (Atman) in three ways"(3). Schep (4; p. 30) quotes the Psalm, 63 : 1, where the poet says to Yahweh, "My Soul thirsteth for thee, my flesh longeth for thee," as though Soul and flesh (body) are one. He reproduces the interpretation of J. J. Valetton who "regards Soul and flesh as both denoting the *whole man* (or self), without distinction between the inner and outer aspects." The Soul and Body, as content and container, become identified with each other. Even the popular English phrase, "poor Soul," suggests nothing else than a "pitiable individual." Soul, or the female-soul, is the abstraction of life-form, which differs from species to species and from individual to

individual. To avoid confusion between soul as a whole and the female-soul, the former is written here with a small "s", as soul, and the latter, or *Nafs*, with a capital "S", as the Soul.

4. *The conception of souls in alchemy.* The subject of souls being of vital importance in alchemy their nature must be explained in terms which the masters of the art themselves have expressed. Stapleton(5) reproduces a Latin "extract from the (work) Margarita Pretiosa Novella of the Italian Alchemist, Bonus, c. 1330 A.D., affording an excellent summary of the opinions of Arabian alchemists, regarding the terms Body, Soul and Spirit." The passage left untranslated, was by no means easy to understand. It was kindly rendered into English by Rev. Father Mascarenhas, S. J., of St. Patrick's High School, Karachi. Some subtle points were further explained by Dr. Gruner, of Canada, the first to introduce Avicenna to the English reading public. My sincere thanks are due to them both. However the responsibility for the interpretations that follow entirely rests with me.

Bonus maintains that the portion or the substance which is stable to fire is Body. But at the same time it serves as the vehicle of a noncorpoeral element, the Soul. Soul cannot resist heat and evaporates, as some kind of vapour, with the action of fire. Spirit, the third element, is a powerful force, capable of resolving Soul and Body together as vapour; and also the reverse, making them both fire-proof, even when the body is originally sublimable. Without Spirit neither can the Soul remain in the Body nor be

separated from the latter, for the simple reason that Spirit and Soul constitute a soul-complex, or soul as a whole.

We may now discuss examples illustrating the above two phenomena. The classical picture of the Spirit making the Body buoyant is that offered by the resurrection of Lord Jesus Christ. His spirit returned to his dead Body, enlivened it and took it to Heaven. His body, as such, became buoyant. It is a controversial point, due to rationalism being allowed to interpret a recognized legend, whether Jesus went with his body and flesh, or the body was transformed into an ethereal structure which was naturally light enough to ascend upwards. The orthodox Muslim view maintains that Jesus went with his original body. Likewise, on the Day of Judgment, all will rise with the bodies they used to know before their death. Schep(4), in his erudite treatise, on the Resurrection Body, has gone deep into the problem and fully supported the traditional view mentioned above. I am now convinced that the alchemist also understood by resurrection the body becoming sublimable without any change in its constitution; this is a change from my previous interpretation. A Body which was non-volatile before can become sublimable and the property could be donated to a Body by a Spirit, being the agent capable of inducing resurrection.

We can here consider a pure alchemical phenomenon of this category. Common salt is solid and as such non-sublimable. It may be distilled with alcohol, much like rose flowers with steam. Heat kills the salt, liberates its Spirit, which evaporates along with

alcohol vapours, and is recovered in the distillate. This is returned to the distillation flask when the Spirit revives the dead body of the salt. By repeated distillation the salt is killed and revived until the impacts of the Spirit on the Body make the latter sublimable. The end result is that the entire quantity of salt distils over and the product becomes Elixir of common salt. Its other name would be Resurrection Body of salt. It may be added that the different system of mysticism, treating the body mercilessly, illustrate the same principle. The Spirit has to produce impacts on the Body, killing within limits and reviving the same, until it acquires miraculous powers quite foreign to its material nature. In fact the acquisition of such virtues characterizes an immortal, apart from the ways and means which has made him one. Thus an Elixir, according to Jiladaki, the famous master of Arabian alchemy, also "enables one to achieve extraordinary and talismanic results" (6 ; p. 80). I have previously(7) reproduced the picture of such an Elixir-made Chinese immortal ascending to Heaven in broad day light just as Jesus did. We see here clearly how mysticism has been extended to appear as alchemy. The incorporation of mysticism in alchemy is indirectly recognised when authors, like Sir E. Thorpe(8), state that, "theosophy and mysticism were first imported, into alchemy not by Arabs but by Christian workers." When Elixir had talismic powers and enabled one to ascend towards the sky what better proof can be offered of alchemy being applied mysticism from its very inception.

There is still the opposite role to be exemplified, of a volatile substance becoming heat-proof. Mercury vaporizes with heat.



Spirit, however, is so powerful that it can pin down the Soul to the Body, when both, along with the Spirit, can continue to mock a blazing fire. In fact an adept in alchemy first gains confidence when he has successfully stabilized mercury against heat.

The interpretation discussed above can be briefly confirmed by what Juldaki has to say. He was alive in 1342 so that he belongs to the same age as Bonus, who lived about 1330, when alchemy was at its zenith. According to Jildaki "pure Bodies are the carriers of the Souls and Spirits, the latter merely serving as a *liason* between the other two" (6; p. 54). And again, "Soul and Body do not combine with each other unless helped by pure Spirit, which plays the part of an *intermediary*" (6; p. 283). Spirit is like a catalyst, controlling the reaction between Body and Soul, separating as well as uniting the two.

5. *The mortal and the immortal, the nature of their souls.* By now we are fully initiated to understand the constitution of the soul of Soma and thus explain its limitations as a drug of immortality. The soul of Soma had only additive properties, while the real immortalizing soul must be multiplicative or ever-growing. The soul in Soma was preponderantly male, that is why it was strong enough to prolong life longer than any other donor of soul. But since it is not self-reproductive, its stock was bound to get exhausted when a fresh portion of the juice had to be taken. Now Soma was the herb Ephedra(9). Being a perennial plant it possessed a large quantum of Spirit which accounted for its life-increasing power. But being a delicate plant its Soul was poor.

Thus its soul structure was highly unbalanced, much like Adam who was a mortal. We can now take the case of a metal like copper. This is the carrier of a dominating female-soul. But when we take Soma and copper together we have:

Soma=Strong Spirit+weak Soul

Copper=Strong Soul+weak Spirit

On calcining them the weaker elements depart first, and of the two, the weak Soul before the weak Spirit. Thus the first to really appear on the scene is the strong Spirit, and as soon as the strong Soul is free to accept the male-soul, the herbal Spirit joins the metallic Soul, fusing to constitute the soul of a herbo-metallic complex. The male and female souls are now equally strong, unlike anything in nature and their unity represents a well balanced bi-sexual constitution. Being bi-sexual, or a hermaphrodite, it is self-generating, unlike the male soul of Soma. An ever increasing soul is another name for an immortalizing soul and the herbometallic complex, obviously a metal, becomes eternal as gold, being the only metal which is fire-proof. To say that gold resulted as the impact of the Spirit of Soma on dead copper, is to admit that the resultant is now a soul-bearer, a creature. While so much has been explained of alchemy the animated nature of synthetic gold is never mentioned in the literature. Authors appear to feel shy in facing irrational concepts and having subconsciously rationalized alchemical doctrines they have left alchemy an unsolved problem.

6. *Two kinds of creations and their respective creators.* Our conception of the creator starts with the belief that, we have life and body, or rather a body and an invisible soul, when their ultimate source is the creative power which, personified, becomes the creator. First God created "dust" out of nothing. Then he sent his "word" which was transformed into the "soul", and the impact of the latter upon the previous dust resulted as life with the form of Adam. But then there is to be a further repetition of creation. On the Day of Judgment there will be a mass resurrection. The souls of the dead will return to their respective "ashes", which are nothing else than the original clouds of "dust". Thus each soul and each clod of dust will reunite for the second time and repeat creation, thus making Resurrection = Creation. Correspondingly the power that resurrects is the same that creates and we do attribute them both to God. In Hindu philosophy the power that created out of nothing is Brahma.

We unwittingly recognize another kind of creation which is spontaneous generation. It is, so to say, anonymous creation, since it is not attributed to any creator. To cite a couple of examples, we observe mushrooms shooting up from vegetable debris as also growing from trunks of fallen trees. Worms are born in our intestines from decomposed vegetables and meat that we eat. Above all there is a regular recipe for generating scorpions by mixing curds with cow dung. What is the origin of life in such cases? Only Dualism has tried to answer it. There is some Yang matter and other as Yin. They behave like mysterious father and mother producing an issue which is what we actually see as mushrooms, scorpions etc. Dualism explained every creation on this pattern, thus leaving no form of life unexplained.

Now arose another difficulty when man tried to interpret the origin of mortal and immortal beings. Adam was mortal by his constitution but with Eve, to reproduce their race, mankind became immortal. Man accordingly conceived, Reproductivity = Immortality. In as much as Eve is the joint contributor to the immortality of the human race her origin has also to be considered. She was not created from a separate clod of dust but out of a "rib" of Adam. Adam was divided between two parts, though unequal, a rib and the rest of the body. Adam remained as such while the rib grew to be Eve. Thus we find that man and woman ultimately come from a single clod of dust. Let us now return to Hindu philosophy for the genesis of such donors of immortality. We read in Radhakrishnan (10; p. 59) that, "a personal god, Prajapati, tired of solitude produces the world after having divided himself into one half male and the other half female." Just at this stage, when he took over the duty of the creator, Prajapati was bisexual or a hermaphrodite. In order to further explain his activity, as the creator of immortality, the following extract has been reproduced from Brahadranayaka Upanishad (3 ; p. 50): "One does not feel happy when alone. He (Prajapati) desired a mate. He became the form of a *man and wife embracing each other*. He divided this body into two. From that husband and wife came into being. Therefore this body is half of himself like that of a two-celled seed." And the two-celled seed became the everlasting tree of life, and of eternal creation. The constitution of Prajapati is fully confirmed as that of a hermaphrodite. Adam later on became essentially the same, but as

two unequal halves, as a rib and the main body. Since Prajapati's two halves contribute to the immortality of man his initiation makes Reproductivity. =Immortality. And what is reproductivity but a continuation of creation so that, Procreation=Creation. Now the above two equations as one make, Procreation=Creation —Immortality.

7. *Procreation identified as immortality.* When the concepts of Procreation and of Immortality become fused into one, such a belief led to the worship of the procreative power as that of the immortalizing one. Archaeologists have unearthed images of the reproductive organs which were worshipped in ancient times. Relics of the same worship, in a disguised form, persist even today. Moreover there is a regular pageant of resurrection depicted as a scene on a Chinese grave(11) of about 3rd cent. A.D.; Fig. 1. There are male and female deities, half human and half serpents, which are active pairing. By their procreation-activity they are generating life-essence for reviving the dead from the grave. Life springs when Yang and Yin substances undergo reproduction be it in secrecy. A symbol of this category has found its legitimate place in alchemical literature. In an Arabic MSS on alchemy there are shown two serpents intertwined, Fig. 2, a feature characterizing the reproductive pose of these reptiles. Life-essence is being generated by serpents which are themselves spirits and would go to animate dead copper as live gold. A similar symbol, entitled the Hermatic Rod, is the design of Holbein, the younger, Fig. 3. The two serpents, representing male and female souls, shown co-opulating, have thereby created a soul, shown as the bird, sitting on the top of the tree of life, depicted as the staff or the rod, the soulbearer or Body. Different versions of the same, with two serpents pairing, are found profusely decorating

medical literature. Their activity represents *creation via reproduction*. By creation is meant generating life-essence, the agency that creates and that resurrects. Briefly the Hermatic Staff is the magician's rod that dubs the dead to rise to life. It has therefore become a popular symbol in medicine, the art of healing and of saving life from premature death.

8. *Synthetic gold and the category of its creation*. It is further desirable to understand the pathway leading to the synthesis of gold. A Yang-herb and a Yin-metal generated an immortalizing soul and this was assimilated back into the body which, as a system of creation, finds a ready explanation in Hindu philosophy. Radhakrishnan (10; p. 69) writes that, according to the Upanishad, "He (the creator) created the world and then enters it." In the synthesis of gold, gold was created out of copper and the soul enters the metal to animate it. Creation was dead until the creator as soul entered it; likewise gold *was* not a ferment until the soul that was generated permeated it. The feature common in both cases of creation is that the life-essence did not come from outside. The generator of the soul, or the creator, and the acceptor of the soul, or the final animated creation, constitute a closed system. This is expressed otherwise, when Radhakrishnan states that, the creator "created itself by itself". If creation is to be self-explanatory, or at least consistent, we have to identify the material that grows with the power that induces growth. Thus there is a doctrine which equates Creator = Creation, leaving nothing outside it. It is called Vedantism in Hindu philosophy and Unity of Existence in Islamic Sufism. I imagine such monistic theories exist also elsewhere. What Dualism did was to start from the very beginning with a dual-natured creator so that, when there is a self-reproductive system, creation and immortality both are implied in it. Only a hermaphrodite-creator could create itself by itself, as a typical bacterium would. In reality Dualism projected

the phenomenon of human birth to explain the origin of the universe. One is reminded of what a French cynic shrewdly observed : Man first created God in human image and then God created man in divine image. Dualism projected man/woman as Yang/Yin as the cosmic male and female elements which became one as the creator. The creation of a hermaphrodite creator naturally became bisexual. Brahma created the world out of nothing which cannot be visualized. Moreover Brahma created man a mortal which is not perfect creation. Prajapati on the contrary created the universe out of himself which is relatively easier to grant. Moreover Prajapati's creation is immortal and his technique of creation is reproductivity which again is easily appreciated. Thus arose two creators in the Hindu Pantheon, one for simple creation, and the other for immortality. In Chinese philosophy there is no counterpart of Brahma, whereas Prajapati's place is occupied by Yang-Yin, the procreative-creative power. Dualism is the philosophy that mainly supports alchemy, Animism being another, and with their doctrinaires largely in China it explains how alchemy took its birth there.

9. *Synthesis of gold allegorically represented.* A picture can represent an object which it tries to reveal. In some cases the artist tries to conceal what he specially likes to present as a riddle. It is a form of negative, but more forceful, presentation of some contents. Allegorical compositions come under this category. Unless one possesses a key to the understanding of such contents a picture as a whole conveys little meaning. We have learnt of three features characterizing synthetic gold. Firstly it is something living, a creation. Next it is ever-growing a ferment. Lastly it is a drug of immortality. Briefly it is the donor of an immortalizing soul, hence a creative force. We have to find all these features in the symbols

of the alchemist. We know that he imitated creation by inducing spontaneous generation. As an artist the alchemist has depicted two lovers, most eager of union. Accordingly there are love scenes showing that the selection of two initial substances has been proper. Naturally they are to be presently bound which means by marriage. The alchemist does figuratively speak of marriage when referring to a further stage of union between his opposite substances. Then the technique of marriage requires procreation and the alchemist has accepted procreation as a means of generating the soul. This stage is shown as a nude couple on a nuptial bed. Later on marriage is blessed with an issue. This is depicted as a child being born by its parents or even independently. It is the fruitful end of the experiment, the issue representing soul as creation. The issue or the soul has been generated by two opposites. Now the soul has to be absorbed. It may be reminded again that Hindu philosophy conceives the creator entering the creation to animate it. Such a stage, with the soul assimilated, shows fusion of the opposites, into a unit constitution. The female is grafted on to the male, when the resultant becomes a hermaphrodite, an element by itself, no longer capable of existing as any half. A successful marriage is a bondage for ever, husband and wife living two as one, or half and half as one, which, figuratively speaking, becomes a hermaphrodite. And this inter-dependent life begins with the birth of an issue, of the soul, that has been generated by the pair of lovers and now binds them into unity. The pair, as husband and wife, is the stage prior to their becoming a hermaphrodite, or as



two mortals about to become a self-generating immortal. Those who know a married couple having remained childless and then getting an issue will realize the change here spoken of as mortals becoming immortals, when their life's mission seems to have been achieved. The hermaphrodite represents joint-creators in the constitution, otherwise even a married couple can personify creation as also immortality. In alchemical symbolism therefore Married Couple=Hermaphrodite ; and both kinds of symbols occur in numbers.

10. *The Hermaphrodite and the Staff of Hermes.* We can now analyse a symbol of the hermaphrodite in all its details. Fig. 4 is a classical symbol of the hermaphrodite and has been taken along with Fig. 3 from the illuminative article of Schef(12). There are at once two parts in the picture, the hermaphrodite and the dragon, the latter bearing the former. The dragon is the Body and the hermaphrodite the soul. Both Body and soul are dual natured. Body=Adam+Eve (as elements). The dragon, or the Body, with its two ends, carrying the heads of a man and woman, chin to chin, show mutual attraction as between the two poles of a magnet. Likewise the Soul=Male-soul+Female-soul. These are two parts of a whole which cannot be separated any more. But we have seen that previous to this state of fusion they were separate. In fact in a mortal being Spirit and Soul easily separate, whereas in an immortal they become one and self-reproductive, for which the hermaphrodite is the proper symbol. Body continues to remain one and is accordingly treated as an element, but since Spirit and Soul do separate they are treated as two distinct

elements in a mortal. Thus arise the three elements of the alchemist, Body, Spirit and Soul, already discussed. The symbol Fig. 4 as a whole is accordingly named "*Luciferian Trinity*". The hermaphrodite, or the soul as a whole, is carrying a huge pair of wings, showing its volatile nature, and even the dragon or the Body, bears a small pair. The Body has become sublimable, which is expressed by assigning a smaller pair of wings to the dragon. The picture is labelled *Luciferian Trinity* with the dragon bearing four heads, with open mouths spitting out flames of fire. The Body is obviously "in heat". Now animals ripe for the procreative act, show their bodies "in heat" so that the Luciferian Trinity= Procreative Trinity, which also means the Creative Trinity and the Immortalizing Trinity. The male half of the hermaphrodite is carrying a sword and the female half a crown. The alchemist's endeavour has been a success, his initiation was no less than a conquest, shown by the sword, and the end no mean achievement, fully deservant of a crown. Fig. 3 has been already mentioned before. It can be equated with Fig. 4. The male and female halves of Fig. 4 become the serpents in Fig. 3, as Spirit and Soul, and then in their procreative pose being intertwined. Serpents symbolize souls, and when male and female souls unite another soul is generated which animates a body, or reincarnates the dead, the bird in Fig. 3 is the generated soul of the immortal.

11. *The essential of creation.* While considering, Procreation=Creation, we found that Hindu philosophy had recognized each as the achievement of their respective authors, thus equating Prajapati=Creator. These nevertheless represent

two concepts, hence there must be a common virtue which makes them both creators. It is the property of growth. In a previous article (2) it has been explained that, Life-essence=Growth-soul. There is etymological evidence supporting the origin of such a conception. Brahma, the word for the Creator, is derived from Brahma, to grow, and its other derivative, Brahman, signifies the cosmic soul, the creative force behind everything that exists. Now if anything grows it implies the existence of something that was capable of growing but did not grow before. It is another phase of the same problem which in the end tries to identify Creation with the Creator. Thus the inert substance and the power of growth must also be identified as one. But when Brahma made something grow out of nothing, it merely means our having assumed Growth=Creation. Once we realize how man got to this conception the problem becomes much easier. He first observed a seemingly dead tree in winter and later the same springing forth into foliage, and *thinking backwards* he made a sort of predated achievement which meant, to grow is to create, Brahma really made the *individual* grow. Prajapati made the *species* grow, hence Brahma=Prajapati. Once we factorize Life = Growth +Reproduction, we at once understand how Brahma and Prajapati both must become creators.

The conception that Creative-force = Growth-soul is capable of confirmation. Man observed that without sunshine there is no plant life, hence also no animal life, which is dependent on vegetation. Accordingly the sun became the donor of Growth-soul or of life-essence, explaining the world-wide existence of

sunworship. G. K. Chesterton (13; p. 165), who would have never said a word to support paganism, makes the pregnant observation that, "the test of a sun is that it can make something grow," a virtue which qualified it as the creator in the eyes of the primitive observer. Quite independently O. S. Marden(14), has also stated that, "*Sunlight* is a powerful rejuvenator and force producer. *Darkness* and shadows are death-dealing." There could be no better independent interpretation of the dualistic conception of Yang/Yin as they literally mean Light/Darkness. The sun, as the donor of growth-soul, easily becomes the Creator; while Prajapati, the donor of fertility, making the species grow, becomes another Creator.

Here, at Pabna, I received an invitation card to attend a Hindu marriage. In a similar instance from a Muslim side the card would read at the top, "in the name of God." The Hindu custom instead invokes the blessings of Prajapati, with butterfly as his emblem. Now butterfly, as a fast growing insect, represent fertility, which can be also confirmed from Chinese symbolism. Thus Prajapati, with his emblem butterfly, clearly appears as the donor of procreative power, thereby promising a fruitful marriage. We therefore find that Prajapati has become a creator, not by virtue of donating life and growth, but by denoting fertility and reproductivity. The accompanying picture of the butterfly, coming from the invitation card is reproduced, as Fig 5.

12. *The alchemist's conception of perfection, opposites and unity.* These belong to one and the same category, in so far as, when two

opposites unite as one, that stage automatically acquires the property, not perceptible before, of procreation and as such of creation, which qualifies it as perfection. The alchemist was no ordinary thinker, like a gold-smith, to trade in words like perfection and unity. Indeed he came to alchemy as a professed thinker, making his art applied philosophy or better still applied mysticism. He actually styled himself a philosopher. In an age when he could have easily called himself a physician, since he dabbled in pharmacy, and pharmacy and medicines were no separate professions then, he nevertheless preferred to be known as a philosopher. The Muslim alchemists, therefore, particularly called themselves *Hakims*, philosophers, and never Tabibs, physicians. A reference to the Alexandrian alchemists, to be mentioned later on, also speaks of them as philosophers, a designation never taken seriously so far. In as much as alchemy tried to imitate creation or really generating a soul, its special technique was the outcome of applied mysticism. The alchemist, as a philosopher, ransacked all sources of information to get an insight into the spring of life, into the birth of the soul, to learn the know-how of life. One system of philosophy which was not ignored by the Alexandrian alchemists was that of Aristotle, a fact given due importance, for the first time by Hopkins(15), though as late as 1934. The Arabian alchemists did the same. But I have shown that, what they apparently owe to Aristotle and other Greek philosophers, is nothing outside Animism and Dualism, both of which flourished far better in China. One term which has been used by Aristotle and found in alchemical literature is

perfection. This, however, follows the notion of opposites. Opposites mean joint creators, nothing less. They are joint-partners in procreation with procreation as the means of creation. The opposites are like the two poles of a magnet where magnetism stands for life. The opposites are not like the pair brother and sister, but instead like brother and sister-in-law, man and wife. One who cannot equate the opposites as Yang and Yin cannot appreciate what the opposites mean.

It has been mentioned before that alchemy descends from mysticism via herbalism. A mystic, rather than a philosopher, not excluding Aristotle, would be best qualified to interpret what perfection signifies. The following commentary by St. Thomas Aquinas, taken from Underhill (16; p. 428), will reveal what the alchemist, essentially a mystic, would heartily endorse. The Saint means that, "the last perfection to supervene a thing is its *becoming the cause of other things*. While then a creature tends by many ways to the likeness of God (the Creator), the last way open to him is to seek the divine likeness, by being the cause of other things (or in turn a creator of some other creation)." Thus perfection means generating an endless series of cause and effect, source and issue, Creator and creation, as two links repeating themselves to constitute the chain, immortality. If something grows unhampered it is destined to transcend time and space. A bacterium or ferment is theoretically capable of becoming such an all-pervading entity. Likewise a soul, which is ever-increasing, is on the pathway of immortality and has reached perfection. No other attribute can supersede such a virtue. The motion of unity is fairly simple to

paraphrase. In the first instance it is an element or one which challenges factorization. Unity further means fusion of two and of only two constituents into one. And in alchemy it means unity between male-soul and female-soul and again between soul as a whole and the body. When the ratio between Spirit: Soul is one, it becomes a hermaphrodite by form and a self-generating entity by function. An immortalizing soul produces such an impact upon the body that the two become one, and the body becomes soul-like and sublimable. Unity is exemplified by the hermaphrodite, by Prajapati, two as one, who is ever active, whereas Brahma remaining one, has long since creation been a spent volcano.

13. *Genesis of the idea of a Creator.* We have have just dealt with three philosophical terms found in alchemical vocabulary. There are many others. Above all no end of allegorical pictures which are being reproduced in books and magazines more to entertain the readers by their quant appearance than to reveal any significance. The solution lies in properly interpreting them and this requires knowing the basic concepts on which alchemy is founded. When a chemist is interested in a substance he analyses it as also others when he finally gets to several ones which become elements. Only with their help he can understand the nature of any substance later on. Moreover the chemist traces a product to earlier substances from which the main one has been naturally evolved. This is recognized as biogenesis and now-a-days in the more important phase of chemical study. To apply the same to the evolution of ideas would be psychogenesis. And it is

advisable to introduce such a technique in the study of the history of alchemy.

We are interested in the phenomenon of creation as the alchemist interpreted it. Yearning after immortality man found himself in a closed system of reasoning with three links of a ringed chain as sketched below:

Creation

Procreation<---Immortality

We have to see how exactly the idea of a creator was evolved and how far back it can be traced.

Experience begins soon after birth. The infant's first experience, which keeps on recurring ever after, is the feeling of hunger. This results in the recognition of a mobile, all-round, impressive object, its mother. She, and not her milk, is recognized as the pacifier of its hunger, like the container for its content. An infant, before it is a year old, also feels thirsty, another feeling which remains for the rest of the life. Now feelings of hunger and thirst come close enough to become one. Likewise the objects that satisfy these two-feelings, namely food and water, also become one, and the mother, that provides food and water, becomes its preserver. The infant is otherwise physically dependent upon its mother, but for whose protection its future existence is inconceivable. Then Mother=Preserver. When the



child is about five it comes to learn that it was delivered into this life by its mother who, as the source of its birth, becomes a creator, or Mother= Creator.

Later on, say at about ten, the boy becomes aware of the biological role of his father in his origin. Further he finds his father busy in outdoor life trying to provide food for the family. His earlier notion of his mother as Preserver-Creator now undergoes modification when both Father-Mother=Preserver-Creator. We see then that the feelings of Hunger-Thirst, satisfied by Food-Water, were provided by Father-Mother, when all these dual conceptions as each pair became one.

By the time an individual become a youth he can work as well as his father and realize for himself the factors responsible for food production. There are two, Soil and Water. Soil is permanent, Water, or rather rain, its source, capricious. Now what is variable and yet essential becomes the more important, and such was rain, in the eyes of the earlier man, in fact, in many countries even to-day. The result was that life's support now depended upon Fertility, and Fertility =Earth +Water.

Attaching far more importance to rain, Fertility= Water. At this stage the original feeling of Hunger+Thirst as one was ultimately removed by the supply of Food+Water which depended upon Earth+Water. Accordingly the concept of Father+ Mother as Preserver+ Creator gave in to Earth+ Water instead. Briefly the important concepts can be better visualized as the following pairs of series:

Mother/Father = Earth /Water =Preserver/Creator.

14. *Water, the nature of its source.* In the series just considered the last pair of concepts represents deductions from the other two. And of the four factors, Mother, Father, and Earth all are stable, whereas Water, which comes as rain, is variable. Now if water comes as rain and rain descends from clouds, the problem is to establish the origin of clouds. As a hunter man saw animals losing blood when he came to believe that Life=Body +Blood. The concept, Blood = Soul, is found also in the Old Testament. Later on it was observed that only fresh Blood is red so that Life=Body+Redness. The notion that, Redness= Soul, has induced man to smear bones of the dead with a red pigment in order to revive them with it. This has been found in Europe as also in China. As a relic of this belief the alchemist looks upon vermilion as the most important substance, in fact as life-donor, only next to his Elixir; and this because vermilion is the nearest approach to blood in its colouration. At a later stage it was established that warm blood loses a constituent as vapours which rise as clouds and disappear upwards to become clouds in heaven. The word which represents Blood-Vapours=Soul, in Greek, is Thymos, which was current upto the time of Homer. Clouds then represent the souls, of dead ancestors, which descend as rain to bestow fertility upon the soil and provide food for the surviving generation. The deity who was the custodian of the souls of dead ancestors was the Dragon being thus in charge of clouds. Accordingly Dragon worship is both ancestor-worship and fertility-worship, hence its great importance in China. And the

seat of clouds is in Heaven. Heaven, as the container of clouds, got identified with its contents the souls, when Heaven = Clouds=Souls. Most people believe that when man dies he goes to Heaven. They have become clever enough not to speak accurately like the pagans, and state that dead souls are merged into the clouds which we see in Heaven. Thus arose the series of conceptions, Heaven =Clouds=Souls of ancestors= Donors of rain.

We again revert to, Food production= Earth+Water, to confirm Earth as a stable and water as a variable factor. The origin of water has been traced while that of the earth remains to be established. The early man was an Animist, he believed Life =Body+Soul. Soul goes to Heaven and Body naturally becomes dust and mingles with the Earth. He thus distributed his two constituents, Soul and Body, between Heaven and Earth. The conceptions, of Heaven and Earth, were the products, so to say, of a centrifugal thinking, with human life at its centre. Heaven and Earth became the final source of life and thus the highest benefactors of the human race. The previous conception of Father-Mother as Preserver-Creator became extended to Heaven-Earth. Since these dual terms are equal of one another they could be easily duplicated to produce the most emphatic expression that has been coined, being found in Brandranyaka Upanishad, and quoted by Radhakrishnan (10; p. 128) as, "Father Sky and Mother Earth." Thus arose the belief in Heaven/Earth as the Creator, and in China, where Dualism predominates, Heaven and Earth are actually worshipped in lieu of the Creator. What others have done

is to merely reduce these two to one, giving all importance to Father, in domestic life, and correspondingly to Heaven, and to soul, under-valuing the other elements, Mother, Earth and Body respectively.

15. *Genesis of the idea of cosmic elements.* Earth is a vast expanse while Heaven high above human reach. Man wanted agencies useful rather than ideal or impressive. Such an urge finally resulted in the subdivision of the joint creators into deities who, so to say, became "servile" creators. Man again started with life and established factors on which such concepts depend. The subject deserves a special study but has been partially handled before(17). We have realized the series of concepts, hunger, food and fertility all terminating with water. In fact man saw that wherever there was life there was water at least in the form of vegetation. Man's first phase of civilization was represented by the hunter. Next followed pastoral life. Without rain and water for the pastures there was no food for flocks and herds. At this stage life depended upon water. Lands subjected to drought and famine have impressed the importance of water upon every observer. Even in Rig Veda Water is the first element to be mentioned. Not before 1001 years Thales introduced it into Greek cosmogony at about 588 B.C.

When life became more settled observations on death became more minute. It was established that, to breathe was to live, and life became the interval between the first breath a baby inhales and the last breath that the dying exhales. The Arabic word for

Breath is *Nafas* from which is derived *Nafs*, the Soul. Air became the second important factor. As element Air was introduced into Greek philosophy by Anaximenes c 546 B.c. In Dualism everything has to be male and female. Air and Clouds, both are celestial, but clearly air is the finer of the two, hence air became male and clouds female. As Chinese deities they are Red-Bird or the Phoenix and the Dragon, male and female respectively. Heaven or the sky, as Yang, could then be represented by a pair, Red-Bird and Dragon, as male and female celestial deities, like two children of a father.

We have seen that hunger finally brought the human mind to accept water and earth as the final producers of food. Earth, or rather the soil, is the joint contributor of fertility. Man's body finally becomes dust or earth so that this is an important factor contributing to life. Earth was introduced as the third element in Greek philosophy, through Xenophanes at about 540 B.C.

Another important symptom of human life is warmth. Respiration may be suspended to return later, but once the body becomes cold it is dead for ever. Heat, represented as fire, became the fourth element in Greek cosmogony, due to the efforts of Heraclitus c. 502 B.c. The elements of the body came later than those of the soul. In Chinese mythology the deities in charge of earth and fire are called the Black-Warrior and the Tiger, the former as female and the latter as male, both being terrestrials. Thus Heaven/Earth, as male/female gave rise to four deities, a pair of celestials and another of terrestrials. That there should be

only four deities in China, shows how the Greeks also got their four cosmic elements later on. It is important to note that water was the first to be recognized in India as also in Greece. Even in China, Dragon the deity of clouds, is worshipped more than the deities of the other three elements. Summarizing we can say that Creative Force = Yang/Yin = Heaven/ Earth = (Air + Water)/(Fire + Soul). The word Soil has been used for Earth which had otherwise to be repeated in the same equation.

16. *The three phases of creation and the place of alchemy among them.* We have seen that the Hindu conception of Brahman-Prajapati, as two creators becoming one, arises from our realization of Growth-Reproduction as the two phases which constitute life. But then there are other factors which go to characterize life as a whole. Existence comprises of the following factors:

- (i) Matter, or "dust", as creation of nothing, with an unknowable past.
- (ii) Soul, or life-essence, with an unknown constitution and an unknowable past.
- (iii) Birth, including conception.
- (iv) Growth.
- (v) Reproduction.

Items iv and v present the real life of man.

- (vi) Death, is the separation of the soul from the body.
- (vii) The future of the body is a heap of "ashes".
- (viii) The future of the soul lies in a possible post-mortem life.

Neither creation out of nothing, in the past, nor a post-mortem life, in the future, depending upon the soul, can be imagined. Since the mind clamours for some kind of explanation

predated growth became creation. To create out of nothing means to make something grow, when there was nothing which could grow at all. Post-mortem life was relatively easier to imagine. Body, which ends as "ashes", could be re-animated, much like the original clod of "dust" before. Man nevertheless could realise a sharp difference between the original creation and the subsequent growth which is life. A case of pure creation would be the birth of a child which takes a few breaths and expires. Such would be the work of the creator without the cooperation of the preserver. Any intelligent man would prefer the work of a preserver of life to that of a mere creator. This, in fact, accounts for the paucity of such temples in India where Brahma is specially worshipped. If I am right there are no more than three temples to Brahma, whereas there is no scarcity of them where Vishnu, the preserver, is worshipped.

Life means growth of the individual and growth of the species. Both these phases must continue if life is to be preserved. It has been explained that the first conception of the preserver was in the person of the mother and the last in that of the sun. The sun god became the preserver and his Indian name is Vishnu. Sun worship in time spread all over the world. Here is an example of pre-Islamic worship of the sun. The Holy Kaaba of the Muslim peoples was originally a temple of Arab heathenism. The word Allah, before the advent of Islam, was the name of the most popular god who naturally was the sun-god. Al-Lah was Al-Rah, with Ra, the sun-god, the same as that of the ancient Egyptians. Sun was worshipped wherever land was fertile, like the plains of

the Nile or Euphrates, of the Ganges, and even in ancient Southern and Central America. In India Vishnu became one of the Hindu Trinity. I remember reading *a* discourse differentiating Brahma and Vishnu. It contained a rejoinder from a critic who protested questioning, "who says that Vishnu is not a creator." And in fact we have seen that, creation means growth with retrospective effect. The difference between a creator and a preserver is merely subjective: whom we *think* as the creator is Brahma, whom we *know* as the creator is Vishnu. And the act of knowing precedes that of thinking. We have only to recall our first conception of the preserver, in the person of the mother, who also became the first creator. Thus the conception of the creator actually arose later and as an extension of that of the preserver.

The importance attached to growth, and thus to sun worship, has also taken an intensive form. A plant has been deified as a live image for being worshipped. This is Tulsi, which is dedicated to Vishnu. Its scientific name is *Ocimum sanctum*. Upon it Sanyal and Ghosh(18) note that, according to K. L. Dey, "the holy basil, is the most sacred plant of the Hindus, being dedicated to Vishnu, the preserver of the world." Thus sun-worship has permeated every Hindu household and represents its most intensive form ever instituted by man.

Life's first phase, growth, has its limitations. No child grows to be a giant, nor a cocoanut tree ever touch the clouds. Growth gradually gives rise to reproduction. If growth was initiated by Brahma, reproductively was initiated by Prajapati. A glance at the



diagram below will help to visualize where actually their respective activities supplement each other as a continuous whole:

Brahma: the  
Creator

Vishnu: the  
Preserver

Shiva: the  
Resurrector

Rama

Krishna

Birth

Death

Creation

Growth

Reproduction

Resurrection

Prajapati: the

Creator

### The Spectrum of Life immortal

The knowable phase, between birth and death, with growth and reproduction as the main portions, itself between the unknowable phases, the infra-natal or creation, and the ultra-mortem or resurrection. In one case creation begins as growth, in

the other as reproduction. But once initiated growth-reproduction become continuous life and come under the care of Vishnu, the preserver, who thus has to preserve both. But he has subdivided his responsibility, creating two portfolios, assigning one to Rama and the other to Krishna, and these have become incarnations of Vishnu, the preserver. Thus growth, initiated by Brahma, and preserved by Rama, leads to a well-nourished prosperous life; while reproductively, initiated by Prajapati, preserved by Krishna, ends in an enlarged family; and an increasing prosperous family is all that life in this world means. This makes Vishnu the preserver.

Sometimes later reproductively also ceases and life finally comes to an end. The body becomes a heap of ashes. In fact, "ashes" projected backwards, into a remote past, became "dust", or the original material from which man was created. Man however would easily grant that his ashes could be spread all over but never destroyed. They are evidently assimilated by plants, eaten by animals, and may be some people enjoy the meat of these very animals. Matter thus keeps on changing in form: it is eternal and there is *Unity of Matter*. Since this is true of the body the same must be the case with the soul, for  $\text{Life} = \text{Body} + \text{soul}$ . *Soul is also immortal* and keeps on circulating from body to body; it is present in man and in herb. This theory is well known as the transmigration of the soul. However it ignores the material remains of the body. Another attempt tried to keep the association of the body with the soul in postmortem life, on the same plan as it exists in present life. The disembodied soul rests in heaven, but on the day of judgment the ashes will be recollected

by the power of the creator and each soul would return to its respective heap as ashes. This theory, called resurrection, is nothing else than post-mortem creation, this time from "ashes" in place of "dust". In some religions the power to create and the power to resurrect both rest with one Creator, but in Hinduism, recognizing division of labour, Brahma is the creator of life from "dust", Shiva the creator, from "ashes." Thus Shiva becomes a creator, and has a place in the Trinity, along with Brahma and Vishnu.

The early man was fully convinced of the reality of resurrection. The sun goes down in the evening and rises next morning, the same as before. It was imagined that this represents an ideal case of death and resurrection. Winter seems to take the life of most plants and spring infuses it back into them all. Such seasonal changes were also accepted as examples of resurrection. A minor problem, now to be discussed, is the authority in charge of death; and a major problem, relative to the mechanism of resurrection. We want to know who destroys life, and then why, as also how is it revived.

Brahma created man as mortal. Later on Vishnu was benevolent to a fault. There prospered people who did not do justice to his gifts. Some forms of life had become powerful and hideous, briefly demons, and these became misfits in creation. The lives of the fit was at stake and the fittest could not be evolved in the presence of these dangerous elements. Thus selection of some, implied death of others. A proper scientific

explanation has been offered by Prof. T. H. Huxley(19), the famous champion of Darwinism. He writes that, "in whatever guise life takes refuge worm or man, the living protoplasm not only ultimately dies and is resolved into its mineral and lifeless constituents, but is always dying, and strange as the paradox may sound, *could not live unless it died.*" Likewise speaks Charles Minot(19): "Differentiation leads as its inevitable conclusion to death. Death is the price we are compelled to pay for our organization for the differentiation which exists in us. Death of the whole comes, whenever some essential part of the body gives way. Sometimes one sometimes another internal organ may be the first in which the change of cytomorphosis goes on so far that it can no longer perform its share of work, and failing, brings about the failure of the whole," which is death. We see both, life becomes hideous in some cases, and life becomes cumbersome in others, one has to be killed, the other dies automatically. Resurrection or its substitute must be there or life becomes extinct. Then our present position forces us to realize another dual conception, death-resurrection, as one, and therefore its authority, destroyer-creator as one. To visualize one such case we can consider that of a genuine reformer. He bitterly criticises a degenerate form of religion. He is called a dissenter and a protestant; while several of his colleagues are actually sacrificed as martyrs. Yet what he does is to substitute something nobler and superior. Here we see clearly that he could not but be a destroyer first and a reformer afterwards. So is Shiva the destroyer-creator. Hinduism has conceived incarnations of Shiva which are called

upon to destroy different forms of unhealthy over-growths, or demons. When there is over-growth, pruning becomes the proper work of a creator, who has planned to substitute something superior instead. Once life gave birth to life-forms, there was to be progress in life-forms as such. If Brahma created life, Shiva created species; if Brahma created mortals, Shiva created immortals. And there is no immortality without death. Practically in all religions the heroes, really the dead benefactors, are looked upon as immortals or assigned a post-mortem existence. If we can imagine a wall to our left as birth, shown in the diagram, the spectrum of immortal life, paragraph 16, (p. 97) looking over it towards the past, growth becomes creation. Likewise looking ahead over the wall to the right, reproductivity is seen as immortality. We meet here with other dual concepts, as pairs of synonyms, death-resurrection, reproduction-immortality and procreation-creation. Life is a dynamic phenomenon and progress, as Croce points out, is the beginning of a new cycle. Where one cycle ends, there is the beginning of another: Destruction-Creation go on repeating themselves to infinity. Thus there are two sides to Shiva's activity, Destruction and Procreation, and Procreation=Creation. Many an incarnation is ascribed to Shiva which depicts, each deity full of rage, trampling over a demon. In days of epidemics or of similar diseases, which make life most precarious, Shiva is the god to be invoked. He gets rid of such demons and becomes the real preserver. Then for a family, which has been barren and yearns for an issue, it is again Shiva to destroy their sterility. These are such inborn needs of

man that one cannot conceive an earlier form of worship than the one which may be termed, the Shivite; Shiva worship is the oldest of all.

Coming to Shiva's creative activity, which is an extension of the procreative phase, it is of vital importance for the appreciation of alchemy. The worship of immortality has been directly expressed as the worship of procreation. One of the earliest images to be worshipped by man have been the sex organs. Shivite temples contain sculptures depicting love-scenes, *similar to those of alchemical symbolism*. Among the latter, as mentioned before, there can be nothing more revealing than a nude pair on a nuptial bed. Temple art can easily offer such parallels. Even fig. 1 represents a pageant of resurrection of the same category, for the serpentine deities are depicted in their procreative activity. On any road-side in India a stone image can be found with such figures of serpents intertwined. Fig. 2 is a corresponding symbol from an alchemical manuscript, and Fig. 3, the emblem of medical science, which is but another version of the same. They all convey the idea that, to reproduce is to generate a life-essence, which can then donate life to the sick, or even revive the dead. Above all there is a regular system of Yoga both in China and in India according to which a special technique of sexual intercourse imparts longevity. The act of procreation generates a life-essence and this is absorbed back by the producer to prolong his own life. The principle is the same, as the creator, having created the universe, finally enters into it as its soul. If the soul can be generated for the good of others, it can be absorbed for the benefit of the generator

as well. At least in one case Reproductivity does the work of an Elixir. A family which is getting old, and has remained barren, now gets a child which is also their first born. One has to know such a pair to realize the psychological difference between those suffering from sterility and later enjoying the fruits of reproductivity. Such a couple does feel that life's mission has been fulfilled and before they die they have planted a tree that promises to grow for ever and confer immortality in advance. Hindu religion has therefore made reproductivity a means of obtaining Heaven.

No less an authority than Huxley maintains that what we call life represents the paradox, to live is to die. Life comprises of cycles, and one cycle can begin only when another ends. Thus immortality can only follow death of the mortal. Every religion promises immortality but only to the heroes that have fallen as benefactors of mankind. Alchemy also promises immortality to its candidates who are prepared to taste death, be it for a very short time; in fact it must be within three days before the body shows any decomposition. The resurrection of Jesus also took place on the third day of his death. The special attraction about alchemy is that it promises immortality in this world. This evidently appeals so strongly to the human mind that alchemy could spread far and wide and history shows enough credulous people to risk their lives in the hope of gaining positive immortality. In as much as China is the home of alchemy no other country shows a greater record of people who have unwittingly committed suicide. Amongst those who have lost their lives in this way have been

three emperors of China. Since the making of Elixir was a costly affair hunting for rare herbs, followed by lengthy processes, it could be financed only by the well-to-do or undertaken by ascetics, whom time and labour were of no consideration. We shall see later that when alchemy found its way to Alexandria it also received royal patronage there. We can now summarize the three phases of creation before proceeding further:

- (1) Pure creation out of nothing, the work of Brahma, the creator.
- (2) Creation *as growth*, initiated by Brahma and continued by Vishnu, the preserver.
- (3) Creation *as reproduction*, initiated by Prajapati, the creator, continued by Vishnu.
- (4) Creation *as resurrection*, the work of Shiva, the destroyer of mortality and creator of immortality.

There are three aspects of existence, one before birth, another as life-span, and third as post-mortem life. Life-span is subdivided between growth and reproduction but represents a continuous change.

17. *Chinese alchemy reaches Alexandria.* The promise of immortality in this world seems to go home in spite of the danger of risking present

life. When this aspect is kept secret its progress becomes even faster. Such must have been the case for soon after Alexandria was founded Chinese alchemy reached there. It went along with the Chinese name for Elixir, Kim-Iya. This term means gold-making-juice and we have seen that in the preparation of synthetic gold, as a drug of immortality, a juice like Soma was the real



ingredient. Arab sailors before Islam traded between China and Alexandria and modified Kim-Iya into Kimiya, and with the Arabic definite article Al made it Al-Kimiya, hence the word alchemy. Now Kimiya was transliterated into Greek by an Egyptian speaking the Bocharic dialect when KIMIYA = XHMEIA. This was before Christ. It was pronounced at the time exactly as Kimiya. Later on XHMEIA was transliterated into Latin as Chemeia and pronounced differently. Thus arose subsequently a confusion on making two separate terms when there was originally one. With the rapid popularity of alchemy in Alexandria the loan word, Chemeia, was replaced by the connotative Greek word, Chumcia, from the root Chumos, the juice, and not from Chew to melt, as ascribed to it by Wilson(20). The Sanskrit word for Elixir is Rasayana, again from the root Rasa, the juice. Thus Kimiya-Chemeia = Chumeia = Rasayana, all meaning essentially a substance, in fact a juice, and next knowledge pertaining to such a substance, as the container being identified with the content. Here the interested reader is recommend to consult a previous article(21).

18. *Essential features of Alexandria and Chinese Alchemy.* The active principle of Kimiya, or of Elixir, was the soul, the creative element, and the art depending upon it was concerned with the immortality of man. This explanation is entirely different to the one which Hopkins (15; p. V) has imagined. He states that, "in the beginning alchemy was far from being philosophical. It was just an ordinary art like that of the carpenter or black-smith. It was on this primitive side of its character that it was derived from Egypt."

As mentioned before alchemy took its birth as pharmaceutical chemistry trying to prepare medicaments which did not exist in nature. A drug of immortality could be made only in the light of some theory and alchemy originated when mysticism entered herbalism. Alchemy actually began by "being philosophical", for before then there was only herbalism and pharmacy, but no pharmaceutical chemistry or alchemy.

We have now to compare the special preparations of Alexandrian and Chinese alchemy which would indirectly indicate a common philosophical back-ground. Taylor (1; p. 58) has translated an Alexandrian text entitled, the Dialogue of Cleopatra. To begin with, one is asked, "to look at the nature of plants", for without selecting a herb, like Soma, nothing could proceed further. The passage further refers to "divine water", a substitute for Soma-juice. Then Cleopatra addresses the philosophers, or the alchemists who called themselves as such, and asks them, "how the blessed waters (the divine waters) visit the corpses in the Hades and the Medicine of Life (which the philosophers made) reaches them." The text ends with the unequivocally worded sentence, "when the tomb is opened (the dead) issue from Hades as the babe from the womb," which is brought about by the Medicine of Life.

The conception of "the Medicine of Life", a self-explanatory term for Kimiya or Elixir, is the real equivalent of the Chinese drug, likewise explained as "the King of Medicine". Chao Yun-Ts'ung(22) has translated a Chinese treatise on alchemy where we

read that, "the substance (and Kimiya was a substance) which enables you to return to the origin (birth) and go back to the initial state (as a babe just born) is the King of Medicine." Thus we can safely equate the Alexandrian Medicine, of Life with the Chinese King of Medicine, both promising resurrection of the dead.

19. *The real Alexandrian alchemy.* In the light of its objective attributed above, alchemy was concerned with the preparations of drugs of longevity. This notion still persists in many a legend which thus speaks of what alchemy has been in ancient days. Whereas so much has been spoken of metal-foundry and of bronze-gilding as the occupation of the early alchemists, the real activity of Alexandrian alchemist has never been touched. It was therefore a relief to read what Draper(23) did suggest long ago but unfortunately has never been quoted by any authority on the history of alchemy. His book served as a classic on the History of Conflict between Religion and Science, having undergone 19 editions, by 1888, a copy of which accidentally came into my hands at Pabna, in 1967. He refers to the reign of Ptolemy as follows: "The Museum of Alexandria (proved to be) the birth of modern science" (p. 33). "In connection with the Museum there was a botanical and zoological garden" (p. 20), so that there could be no scarcity of herbs. Finally we read that, "Philadelphus (Ptolemy, reigning B.C. 285-247), who toward the close of his life was haunted with an intolerable dread of death devoted much of his time to the discovery of an Elixir. For such pursuits the Museum was provided with a chemical laboratory. There flocked

to this great intellectual centre students from all countries" (p. 20). The statement sounds as though it was well documented but on trying to trace its source it appeared not to be a historical fact. However Draper was an authority in his times and even his suggestion deserves some respect, above all it fully harmonizes with the fact that, the Alexandrian alchemists tried to make "Medicine of life". Alchemy, born in China, required some time before it could appear at Alexandria. We have now to calculate what the lag time could have been. The earliest historical record, mentioned by others, as also by W. Enfield, in his History of Philosophy, Vol. I, London, 1819, p. 87, maintains that, "We find no account of any attempt to effect the transmutation of metals, earlier than the time of Constantine," the Roman Emperor, 306-337 A.D. The phase of alchemy that tried to make gold for the sake of wealth was a degenerate form of it while it really aimed at making Elixir and this must have started much earlier. When we look for an authoritative work on Chinese alchemy, it is by Ko-Hung, who also lived in the fourth century A.D. Here again we have to grant a lag period between the birth of alchemy and the classical work in the field which is dated as 4th cent. When such a comparison is made even superficially it appears that alchemy did travel fast enough and the explanation is also easy to offer in as much as the promise alchemy offered of conferring immortality in this World appeals strongly to human nature, to the rich and the poor alike. Another reference which speaks in favour of Chinese origin and unknown to me before, is that of E. Underhill (16; p. 148), who, as early as 1930, clearly mentioned that, "it is from

China that alchemy is supposed to have reached the European world."

20. *The test symbols of alchemy.* Symbols are riddles, to solve them here properly is to interpret what alchemy has actually been. Since there is no scarcity of them only a few have been selected as test symbols ; there are others but none better than the ones offered here. It is with this confidence that the composition of Jamsthaler, dated 1625, is being presented in the first instance, and reproduced as Fig. 6. It is taken from Jung(24), who could merely recognize the four cosmic elements being depicted in the symbol. The point is not to rename other parts of the symbol in mysterious terms but to explain the entire composition in common language. Now in the first instance there is an enclosure, with an oval outline, which obviously represents an egg. This is entirely overlooked by him. It is the Brahma-Anda, the creator's egg, of Hindu mysticism. It is usually rendered as the cosmic egg, and represents existence in an egg-shell, rather than in a nut-shell. Mrs. Strong (25; p. 130), while analysing the details of a piece of funerary sculpture of Greek origin, of about 500 **B.C.**, observes that, "offerings were brought by the survivors" with the hopes of reviving the dead. There is a man who carries a cock and an EGG, a woman, the flower and the fruit of the pomegranate, all of them symbolic of the powers of *fertility* and *rebirth*," since Procreation=Resurrection. Further (p. 257) she explains that, "the egg is an apparently inanimate substance but contains a potent principle and has a special vital power which must perforce *awake the vital power to whom it is offered.* The pomegranate which contains in

its myriad seeds the principle of life, like the EGG, became an easily understood *instrument of rebirth.*" Thus the Egg is condensed creative force ready to explode into existence, much like the fishermen's pot in Arabian Nights with its compressed spirit which developed into a giant. In fact the idea of a hermetic seal, was borrowed from alchemy, which tried to preserve volatile active principles, like souls, from being lost.

But the creator of Brahma-Anda has created it out of nothing and even "nothing" has to be depicted. "Nothing" could have been represented as blank paper, but more explicit is a dark background *where anything must mean nothing.* Thus in Fig. 6, Nothing = Darkness (the background) and from "nothing" emerges the creator's egg. The contents of the Egg represent, Existence = Creator + Creation, with Creator = Four cosmic elements, and Creation = Macrocosm + Microcosm. The Creator forms the foundation, supporting creation above. The heaviest element is Earth, also the lowest shown in the picture. The opposite of Earth is the lightest of the four, which is Air, depicted as a pair of wings. Air is male, earth female; but air is celestial while earth terrestrial. A celestial male uniting with a terrestrial female gives a union of extreme opposites and these go to constitute an immortal. We have seen earlier that the proper impact of Spirit upon Body makes the latter buoyant and sublimable. A celestial male with celestial female will go to make an ordinary soul, as also a terrestrial male with a terrestrial female, the mortal body; but then the celestial pair can easily separate from the terrestrial pair, which means the soul can separate from

the body. On the contrary, Fig. 6 reveals the constitution of the immortal, with the combination of Air/Earth, as a celestial male with terrestrial female, which once united are inseparable from each other ; Water/Fire likewise a celestial/terrestrial, female/male pair. The globe as Earth is bearing the dragon, the element Water, and its opposite, Fire, is being spitted out as flame, by the dragon. Water is celestial female, Fire terrestrial male, as extreme opposites. The elements are so shuffled here that all the four should become one and inseparable. They are otherwise present in every constitution though in different ratios. Every activity in the universe depends upon them with varying speeds, here the combination promises eternity.

The four elements, as the creative force, have given rise to Microcosm as autonomous creation, the immortal human race, symbolized as the hermaphrodite. In discussing Fig. 4 the hermaphrodite has been sufficiently analysed. In as much as the hermaphrodite marks the stage of "perfection" this is because the same in turn represents a Creator. It can be otherwise called Prajapati, the creator. In Fig. 6 the hermaphrodite does appear with the insignia of a Creator bearing a pair of Compass and Mason's Square. The right, or male half, is holding, in the right hand, a Yang instrument, the Compass, and the left or female half, in her left hand, the Mason's Square, an angular Yin instrument. This pair of instruments serves, like the magic wand which can create a life-essence, and confer life upon the dead and the dying. It is the same pair of weapons of resurrection wielded by the deities in Fig. I (a). Since it is of the utmost significance in

tracing the origin of alchemy to China they have been shown enlarged in Fig. 1 (b). The same pair of instruments intertwined has become the emblem of Freemasonism which goes to show that it also descends from some cult of mysticism and can be traced to China. At any rate the Compass and Mason's Square are found on a Chinese grave, in alchemical symbolism, and as emblem of Freemasonism ; hence there must be some significance common to them all and it can only be the creative force.

An exhaustive treatment of the subject requires explaining how such importance came to be attributed to these common instruments. Earlier in this paper it has been explained that Heaven/Earth=Creator, and Chinese paganism knows no other conception of God. Heaven is dome shaped, but what we see is only half of what we should know, for there must be a similar half under the earth. This makes Heaven a hollow sphere. Such an object can be produced by a circle turned around its axis. Then the hollow sphere and the circle both become male, with Compass as the source of the series, and Heaven as the final end. The relation between the two is that between the source and its full expansion, between Atman and Brahman, between the individual soul and the cosmic soul of Vedantic philosophy. And the Vedantist is never tired of emphasizing their identity and thus of the importance of Atman. Such is the importance also attached to Compass.



We now come to Earth. It is a flat expanse, with the four directions idealized, thus making earth a regular square. In this form it is not a convincing deduction, and needs confirmation. A square projected upwards becomes a cube which, like the earth, is likewise a Yin or female element. Now the Holy Kaaba was formerly the temple of heathen Arabs and they dedicated it to their most favourite god, which was the sun-god, Allah. In Arabic, as in German, the sun is female. Kaaba, literally cube, being a female, was selected as the ideal form of a temple building to house a female god. And the instrument used by the Mason in shaping angular walls and in drawing a square is the Mason Square. Thus the cube, square, and Mason's square are all Yin elements. Mason's square is the exact opposite, the energized Yin element, the contrary of the Compass, its Yang. Compass/Mason's square become the equivalents of Heaven/Earth, in their generative form or as weapons of creation. Such must be the essential paraphernalia of the Creator, seen in Fig. 6.

Macrocosm, the other creation, is shown as the heavenly bodies at the uppermost limit of the symbol. Of them Sun/Moon again represents Heaven/Earth and as a pair of symbols must be familiar to every reader. Sun/Moon can be equated with Day/Night or Lightness/Darkness, from which the Chinese terms Yang/Yin have been derived. We can see now that Sun/Moon=Heaven/Earth=Creator.

The hermaphrodite, in Fig. 6, bear the label REBIS, in bold letters, which can only be the designation of the hermaphrodite itself. It is interesting to note that Jung (26; p. 197) not only confirms this but expands its significance properly by offering the series of equivalents: Rebis= the philosopher's stone — Hermaphrodite. On p. 306 he states that the alchemists further, "employ the symbolic qualities of the Christ-figure to characterize their Rebis." And we have independent evidence from Chinese sources to show that Elixir makes man not only immortal but also endows him with the power to ascend to heaven exactly as Christ did, in broad day light. Thus it is in order to equate, Rebis=A Christ like immortal. Now the container and the content can be identified with each other, the more important or the more familiar being given preference. Here the immortal consumer is the better known than the immortalizing drug or Elixir. Hence Rebis=the Immortal Christ=the immortalizing drug—Elixir—Philosopher's stone.

Summarizing our observations on the contents of the Creator's Egg, we find that it contains two creations, Micro-and Microcosm, and each in turn is a creator, with the four cosmic elements as the primary initiator of creation. The hermaphrodite thus means a creator and it is Elixir incorporate, the donor of an immortalizing creative soul.

21. *The oldest symbol of Alexandrian alchemy.* The serpent biting its own tail is Ouroboros in Greek. As a symbol it is most ancient and universal, being found in ancient Egypt, China and India

where it is called Kundalini. It is typical of mysticism, and alchemy borrowed it because it belongs to the same school. It is mentioned in Alexandrian literature on alchemy but the earliest illustration comes from a MSS of medieval ages, now in Venice. It was discovered by Berthelot and first reproduced in 1888. The original picture shows a red anterior half and a white posterior one. A red head and a white tail can well represent a pair of opposites, or Yang/Yin as head/tail. But as usually reproduced in black ink, it depicts a black head and a white tail which upsets its real significance. The head should have been white instead, to signify a Yan element, and for the first time such an improved version is being offered in Fig. 7. It suffices to show that the white half represents the creator, and the dark half creation, and creator/creation, as one, represent in the first instance, Unity of Existence, a doctrine on which mysticism is founded. It automatically becomes, to quote P. Carus, a "Symbol of the Source of Existence", as also of eternity, where there is no beginning and no end. Berthelot interpreted it as symbolizing Unity of Matter. Since matter is eternal his explanation can hold true. But it transcends this conception, it symbolizes Unity of Existence. Moreover the symbol contains a Greek text. It has to be interpreted as signifying the content for which the symbol stands. The three Greek words, incorporated in Fig. 7, mean: All is one. This is nothing else than what the Persian Sufis believe as Hame-Ust, All is He. We can therefore safely state that, All is He=All is One =Creator/Creation =Unity of Existence=One. We have only to realize that if an entity becomes ever-increasing

this one grows without check, and, as all-pervading, becomes all, when One is All. An increasing soul is one of the pathway to immortality and is destined to merge with the Creator, to make the Creator and creation as one. This is what the mystic imagined when they also tried to identify the individual soul with the cosmic soul, Atman with Brahman. What they wished to emphasize was the growing nature of a soul, as compared with another lacking this virtue. The growing soul was bound to reach the end, and thereby share immortality with the cosmic soul.

22. *The Ouroboros compared with the Chinese symbol of Yin/Yang.* Another symbol of creative force, as also, of the Source of Existence, is the Chinese presentation of Yin/Yang, fig. 7. Here the disc is the creator, the circumference its creation, and the two appear as one whole. The disc is the main content, showing the creator to be all in all. The disc is divided between two halves, Heaven Earth, as the creator. Each half represents an idealized serpent bearing an eye. The serpents are chasing each other, the head of one touching the other by its tail, both in whorl, representing eternal motion. Creation is the circle outside, without revealing a beginning or an end, and thereby also conveying eternity. The creator represents the dynamic phase, and creation the relatively static phase, which thus makes Creator = Creation. The disc, with its two major halves as serpents, and the two minor units as eyes, together reveal the four cosmic elements. The White/Black serpents are Air/Earth, and their eyes Water/Fire. Air is celestial, hence white, and Earth is terrestrial, hence black. Air is the most important of all and accordingly the white half of

the disc; it cannot appear larger because it is to be in perfect balance with its female, or Earth, which thus appears as the black serpent of the same size. Water is shown as the white miniature disc, or the *eye* of the white serpent. Water is like a "sister" of the Air and, being likewise celestial, also appears white; but as a minor element, or a "sister", and not as its "opposite", it is given a smaller form. Fire, the fourth element, is terrestrial and is seen black on that account. It is, however, a male, like a "brother" of Earth, and is placed as a miniature disc, the eye of the black serpent. Between themselves Fire/Water are Male/Female as husband/wife but terrestrial/celestial like Earth/Air.

The problem now is to offer reasons for assigning the relative importance to these four elements, for none of them is the equal of any other, differing on considering size and colour together. The symbol, Fig. 8, represents immortality and thus life in the first instance. Life means Breath: to live is to breathe. In fact the Arabic word for the individual soul, *Nafs*, is derived from *Nafas*, meaning breath, as mentioned before. The white half represents Breath of microcosm and Air of macrocosm. Breath is not dry air, hence there must be Water enough to contribute to its humidity: Breath is humid Air. Air, the white half, is provided with the white, smaller eye-like disc, as Water. And Water cannot vaporize unless there is heat. Heat must be, as a trace, which is the innermost black dot, as Fire, in the white eye. Briefly we find the following items:

Air=White half, or White serpent.

Water = White eye, the smaller disc.

Fire= Black dot in the eye.

Water+Fire=Humidity.

Air+Water+Fire=Breath=Soul=Heaven. And the ratios between Air, Water and Fire are in a decreasing order of importance as shown by their size in the symbol. Life=Body+Soul, and soul =Breath, which has just been dealt with. Now remains the Body of the microcosm, or the Earth of Macrocosm. This is the black serpent or the black half of Fig. 8. Body is no corpse, which is cold; a living body must be warm. The black serpent accordingly has a dark eye, which is Fire, the source of heat for warming the living body. To keep Fire within control there is a touch of Water at hand, and this appears as the white pupil of the dark eye of the black serpent.

The terrestrial series runs as follow:

Earth = Body =Black serpent, the dark half.

Fire =Dark eye, the smaller disc.

Water= White spot in the dark eye.

Fire+Water=only mild Heat.

Earth+Fire+Water=Living body =Earth, the opposite of Heaven. The word Earth used here first, is the cosmic element, while the same, as the last, is the opposite of Heaven. Water and Fire serve as minor elements to convert Air into Breath, as also to

make cold Earth, into a warm Body. Then Breath/Body=Heaven 'Earth, so that Individual soul=Cosmic soul, or Atman=Brahman. If Breath/Body is creation, Heaven/ Earth is creator, and the two pairs are seen above as identical. In fact the disc implies a circle, for to create a disc is to ascribe a circle also. The designer of the symbol, Fig. 8, has represented the creator as the disc and its circumference as creation; the circle, being nothing outside the disc, the two represent the creator and creation as one, depicting One is All. Further the White/Black disc of Fig. 8, is the White/Black serpent of Fig. 7, with its motto, One is all. Fig. 7 represents Heaven/ Earth; Fig. 8 the two pairs of Celestials/Terrestrials, as major and minor elements. Heaven/Earth, or the Celestial/Terrestrial pairs, represent the creator first and their creation next, the latter incorporated in the creator.

In an earlier paper(17) I have explained that life's four physiological processes can be equated with the four cosmic elements as follows: Air = oxidation; Water = hydration; Earth = reduction; Fire = dehydration.

Oxidation is the most important life's process, so is Air in the symbol, Fig. 8, as white and as half. Reduction is its exact opposite, to check oxidation as soon as it goes beyond a limit. Oxidation-Reduction processes go together as Respiration, just as the disc in Fig. 8 is half/half of one where celestial/terrestrial, or Heaven/Earth is One as Creator/ Creation. Addition of water helps the formation of many a compound and its additive quality

makes it "celestial," being represented as the white eye of the white serpent in Fig. 8. Too much water prevents respiration, or oxidation-reduction, and its removal, with dehydration and condensation, depends upon the system getting heated, which, as fire, is shown as the dark eye of the black serpent in Fig. 8. Earth, as the body, does not represent frigidity ; it is positively warmed by fire, and this in turn is not allowed to scorch, being kept within bounds by Water. The symbol, Fig. 8, is one of the most superficially interpreted, nevertheless a most important one, and to make it quite clear the following details are given :

1. White half=Air ; white eye=Water ; black dot=Fire.
2. Black half =Earth; dark eye=Fire ; white spot=Water.  
Male/ Female =Air/ Water = Celestials. Male/Female =  
Fire/Earth= Terrestrials.

Celestials/Terrestrials = Heaven/Earth = Creator. Air/ Water + Fire/ Earth= Four elements=Creator. In Fig. 8 the four elements, as major and minor, are properly represented, none equal among one another, differing either in size or in colour, but the Celestial/Terrestrials-- Heaven/Earth=White/Black. The measure of interpretation is in terms of dualistic standard, with Heaven/Earth being resolved into smaller units, but the units remaining as pairs, and each pair composed of opposites and thereby endowed with creative power.

## Summary and Conclusions

Dante's pregnant observation, that the alchemist tried to imitate creation, forms the basis of the present thesis. Alchemy



aimed, not at changing one metal into another, but dead matter into living one, dead copper into live or ferment gold. The full spectrum of creation has been offered to show where exactly alchemy tried to imitate it. Creation starts with "nothing", out of which the Creator created creation, beginning with matter as "dust", then life, starting with birth, appearing as growth, merging gradually into reproduction, when, these two phases make life proper. Life implies death, but post-mortem existence continues, not only of matter as "ashes", but also of the soul, with rebirth and resurrection leading to immortality. Both, the beginning as "nothing", and the end as immortality, are unknowable. This vacuum is filled by extending the states known immediately after the beginning, which is growth, and before the end, which is reproductivity. Thus creation becomes growth with retrospective effect, and immortality postdated reproduction. In Hindu philosophy the Creator, producing growth from nothing, is Brahma, and the Creator, initiating reproduction, is Prajapati. In as much as growth and reproduction together mean life, their authors, Brahma and Prajapati, were identified with each other as Creator. Further Brahma had created man as mortal, but Prajapati, starting reproducing himself, created everything out of himself, laying the foundation of immortality. It is this creation, through reproductivity, that the alchemist tried to imitate aspiring for immortality.

In an age when spontaneous generation was accepted as a form of creation this was explained in the light of Dualism. Some subtle matter was conceived as Yang or the cosmic male element,

and another as Yin, its female, while their accidental union resulted as reproduction in

secrecy, when a soul was generated. As this soul entered the bodies of the generators these were fused into one body and further enlivened to become some form of life, be it as worm or scorpion. On the same plan the alchemist took a herb, as the donor of a male-soul or Ruh, and a metal, as the donor of a female-soul or Nafs, and by his technique, he arranged, what he called a "marriage", and generated a self-reproductive or ever-increasing soul, which entered the body of its generators, by now one as hermaphrodite, and made the same eternal. An everlasting form of a metal, which was the vehicle in this case, is gold. Thus the herbometallic complex became gold. Harboursing a soul synthetic gold was animated gold. The alchemist called it a ferment for it could grow into mercury to make it all gold. As a drug a single dose of it could confer immortality upon man for its soul, the active principle, was self-reproductive being well balanced and dual-natured, as coming from a herb and a metal.

When man was created dust was there, it was his soul that was the enlivening agency. Likewise all alchemical preparations depend upon their soul contents. It becomes necessary to inquire what all can go to generate the soul and to fortify its strength. In principle it is recognized, as is announced in a leaflet by a famous firm of Unani Medicines in Karachi, that, "the strength of a medicament is passed on to its consumer." We may here consider the active principle of a drug, like Nux Vomica, which contains strychnine ;

this is of a material nature and only indirectly proves to be beneficial. On the contrary the "strength" of a drug would be its "soul" which directly goes to constitute it. Thus on blood transfusion the strength which passes to the recipient is the "soul," for even in the Old Testament blood is conceived as soul. Accordingly strength = soul. In this light non-material constituents can merge into the soul, above all thoughts and prayers. An insight into the "strength" of a beneficial drug is offered by the opposite case of strengthening a poison. In connection with the latter, Pazzini(27) explains that, " to reinforce the lethal action of arsenic and to make its effects more diabolical it would be blended with distillates (and distillates in alchemy are souls) obtained from the flesh of hanged person and many other things which conjure up the most gruesome thoughts, since it was supposed that these thoughts then become the essential parts of drugs' toxicity. In fact the brutality used in obtaining the constituents were expected to contribute to the drugs' potency." By their very nature thoughts cannot constitute a material element like the active principle of a drug. But they can add to the strength of a soul, if there be one even in a drug, and this is precisely what the alchemist believed. Thus if evil thoughts can strengthen a poison pious thoughts can strengthen an Elixir. Just as man became animated by the divine WORD producing an impact upon a cold of dust, PRAYER was the creative force which the alchemist substituted for the word while trying to transform dead copper into live gold. The share Prayers occupied in the synthesis of alchemical preparation has been effectively sketched by Jung

(26; p. 195), who writes that, "nothing gives a better picture of the psychological state of the alchemist than the division of his work-room into a Laboratory, with crucibles and alembics, and an Oratory where he prays to God." His imitation of creation was essentially dependent upon the powers of his prayers. History of alchemy clearly reveals that its masters in the Muslim world were otherwise well respected for their piety, in fact they were Sufis, like Al-Arabi and Jabir bin Hayyan. In medieval Europe they were mostly monks or highly religious personalities, like von Helmont. In India and China they were invariably recluse devotees. But just as there are quack doctors and bogus saints there were false alchemists whom Dante rightly assigned a place in his Inferno. While his observation is correct that alchemy imitates creation he however overlooked the nature of the spiritual creative force upon which the alchemist depended.

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