Discussions last week developed round the subject of the difference between the wood of a ship’s mast, a gallows or a cross. Is the difference one of function or one of nature; if the latter, does the wood become physically different because of the difference of vibrations with which it has become saturated? Such discussions in terms of ‘either, or’, show the habitual duality of our thinking and they can go on until somebody gets exasperated and says: ‘What on earth does it matter anyway?’

If we avoid this tendency – known in the Work as ‘formatory thinking’ – we shall quickly see that these different alternatives are merely different aspects of the same thing. A piece of wood is selected for a certain function because of its nature – a ship’s mast has to be tall and straight and hard; any old timber will probably do for a gallows as long as it supports a man’s weight; wood is selected for a cross because of its beauty or its traditional use. But being given a certain function the wood does become physically different, being saturated with the vibrations surrounding it; the mast with ‘oxygen’, the gallows with ‘carbon’ and the cross with ‘nitrogen’.

[An example can be taken nearer to hand – take anyone you admire in the Work and ask: ‘Is he (or she) the charming and versatile person we see before us because of his original nature or because of his function in the School, or because of the vibrations with which he is saturated?’ The answer is ‘Probably all three’. Had he possessed originally a different nature with a tendency perhaps towards juvenile delinquency, he would not only now be performing a different function such as robbery with violence; but he would undoubtedly have become saturated with the vibrations of Borstal Institutions, Wandsworth prison, and of the criminal underworld, instead of the benign vibrations of the Work.]

(Discussion: Find some more examples of your own)

This Table of Hydrogens can help free us from the scourge of formatory thinking, which can only count up to two, and which is among the principal occupations of the Outer Circle of Humanity!

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[Note: Something of the idea of the order of action of the Three Forces in relation to function, is to be seen in the classification of simple levers. According to the usual encyclopaedia description: ‘There are three classes of levers according to the position of the fulcrum in regard to the power and the load: 1) Where the fulcrum is between the power and the load: a crowbar, a chemical balance, a poker in the bars of a grate, the handle of a pump, the wrist or elbow joint in lifting, or the knee in kicking – (also the bascules of the Tower Bridge!). 2) Where the load is in the middle: a wheelbarrow, nutcrackers. 3) Where the power is in the middle; the treadle of a lathe, pair of tongs, human fingers and thumb in opposition.’]

Now it is important to return to the big picture and a wider understanding.

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SECTION 2. THE TABLE OF HYDROGENS

This table can be regarded as an extension of the conception of ‘states of matter, solid, liquid and gaseous’ – there being, as you can see, twelve ‘states of matter’ of which the last three, namely Hydrogens 768, 1536 and 3072 are all solids – but mean widely different states of solidity – as different as (for example) a bar of iron, a piece of wood and a loaf of bread. ‘Solubility’ is one expression of this difference, and the next Hydrogen up the scale (384) stands for matter soluble in water – the ‘liquid state of matter’. The next (192) stands for the gaseous state of matter, and the next (96) seems to correspond to the matter of a magnetic field.

But evidently there is much more to it than that; for this Third Scale of the Table of Hydrogens refers particularly to man. We are chiefly interested in the level 768 because it contains all solid matter which can serve as food for man: to 384 belong all the fluids of man’s body, and in the tissue fluids are dissolved food materials, salts, and so on – mainly inorganic matter and the simplest organic compounds.

On the next level (192) matter must be in an ionic state (for it is ionic oxygen which unites with haemoglobin after its extraction from air); and it is the enzyme systems present in cells which not only digest the food we eat but also make possible protein synthesis within the cell.

The level 96 represents ‘endocrine’ man – man on the level of those hormones which are the most powerful chemical materials that his organism synthesises. This is molecular matter, but of a molecular weight more than fifty thousand times that of water, and having the power of self-replication, so that it comprises also the hereditary components of cells, the chromosomes and genes.

In short, if we think of 384 as contained in tissue fluid, then 192 belongs to capillary and venous blood, and 96 to arterial blood. Naturally we can feel nothing of this at first-hand; all we know is that if we have sufficient Hydrogen 96 at a given moment then we enjoy a feeling of physical well-being and vitality; and if our store becomes depleted we feel physically sapped. Some people we feel sap our physical energy, when we are with them – they live off other people’s supplies of 96, so beware of them!

The three Hydrogens 384, 192 and 96 represent all those states of matter and energy in the human body which can be studied by the methods of physiology. The next three, namely 48, 24 and 12 are never thought of as material at all – they seem to have more in common with the table of electro-magnetic oscillations. Perhaps they belong to different categories of matter in the electronic state, and Hydrogen 6 to the photons of radiant energy. We can nowadays study the electrical traces of Hydrogen 48, we can read off from electrodes on a nerve, or sensory end-organ or different parts of the cerebral cortex; but we cannot by means of machines obtain any notion of the richness of the world of human thought and feeling.

Hydrogen 48 represents the average incoming sensory impressions, the vast majority of which do not register in consciousness but keep the body going like an electric current. The System recognises them as in fact material and calls these sensory impressions the third kind of Food. It states that a man can live without solid food for a month or two – provided he has water; he can live without air for about two minutes, but he cannot live for a fraction of a second if all his sensory impressions were to be cut off, as by a clot of blood in the part of the brain where all sensory impressions converge in a very narrow space. To Hydrogen 48 also belong the random
thoughts set up in the cerebral hemispheres by those impressions whether from within the organism or from without. In deep and dreamless sleep at night we revert to the endocrine level (H96), and as we come nearer waking up to the ordinary daytime state, more and more dreams emerge into consciousness; when we wake up in the morning we come into the world of sensory impressions (48) and the turbid stream of thoughts and conflicting desires. Very rarely do we experience anything better; but the fact that we keep a dim memory of such experiences prevents some of us from being completely happy without them and sets us off on the study of what may be called the ‘Alchemy of Happiness’.

SECTION 3. ‘THE ALCHEMY OF HAPPINESS’

As far as I know the phrase ‘The Alchemy of Happiness’ was coined by the Sufi mystic Al-Ghazzali. His great work (the *Ihya ut ulum*, meaning *The Revival of the Religious Sciences*) has been one of the corner stones of the Mohammedan religion. It is full of stories, fables and parables, some of which were borrowed by Rumi and used in the *Mathnawi*. Because of the great length of his book, Al-Ghazzali made a much shorter version which he called the *Alchemy of Happiness*.

There is a published pamphlet which is shorter still, and from its five pages the following remarks can be quoted:

My subject to-night is the Alchemy of Happiness. The highest state of the soul in the Sanskrit language is called Atman which means happiness or bliss itself... Today we often confuse happiness with pleasure. Pleasure is only an illusion of happiness, a shadow of happiness, and in this delusion man perhaps passes his whole life seeking after pleasure, and never finding satisfaction. ... (Happiness is a state of the inner man and is not dependent upon outside things.) The one who is happy is happy everywhere; in a palace or a cottage, in riches or poverty, for he has discovered the fountain of happiness which is situated in his own heart. ... Happiness cannot be bought or sold, nor can you give it to a person who has not got it. All religions, all philosophical systems have taught man in different forms how to find it... And wise men have in some form or another given a method... and have called this process *Alchemy*... The stories of the Arabian Nights which symbolise these mystical ideas are full of the belief that there is a philosopher’s stone that will turn metals into gold by a chemical process... Gold stands for Light or Spiritual inspiration... A person who follows a religion and has not come to the realization of Truth, of what use is his religion to him if he is not happy? A religious person must be happier than one who is not religious. If a person who professes religion is always melancholy, in this way religion is disgraced; the form has been kept but the spirit is lost.

Looking again at the diagram of the Three Octaves of Radiations, I would like you to listen further to the *Alchemy of Happiness* as follows:

The whole process of making gold is described by the alchemists in a symbolical way. They say gold is made out of mercury; the nature of mercury is to be ever moving, but by a certain process the mercury is first stilled, and once stilled it becomes silver.

Hydrogen 48 represents the material of ordinary, unselected impressions and of the un-disciplined mental reactions which they set up in the pre-frontal cortex of the brain, i.e. behind the
forehead. These kaleidoscopic impressions and thoughts are beautifully described as mercury, whose tendency is to be ever changing. Then silver (24), molten silver (12), and finally gold (6) do correspond very well – particularly if you remember other things you have heard:

... the silver then has to be melted, and on to the melted silver, the juice of a herb is poured.

‘The silver then has to be melted, and on to the melted silver the juice of a herb is poured, and then the melted silver turns into gold’ – Realization established within a man.
The real interpretation of this process is that mercury represents the nature of the ever-restless mind realized especially when a man tries to collect his attention...

Such is the nature of mind, it becomes more restless when you desire to control it; like mercury it is constantly moving. When by collecting the attention one has mastered the mind, one has taken the first step... but for this stilling of the mind a special method is necessary and is taught by the mystic, just as singing is taught by the teacher of voice production.

Now that describes the change from 48 to 24.

When the mind is under complete control, and no longer restless, one can hold a thought at will as long as one wishes. This is the beginning of phenomena; but some abuse these results, and by dissipating the power, they destroy the silver before turning the silver into gold. The silver must be heated before it can melt, and with what? – with that warmth which is the Divine Essence in the heart of man which flows out as sympathy, humility, unselfishness in a stream of a thousand drops... The moment this happens the man really lives; he has unsealed the spring of happiness which overcomes all that is jarring and inharmonious.

Have you seen a man whose mind is still and under control? Everything about him is different. A man governed by $24^\dagger$ is very different from ordinary people, who are pulled hither and thither by a thousand different conflicting wills; so that the first step in Self-Realization is the stilling of the mercury and the changing into silver.

$\dagger$(Note: This is achieved through School discipline, whereby the voluntary nervous system is co-ordinated into a single unity with memory and feeling of ‘I’ in quite a new way. In the Philokalia it is explained that this is the meaning of the story of the Centurion in the Gospels, who said: ‘Lord, I am not worthy that Thou shouldest come under my roof, but say the word only and my servant shall be healed. For I also am a man under authority, having servants under me and I say to this one go, and he goeth, and to the other come, and he cometh; and unto my servant do this, and he doeth it.’)

Then he goes on:

After the heart is warmed by the Divine element, which is love, the next stage is the juice of the herb which is the influence of Truth itself. The love of Truth alone is not sufficient, knowledge of the Truth is clearly necessary. Knowledge of Truth strengthens man’s belief in the Truth, throws light on the individual and on life. Things become clear; every leaf on a tree becomes a page of a holy book to one whose eyes are open to the knowledge of God. When the juice of the herb is poured on to the heart and warmed by the love of one’s fellow men, then that heart becomes the heart of gold, the heart that expresses what God would express. This man has not seen God, but he has seen the reflection of God in man, and when this is so, then everything that comes from this man comes from God himself.

‘Knowledge of Truth is necessary’. About the melting of the silver, it mentions the warming of the heart ‘by the Divine element, which is Love’. Hydrogen 12 can be thought of as ‘devotion’; so the melting of the silver is increasing devotion, the warming of the heart. Now this ‘devotion’ on the way is often connected with a person, or with the Leader of a School, with the Tradition,
with the people in the School (especially external considering), and so on; but ultimately this devotion is not directed to any person, but towards the Divine Self, the Divine spark in everybody.

As I see it, the melting of the silver is the change from 24 to 12. Now when the silver is melted (12), you see there is an interval between Fa and Mi in that top octave. These intervals in the Three Octaves of Radiations have to be filled from above, they cannot be filled from below. One does all one can with help to reach the level 12 (it is the point to which the meditation can, for instance, take us again and again), but at that point a shock has to come from above. The Christians call it the ‘Grace of God’, for the juice of this herb is something which you or I cannot produce. We can get ready for it, we can be in a situation to accept it, but it has to come from above; and then the silver, being acted upon by Hydrogen 3 (Carbon 3 up there – 12 meets Carbon 3) is converted into gold, which is the Supreme Self – ‘the Light which is born into every man when he comes into the world’, but is unmanifested unless the whole life is governed by it, and then it is manifested.

You will learn next time exactly how this is achieved in the body in the form of a diagram of man’s house of three storeys.

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