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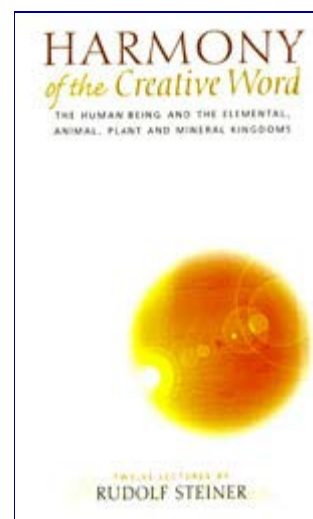
A READER'S JOURNAL

Harmony of the Creative Word, GA#230 The Human Being and the Elemental, Animal, Plant and Animal Kingdoms Essentials for the Healing of Civilization by Rudolf Steiner

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Burnett

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Here is an inspirational scheme of the world as a living flux of spirit seeking incorporation into matter, and matter itself seeking to be spiritualized; here is a world picture which has as its genesis and goal the idea of the truly human being, whose evolution has been carried spiritually by the creativity of cosmic forces since the very beginning.

— Ann Druitt in her 2001 Introduction

The human being is a microcosm of the cosmos in which we are embedded. The laws and processes found in the world around us are also found within us human beings. There is a harmony in what exists in us and what exists in the world around us. To tap into this knowledge we will have to delve into the secrets which lie in the world, and we will have to delve at the same time into the secrets which lie inside of us as living human beings. Steiner will be our guide into this world of laws and processes of the world and the human being.

Part One: Man's Connection with the Cosmos, the Earth and the Animal World

[page 3] Today we'll examine the world and then the human being from certain points of view, and we may then discover how the microcosm of the human being relates to the macrocosm. . . . Let us begin [with] the creatures that are most obviously living in the air — the birds.

Birds are all head — this is the main principle for us to grasp. Steiner tells us that an eagle's feathers stream away from its body the way thoughts stream away from our human head. Given the relationship between feathers and thoughts, it is interesting that the first instrument of writing upon papyrus, parchment, and paper was a quill made from a large feather.

[page 7] When we progress from the physical to the astral level, something of a paradox arises: on the physical plane those powers cause feathers to develop; on the astral plane they give rise to thoughts. Feathers are given to the eagle; that is the physical aspect of the process in which thoughts are formed. The thoughts given to human beings are the astral aspect of the development of feathers. Such things are sometimes indicated in a wonderful way through the genius of the vernacular, of common sayings. If a feather is cut off at the top and the contents are extracted, the country people in some German-

speaking regions call this the "soul". Some people will no doubt take this to be simply an outer term, but it is not. Anyone who understands these things will find that a feather holds something tremendous: it holds the secret of how thoughts are formed.

When we fill a feathered quill with ink, it allows us to pour out our soul onto a page in writing. In modern times the quill has been replaced by a Gel-filled Ballpoint Pen, which is my favorite handwriting tool with which I pour out my soul on paper. At this moment, I am using my PC keyboard to pour out my thoughts in pixels which can later be printed upon paper. The above quote from page 7 inspired me to pen this poem(0):

With Soul I Write . . .

**With my quill,
I pour out my soul
in India Ink.**

**With my ballpoint pen,
I pour out my soul
in jellied ink.**

**With my keyboard,
I pour out my soul
in pixilated ink.**

In the air, the birds remind us of our thoughts or thinking process. On the ground we see the very model of the carnivore, the lion, which has a short digestive tract because it eats only raw meat which puts very little load on its circulation compared to the cow or bull. The lion develops a balance between breathing and circulation. In the courageous lion's chest we see represented the epitome of the rhythmic system.

[page 8, 9] In lions, more than in any other animal, the inner rhythms of breathing and heartbeat are in inner balance and harmony. This is why lions — if we enter into what may be called their subjective life — have that particular way of devouring their food with unbridled voracity, literally gulping it down. They are simply glad to have got it down. They are ravenous for nourishment because it is part of their nature that hunger causes them much more pain than it causes other animals. They are greedy for nourishment but they are not bent on being fastidious gourmets! They are not all interested in taste sensation, for they are animals that find their inner satisfaction in the even rhythms of their breathing and circulation. It is only when . . . they feel in themselves the result of their feeding, an inner balance between breathing and circulation, that lions are really in their element. They are wholly lion when they experience the deep inner satisfaction of the blood beating upwards and of the breath pulsing downwards. Lions are alive and in their element when these two wave movements come together.

If we look for the characteristics of the bird in the human being, we see the head; for the characteristics of the lion, we see the human chest. Lion-hearted means to have the breathing and circulation attuned in the human body as it is in the lion. If we look for the characteristics of the cow, however, we must look at the stomach, for entire cow seems to be designed for digestion. It not only has a long digestive tract, but it has multiple stomachs to extract nutrients from the plant stuffs it ingests while grazing. It devotes its life to digestion and anything which distracts it from digestion is unwelcome.

[page 10] I have frequently spoken of the pleasure to be gained from watching a herd of cattle, lying replete and satisfied in a meadow, and from observing the process of

digestion which here again comes to expression in the position of the body, and in the expression of the eyes, in every movement. Make the opportunity to observe a cow lying in the meadow and its reaction when a noise comes from one direction or another. It is really marvelous to see how the animal raises its head, how in this lifting there lies the feeling that it is all heaviness, that it is not easy for a cow to lift its head, and there is something rather special going on. Seeing a cow in the meadow disturbed in this way, we cannot but say to ourselves: This cow is amazed at having to raise its head for anything but for grazing.

What does any of this have to do with the human being? From the above considerations of the animal kingdom's bird, lion, and cow, Steiner has drawn out for us the three human processes of thinking, feeling, and willing and shown their relationship to the bodily processes occurring in the head, breathing and circulation, and the metabolism.

[page 13] What we have learned so far can lead us to this. When the human head looks for what accords with its nature it must direct its gaze upwards to the bird kingdom. The human chest — the heartbeat, the breathing — must, if it desires to grasp itself as one of the secrets of nature, turn its gaze to such a thing as the nature of the lion. And man must try to understand his metabolic system from the constitution, from the organization, of the ox or cow. But in his head man has the vehicle for his thoughts, in the chest the vehicle for his feelings, and in his metabolic system the vehicle for the will.

The same astral nature of the bird that forms its plumage forms the cow's flesh, muscle, and bone, and only by understanding this can we come to understand the origin of the Hindu's reverence for the cow. The ancient Hindu saw the astral nature of the cow's body, revered it, and that veneration holds yet today among modern Hindus, even though few can explain why they treat the cow as sacred. (See also passage from page 25, 26 below.)

Next we study the butterfly by comparing its birth cycle to that of the bird. What happens in one phase, the egg, in the bird is separated into three phases in the butterfly. In the drawing below we see the three processes of egg, caterpillar, cocoon, and butterfly illustrated(1).

[page 16, 17] The caterpillar, sacrificing itself, casts itself into the sunlight, and weaves around itself the threads of the sunbeams, following the direction in which they go at any given moment. If you look at a silkworm cocoon you are looking at woven sunlight, but sunlight given physical form from the substance of the silk-spinning caterpillar itself. The result is an enclosed inner space, so that outer sunlight has in a sense been overcome. . . . The sun, which previously exerted its physical power, causing the caterpillar to spin its own cocoon, now exerts power on what is inward, and out of this inner nature creates the butterfly, which then emerges. Then the whole cycle begins again. Here you have spread out before you in sequence what is contracted in a bird's eggs.



Compare the whole process with what happens when a bird lays its eggs. Inside the bird itself, in a process that has undergone metamorphosis, a chalky eggshell develops around the egg.

The forces of the sunlight make use of the substance of the calcium carbonate to bring together in one process what is a whole sequence of egg, caterpillar and cocoon in the case of the butterfly. With processes that otherwise are separated into different stages thus brought together, the whole of the bird's embryonic development is different. In the bird, the first three stages are one whereas in the butterfly we have the separate, outwardly visible stages of egg, caterpillar and chrysalis/cocoon, with the butterfly finally emerging.

What are thoughts without memories? Thoughts and sensations are but momentary stimuli which arise at random, but they are of little use unless we can store and retrieve them from memory at will. Our momentary thoughts and sensations have an astral nature like the eagle's feathers, but memories require a tripartite process such as the life cycle of a butterfly. In our physical body a process like the egg occurs, in our etheric body a process like the caterpillar occurs, and in our astral body a process like the cocoon occurs. When we have an astral sensation arise in us, we push it down similar to how a butterfly lays its egg. It is as if the life in our etheric body weaves an astral cocoon around the thought, which later becomes available to us as a memory, a memory arising like a butterfly from its chrysalis or cocoon. I wrote [once](#), without knowing this process, "Our dreams have wings and other things which smile like butterflies."

[page 18] Thus we look around us and feel to what an immense degree nature is related to us. We think and we see the world of thoughts in the flying birds. We remember, we have memories, and see the world of memory images that live in us in the fluttering butterflies shimmering in the sunlight. Yes, man is a microcosm, and contains within himself the secrets of the macrocosm. And it is indeed true that the things we perceive inwardly — our thoughts, feelings, will impulses and memory pictures — seen from the other side, outside in the macrocosm, can be found again in the realm of nature.

Steiner said about the below process, "Reality of this kind cannot be grasped by mere thoughts, for to them reality is a matter of indifference. " Thoughts depend only on logic, but logic can be used to prove anything. Compare the logic used by the hyena and the wolf in this amazing metaphor, a fable of the African tribe, the Felatas.

[page 18] *Once upon a time a lion, a wolf and a hyena set out on a journey. They met an antelope. The antelope was torn to pieces by one of the animals. The three travelers were good friends, and now the question arose as to how they should divide the dismembered antelope between them. First the lion said to the hyena, "You divide it.*

The hyena said, "We'll divide the antelope into three equal parts — one for the lion, one for the wolf, and one for myself." Then the lion fell upon the hyena and killed it. That was the end of the hyena. The antelope still had to be shared out. So the lion said to the wolf, "Look here, my dear wolf, we'll have to share it out differently now. You divide it. How would you share it out?"

Then the wolf said, "Yes, we must now apportion it differently; there can't be equal shares, like before. Since you have rid us of the hyena, you as the lion must of course have the first third; the second would have been yours in any case, as the hyena said, and the remaining third shall be yours because you are the wisest and bravest of all animals." That is how the wolf apportioned it.

Then said the lion, "Who taught you to divide in this way?" To which the wolf replied, "The hyena taught me."

"So the lion did not devour the wolf, but, according to the wolf's logic, took all three portions for himself,"

Steiner said of the fable. This is how it is with abstractions — especially logic — you can prove anything you want, but if you ignore the realities of life and the lessons it teaches you in the moment, your life could be in danger. "Use it right away" is an excellent motto for learning, and the wolf showed us the life-saving value of immediately applying his new-found learning from the hyena(2).

[page 20] We must be able to study the human being not merely by applying logic, but in a sense which can never be achieved unless intellectualism is taken onward into the artistic element in the world. If you succeed in bringing about the metamorphosis of intellectualism into artistic perception, and are able to develop this artistic approach into an instrument of perception, you will find in the outer macrocosm the phenomena that exist in the human being, though transformed there from how they manifest in the natural world. Then you will find that man is related to the macrocosm in a very true and real sense.



In the diagram above, Steiner has drawn the human being and its connection with each of the orbs in our solar system. From the top in violet, indigo, and light blue are Saturn, Jupiter, and Mars. In white is the Sun and below it comes Mercury, Venus, and the Moon. Each has a relationship to the human body where the colored band contacts it.

In this next passage, Steiner talks about the outer planets from Sun to Saturn. He is talking as he draws the diagram above.

[page 22, 23] Let us draw this, so that we may actually see it, in a diagram: the Saturn sphere, the Jupiter sphere, the Mars sphere; we then show the transition to the sun sphere, giving us in the outermost part of our planetary system the interaction of sun, Mars, Jupiter, Saturn.

And when we see the eagle circling in the air we do in fact utter a reality when we say: The forces that stream through the air from the sun in such a way that they are composed of the interaction of the sun with Mars, Jupiter and Saturn — are the forces that live in the whole configuration, in the essential nature of the eagle. But at the same

time they live in the form that has arisen as the human head. And when we place man in the universe in accordance with his true reality — on earth he is only, so to speak, a miniature image of himself — we must place him in the eagle sphere as regards his head.

We must, therefore, think of the human being in regard to his head as belonging to the eagle sphere; this is the aspect of the human being that is connected with the forces in the upper sphere.

The Sun (white band) touches the human body where the heart and lungs are located, so we would expect the lion — and therefore the human rhythmical system — to be most affected by the Sun and the inner and outer planets.

[page 23, 24] The lion is the representative of the animals which are in the real sense sun animals, in which the sun unfolds its own special force. The lion prospers best when the planets above the sun and the planets below the sun(3) are in a constellation where they exert the least influence on the sun itself. Then those special characteristics appear which I described to you yesterday, namely, that the forces of the sun itself, penetrating the air, produce in the lion a breathing system of just such a kind that its rhythm is in perfect balance with the rhythm of the circulation, not in a numerical sense but as regards its dynamics. In the lion this balances itself out in a wonderfully beautiful way. The lion regulates its circulation through the breathing, and the circulation continually stimulates the stream of the breath. I told you that this can be seen even in the form, in the very shape of the lion's mouth. In this form the wonderful relationship between the rhythm of the blood and the rhythm of the breath is actually expressed. One can see this, too, in the remarkable gaze of the lion, resting in itself, and yet looking boldly outwards.

But what lives in the lion's gaze lives also in the organization of the human chest and heart, in the rhythmical organization which connects with the other elements of human nature — the metabolic system and the head system.

And if we picture unconstrained sun activity we must put the human being into the diagram in such a way that we place his heart and lungs in the region of this sun activity. It is here, in this sphere, that we have the lion nature in man.

This is not easy material to assimilate, especially if you, dear Reader, are encountering it for the first time. You may require the digestive system of the cow to manage it. Chew on it, regurgitate it, ruminate on it, and pass it through three or four stages of digestion in various stomachs before it has been assimilated. But note that just from what you have read so far in this review, you would expect that the inferior planets (Moon, Mercury, and Venus) would affect the human metabolic system, and the digestive or metabolic system of the cow. The forces of the Sun are mediated by those of the Moon, Mercury, and Venus and work upwards from the depths of the Earth upon which rests the cow during its process of digestion. Those same forces of the Sun can work upwards from the depths of the Earth to assist you in digesting this difficult reading material.

[page 24, 25] When we turn to the inner planets nearer the earth, the 'inferior' planets, we have first the Mercury sphere. This has to do in particular with the finer parts of the metabolic system or organism of man, the region where foodstuffs are transformed into lymph-like substance and then taken over into circulation of the blood. Progressing further, we come into the region of Venus activity. This is connected with the somewhat coarser parts of man's metabolic system, to that part of the human organism which works primarily from the stomach on the foodstuffs which have been consumed. We next come to the sphere of the moon. (I am drawing this in the sequence customary today in astronomy; I could also draw it differently.) There we enter the region which exerts influence on the metabolic processes, for these are connected with the moon.

How can we understand the Hindu's reverence for the cow if we do not understand the astrality which infuses the whole process of digestion of the cow?

[page 25, 26] The cow is the animal of digestion. It is, moreover, the animal which accomplishes digestion in such a way that there lies in its digestive processes the earthly reflection of something actually super-earthly; its whole digestive process is permeated with an astrality which reflects the entire cosmos in a wonderful, light-filled way. There is — as I said yesterday — a whole world in this astral organism of the cow, but everything is based on gravity, everything is so organized that the earth's gravity works there. You have only to consider that a cow is obliged to consume about an eighth of its weight in food each day. Man can be satisfied with a fortieth part and remain healthy. Thus the cow needs earth's gravity in order to fully meet the needs of its organism. This organism is designed for the gravity of matter. Every day the cow must metabolize an eighth of her weight. This binds the cow with its material substance to the earth; yet through its astrality it is at the same time an image of the heights, of the cosmos.

This is why, as I said yesterday, the cow is an object of so much veneration for those who follow the Hindu religion. The Hindu says to himself: The cow lives here on the earth; but through this fact it creates in physical matter, subject to gravity, an image of something super-earthly.

Steiner bids us to consider the calls of the eagle, the roar of the lion, and the cow. We know already the allurements that the call of the cow has for the Orient, especially the Hindu, but which countries heed the call of the eagle and the lion? If you think of America when you think of the eagle, you would be right. Some ancient wisdom must have inspired the Founding Fathers of America when they chose the eagle as the symbol of this land.

First, the Eagle and its call:

[page 26], 27] This is the stamp of our age, that it is the aim of the cosmic powers to bring about a threefold division of man, and that each form of these cosmic powers is always striving to suppress the others. The eagle strives to subjugate the lion and the cow and make them of no account, and in like manner with each of the other elements. In our present age something particularly alluring is working on the subconscious in man; alluring because in a certain sense there is also something beautiful about it. In his conscious life man today is unaware of this, but in his subconscious, three calls surge and sound through the world, seeking to tempt him with their allurements. And I must say that it is the secret of our present time that from the sphere of the eagle there sounds down to man what actually gives the eagle his eagle nature, what gives it its plumage, what hovers around it as astrality. It is the eagle nature itself which becomes audible for the subconscious of man. This is the alluring call:

Learn to know my nature!

**I give you the power
To create a universe
In your own head.**

Thus speaks the eagle. That is the call from above, which today wishes to impose one-sidedness on man.

Second, the call of the Lion, the roar of the King of Beasts, which fills us with the balance of breathing and circulation when we hear it, but which expresses its own one-sidedness to us.

[page 27] And there is a second alluring call. This is the call which comes to us from the middle region where the forces of the cosmos form the lion nature and where through the mingling of the sun and air they bring about equilibrium between the rhythms of

breathing and circulation that constitutes the nature of the lion. What thus vibrates through the air, from the nature of the lion, what wills to make man's own rhythmic system one-sided, speaks alluringly to man's subconsciousness, saying:

Learn to know my nature!

**I give you the power
To embody the universe
In the radiance of encircling air.**

Third, the call of the cow or bull, with the deep rumbling tremor of its earthly digestive system. My fisherman brother David fished nearly every day, at all times during the day. He told me that, if the cows in the pasture he drove by to his fishing spots were standing the field, he knew the fish would be biting, but if they were mostly all lying down in the field, the fish would not be biting. He was observing how cows laid against the Earth to digest their food, and how in their digestion they matched the times when even the fishes are digesting instead of eating.

[page 28] It is truly the way I described to you yesterday, that when one sees a herd of cattle replete with grazing, sees them as they lie there in their own peculiar way, their very form revealing that they are given over to earth's gravity, all this is conditioned by the fact that this bodily form must daily metabolize an eighth of its own weight. And to this must be added that the depths of the earth, which under the influence of the sun, Mercury, Venus and the moon bring all this about in the digestive system of the cow — that these depths, as if with demonic rumbling power, resound through such a herd with the words:

Learn to know my nature!

**I give you the power
To wrest from the universe
Measure, number and weight.**

Thus speaks the cow. And it is the Orient which is especially exposed to the allurements of this call.

What would happen if Europe (the Center) fell prey to the allurements of the lion? Mechanization would begin to disappear from the Earth. I have noticed signs of this happening at the Goetheanum where one has to wait for 5 minutes for a simple slice of quiche to be warmed up in an electric heater because microwave ovens are forbidden. Whether the slice is heated from without by electric radiant heat or from within by moving the interior molecules seems to be a trivial matter to me as a physicist, but some phobia about the word "radiation" seems to have created a Luddite attitude towards microwave ovens which are an efficient and safe method of using non-ionizing radiation to heat food. This appears to be an example of the lion nature taking over.

[page 31 Now turn your thoughts to what would happen if the Center fell prey to the allurements of what is spoken by the lion. . . . Mechanization would gradually disappear from the face of the earth. Civilization would not become mechanistic, but, with one-sided power, man would be given over to all that lives in wind and weather, in the cycle of the year.

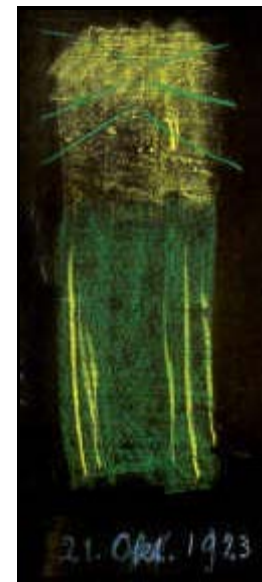
Steiner gives us a modern version of the tale of the lion, wolf and hyena, in which the hyena withdraws, keeping its silence, and allows the lion and wolf to kill each other, after which the hyena can eat the decaying remains of the antelope, lion, and wolf.

[page 35] The hyena is the image of what lies in the human intellect, the element in human nature which kills. It is the reverse side, the caricature of eagle civilization.

America is infused with the one-sided nature of the eagle, Europe with that of the lion, and the Orient with that of the cow. Steiner explains how any one of these one-sided approaches to civilization would end in a sad fashion. He gives us a modern version of the African fable above to illustrate his point, which is that we must oppose each of the one-sided approaches with a threefold approach of the human being. We must grasp "the call of the eagle from the heights, that of the lion from the surrounding world, that of the cow from the interior of the earth." (Page 37) Then we can learn the language of the stars from the cow, the language of the cycles of the Earth from the lion, and the language of the eagle which allows us to create a universe in our head.

Steiner tells us in Lecture 3 that our human head consists of physical substance and spiritual forces, while our limbs (arms and legs) conversely consist of spiritual substance and physical forces. At right is the diagram he was drawing on 21 October 1923 as he spoke the words below.

[page 40, 41] So that if we were to represent the human being in a diagram we would have to say: The lower man actually shows us a formation in spiritual substance, and the further towards the human head we go, the more the human being is made of physical substance. The head is essentially made of physical substance. But of the legs — grotesque through this may sound -- it must be said that essentially they are made of spiritual substance. So that as we approach the head we must draw the human being in such a way that we allow spiritual substance to change gradually into physical substance; physical substance is to be found particularly in the human head. Spiritual substance, on the other hand, is spread out in a particularly beautiful way just where — if I may put it so — man extends his legs and his arms into space. It is really as though the most important matter for arm and leg is precisely the fact that they are filled with spiritual substance, as if this is their essence. In the case of arm and leg, it is really as though the physical substance were only floating in spiritual substance, whereas the head presents a compact form composed of physical substance. In a form such as man possesses, however, we must differentiate not only the *substance*, but also the *forces*. And here again we must distinguish between spiritual forces and earthly, physical forces.



To help me remember this floating aspect of our legs mentioned in the passage above, I wrote this short poem:

**I run my life
with physical legs.**

**I live my life
on spiritual legs.**

**My legs of bone and flesh
swim within
my spiritual legs.**

In another lecture series Steiner said that the brain is able to exert spiritual forces by dint of its floating in the cerebral fluid so that its weight *in situ* (and alive) is a small fraction of what it would weigh outside the skull.

[page 41] In the case of these forces, things are exactly the opposite. In the limbs and metabolism the substance is spiritual but the forces are physical, for instance the force of gravity in the legs. In the head the substance is physical but the forces active within it are spiritual. Spiritual forces play through the head; physical forces play through the spiritual substance of the limbs and metabolism. The human being can only be fully understood when we distinguish in him the upper region, his head and also the upper

part of the chest, as actual physical substance worked through by spiritual forces, the lowest of which, one can say, are active in the breathing. And we must regard the lower part of man as a formation composed of spiritual substance within which physical forces are working. Only we must be clear as to how these things are interrelated in man, for the human being also projects his head nature into his whole organism so that the head, which is what it is because it is composed of physical substance workforces, also projects its entire nature into the lower part of the human being; and what man is because of his spiritual substance in which physical forces are at work, this, on the other hand, plays upwards into the upper part of the organism. In these activities in the human being there is mutual interaction. Man can in fact only be understood when he is regarded in this way, as composed of physical and spiritual substantiality and of physical and spiritual dynamic forces.

Imagine the human being dissected by the diaphragm into the upper part Head and the lower part Limbs. In the Head region, the substance is physical and the forces are spiritual. In the Limb region, the substance is spiritual and the forces are physical. If this balance gets skewed in one direction or the other, illness occurs.

[page 41] This is something of great significance. For if we look away from external phenomena and enter into man's inner nature, it becomes clear to us that disturbance and irregularity ought not to enter into this distribution of substance and of forces in the human being.

The physical and the spiritual balance must be maintained or otherwise illness will result. For example, if physical substance, which is welcomed in the Head region, were to intrude into the Limb region, it would be most unwelcome. One example is the painful condition known as gout is due to the presence of physical substance in the spiritual limbs. It is caused Head forces causing uric acid to precipitate in the fluids of the spiritual legs into a physical, crystalline form. This was pointed out by Steiner in another lecture series, and the example he gives in this lecture series is that of diabetes, during which sugar appears as physical substance in the metabolic or Limb system.

[page 42] If, for example, what should be pure substance, pure spiritual substance in man, is too strongly penetrated by physical matter, by physical substance — if, that is to say, physical substance which should in fact tend upwards towards the head makes itself too strongly felt in the metabolism so that head nature enters too powerfully into the metabolism, the human being becomes ill; certain quite definite types of illness then arise. And the task of healing consists in paralyzing and driving out this physical substance formation intruding into spiritual substantiality. On the other hand, if man's metabolic system, with its particular and special manner of being worked through by physical forces in spiritual substance, is sent up towards the head, then the head is, as it were, too strongly spiritualized, and excessive spiritualization of the head results. This also represents a condition of illness, and care must then be taken to send enough physical forces of nutrition to the head, and in a way which does not allow them to become spiritualized.

In another lecture series Steiner talked about how our head is formed from the limbs of our previous lifetime. We can see how the spiritual substance of the limbs is preserved to make this possible.

[page 43] Only by taking the spiritual substance of his limbs and metabolism through the gate of death can man undergo the transformations he needs to undergo. He would be unable to descend to future incarnations if he were to give back to the earth the spiritual substance which he owes to it. This he cannot do. He remains a debtor. And that is something which there is no means of bettering as long as the earth remains in its middle period. At the end of earth existence things will be otherwise.

We are "borrowers" from the Earth, a condition which world karma requires that we rectify when we reach the Jupiter, Venus, and Vulcan stages of evolution of our cosmos.

[page 45] Thus it is not only by going through the experiences of a single life that man fashions karma, but man creates karma — world karma, cosmic karma — just through the fact that he is an earthly human being, an inhabitant of the earth; and draws his substance from earth.

The eagle, lion, and cow are used as symbols connected to the evangelists John, Luke, and Mark. Matthew had as his symbol, the human being(4). The four evangelists form a whole in the cosmic scheme of things just as the three animals and the human being do.

[page 53, 54] You see, the three animals, eagle, lion, and ox or cow, were created out of a wonderful instinctive knowledge. Their connection with man is one we can sense and feel. For when he sees into the truth of these things, the human being should really admit: The eagle relieves me of the tasks that I myself cannot fulfil through my head; the cow relieves me of the tasks that I myself cannot fulfil through my metabolism and through my limbs; the lion relieves me of the tasks that I myself cannot fulfil through my rhythmical system. And thus I myself and the three animals are made into a whole in the great cosmic scheme of things.

Thus one lives one's way into cosmic relationships. Thus one feels the deep connections in the world and learns to know how wise are the powers which hold sway in the living world into which man is woven and which billow and surge around him.

You see, in this way we were able to interweave everything that we encountered when we sought to discover man's connection with the three animal forces which we have spoken about in recent weeks.

Part Two: The Inner Connection of World Phenomena and the Essential Nature of the World

The three lectures in Part Two of this four-part book deal with "The Inner Connection of World Phenomena and the Essential Nature of the World." In Lecture 4 we learn about the butterfly, which corresponds in its metamorphosis to the plant. Its seed does not enter the Earth, but hangs in the air. When its caterpillar appears, it is like the leaf appearing on a plant. When the caterpillar enters its chrysalis stage, it resembles the calyx of a plant from the flower later developed. The butterfly when it unfolds its wings does so as a flower unfolds its petals. Bright colors appear and flutter in the breeze with the flower as with the butterfly. "Just as the butterfly lays its egg, so does the flower develop within itself the new seed for the future. So you see, we look up towards the butterfly and understand it to be the plant raised up into the air." (Page 67)

In this next passage he leads us through the process of a plant's life, comparing each step to the life process of a butterfly. The anabolic growing of the plant is stopped by the catabolic forces of Saturn which causes what had been destined to be leaves to become fragrant and colorful flowers. Similarly, the anabolic life of seed to caterpillar is stopped by the catabolic forces of Saturn which creates the beautiful butterfly.

[page 67] When the seed became earthly, it was not the butterfly which developed; but when the seed became earthly and was entrusted to the earth — and not now to the sun — the plant root developed, the first thing to arise out of the embryo. And instead of the caterpillar emerging . . . under the influence of the forces which proceed from mars, the leaf arises, emerging in a rising spiral. The leaf is the caterpillar which has come under the influence of what is earthly.

The milkweed, *asclepias curassavica*, also known as the butterfly plant, lives a life in synchrony with the monarch butterfly. The butterfly plants its seed on the milkweed, its caterpillar eats the leaves of the milkweed as it progresses its way to the top of the plant, stopping always short of the calyx and flower stalks at the top. The caterpillar spins itself into a dark chamber, its personal cromlech, and dies. Inside of the caterpillar, the butterfly grows, feeding from the nutrients stored for it, until finally the monarch butterfly emerges, forces its wings open, and takes flight. The monarch butterfly returns to the milkweed for its nourishment and lays its egg there to begin a new cycle of life.

In this next passage Steiner compares the importance of the chrysalis to the butterfly with the importance of the cromlechs of the ancient Druids.



[page 64] Then, as you know, the butterfly emerges from the cocoon, from the chrysalis — the butterfly which is borne on the light, and radiant with light. It leaves the dark chamber into which the light could only enter as it did into the cromlechs, in the way I describe to you in the case of the ancient Druid's cromlechs. There the sun comes under the influence of Saturn, and it is only in conjunction with Saturn that it can send its light into the air in such a way that the butterfly can shine in the radiance of its many and varied colors.

Steiner is referring to the lectures he gave in September 1923, a few weeks before this lecture. Below are two excerpts from my review of those lectures(5). First, from Lecture 1 in Stuttgart (Page 27) , where he discussed how the shadows of physical light rays contain their spiritual essence and how the Druids used this light to assist their production of food.

[page 27 of MSDP] But it is only the physical sunlight which cannot penetrate there; its activity penetrates, and the Druid, as gradually through this activity he came to be permeated by the secret forces of cosmic existence, entered into the secrets of the world. Thus, for instance, the actions of the sun on plants was revealed to him; he could see that a particular kind of plant-life flourishes at a particular time when the sun is active in a particular way.

In this second passage, from Lecture 4 in Dornach (page 73), he talks about the printing-press man. One can rightly understand this only if one understands that the Druids immediately recognized that anyone using signs (written words) was ill or diseased. Steiner said, "Yes, my dear friends, if we with all our present knowledge were transported into the Druid culture, we should all be sent to hospital and cured."

[page 73 of MSDP] The Druid priest looked at the mysteries of the Cosmos. He read

there when corn, rye, and so forth were to be sown. These are only instances. The impulses for all that was done were read from the Cosmos. The greater impulses, which were needed, one may say, to complete the yearly calendar, were obtained from observation within the shadow of the Druid circle. So that in this age, when there was nothing that was derived from the human intellect, the Cosmos alone was there. And instead of the printing press, man had the cromlech in order to unravel from out of the Cosmos the mysteries it contained.

The cromlech was an enclosed stone structure through which no light entered from the physical Sun, but which permitted the Druids to experience the blaze of light from the spiritual Sun. A butterfly draws the light of the spiritual Sun into its darkened cocoon and these colors flutter into daylight with their dazzling arrays covering these flying plants of spiritual light.

[page 68] We can therefore contemplate two verses which give expression to a great secret of nature:

**Behold the plant:
It is the butterfly
Fettered by the earth.**

**Behold the butterfly:
It is the plant
Freed by the cosmos.**

But Steiner has more to say about the butterflies and birds. They have a spiritual nature which has an effect on this region of the cosmos. First of the butterflies:

[page 71, 73] Actually a butterfly lays its eggs only where they do not become separated from sun activity, so that the butterfly does not entrust its egg to the earth, but only to the sun. Then the caterpillar emerges; it is under the influence of Mars activity, though naturally the sun influence always remains. The chrysalis develops under the influence of Jupiter activity. From it emerges the butterfly, whose iridescent colors reflect in the earth's environment the luminous sun power that the earth can potentially evolve in conjunction with the power of Saturn. . . .

Now, it is spiritualized matter that we find to the greatest degree in the butterfly. Because a butterfly always remains in the sphere of sun existence, it only takes to itself earthly matter — naturally I am still speaking figuratively — as though in the form of the finest dust. It also gets its nourishment from earthly substances that have been worked through by the sun. It unites with its own being only what is sun-imbued; and it takes from earthly substance only what is finest, and works on it until it is entirely spiritualized. When we look at a butterfly's wing we actually have before us earthly matter in its most spiritualized form. Through the fact that the physical substance of the butterfly's wing is imbued with color, it is the most spiritualized of all earthly substances.

The butterfly is the creature which, lives entirely in spiritualized earth matter. And the spiritual eye is able to perceive that in a certain way a butterfly despises the body which it carries between its colored wings because its whole attention, its whole group soul being, is centered on joyous delight in the colors of its wings.

And just as we marvel at its shimmering colors as we follow it, so also can we marvel at its own fluttering joy in these colors. This is something which it is of fundamental importance to cultivate in children, this joy in the spirituality fluttering about in the air, which is in fact fluttering joy, joy in the play of colors. The nuances of butterfly nature reflect all this in a wonderful way; and something else lies in the background as well.

Second of the birds:

[page 73, 74] We were able to say of the bird — which we regarded as represented by the eagle — that at its death it can carry spiritualized earth substance into the spiritual world, and that thereby, as a bird, it has the task in cosmic existence of spiritualizing earthly matter, thus being able to accomplish what cannot be done by man. Human beings have earth matter in their heads that has also been spiritualized to some degree, but they cannot take this earthly matter into the world in which they live between death and a new birth for they would continually have to endure unspeakable, unbearable, devastating pain if they were to carry this spiritualized earth matter of the head into the spiritual world.

The bird world, represented by the eagle, can do this, so that a connection is actually created between what is earthly and what is extra-earthly. Earthly matter is, as it were, gradually transformed into spirit, and bird creation has the task of giving over this spiritualized earthly matter to the universe. One can actually say that when the earth has reached the end of its existence, this earth matter will have been spiritualized, and that bird creation had its place in the whole economy of earthly existence for the purpose of taking this spiritualized earth matter back into spirit land.



In the diagram from 27 October 1923, we can see in Steiner's own hand his drawing of how cosmic thinking, memories, and dreams are related to the birds, butterflies, and bats which flutter about our world. Cosmic thinking is connected with the birds (11 and 1 o'clock, purple color), comic memory with the butterflies (9 to 3 o'clock, cyan, yellow, and red strokes), and cosmic dreaming with the bats (3 o'clock, sketch of bat in white).

[page 83, 84] The bird is the flying thought. But the bat is the flying dream; the flying dream picture of the cosmos. So we can say: The earth is surrounded by fluttering butterflies — they are cosmic memory; by the kingdom of the birds — this is cosmic thinking; and by the bats — they are cosmic dream, cosmic dreaming. The flying

dreams of the cosmos actually rush through space as bats. And as dreams love the twilight, so, too, does the cosmos love the twilight and send the bat through space. The enduring thoughts of memory, these we see embodied in the girdle of butterflies encircling the earth; thoughts of the moment we see in the birds encircling the earth; and dreams in the environment of the earth fly about embodied as bats. And you will surely feel, if you enter deeply enough into their form, how much affinity there is between looking at a bat in this way and having a dream! One simply cannot look at a bat without the thought arising: I must be dreaming; that is really something which should not be there, something which is as much outside the other creations of nature as dreams are outside ordinary physical reality.

So we can say: The butterfly sends spiritualized substance into spirit land during its lifetime; the bird sends it out after its death. Now what does the bat do? During its lifetime the bat gives off spiritualized substance, especially that spiritualized substance which exists in the stretched membrane between its separate fingers. But it does not give this over to the cosmos; it sheds it into the atmosphere of the earth. Thereby beads of spirit, so to say, are continually produced in the atmosphere.

Of the butterflies, birds, and bats one can imagine them in action in the act as one reads this short poem I wrote about them.

Butterflies, Birds, and Bats

**Flutter, fly, and flit —
but that's not all of it —**

**Butterflies flutter by,
Birds fly by, and
Bats, in a pique of fit,
they flit.**

In this next passage Steiner explains that butterflies do not see the Earth, but merely see the cosmos reflected in the Earth as if it were a mirror. Ever wonder why butterflies mostly ignore humans? Their eyes are focusing on the cosmos. The birds do not see the Earth either, all they see is things which are in the air. The bat sees the parts of the Earth it must fly quickly around as it flits; disliking light, bats fly when it is dark.

[page 82] A butterfly sees everything that is on the earth as though in a mirror; to the butterfly the earth is a mirror for what is in the cosmos. When you see a butterfly in the air, you have to realize that it ignores the earth, for it is just a mirror reflecting the cosmos. A bird does not see what belongs to the earth, but it sees what is in the air. The bat is the first of these creatures to perceive what it flies through, or flies past. And because it does not like the light, it is unpleasantly affected by everything it sees.

On a serious note, Steiner tells us about bat emanations which provide nutrition to the Dragon principle in people who breathe in these spiritualized bat residues. In another ancient knowledge which has been flattened into a symbolic (or thought to be symbolic) metaphor, we have the slaying of the dragon by Michael the Archangel, often portrayed as St. Michael with his foot on the writhing snake and ready to apply the sword. (See photo of statue.)

[page 86] This bat residue is the most desirable food of what I have described in lectures here as the Dragon. But this bat residue must first be breathed into the human being. The Dragon finds his surest foothold in human nature when man allows his instincts to be imbued with these bat-emanations. There they seethe. And the Dragon feeds on them and grows fat — in a spiritual sense, of

course — gaining power over people, gaining power in the most manifold ways. This is something against which modern man must again protect himself; and the protection should come from what has been described here as the new form of Michael's fight with the Dragon. The increase in inner strength which man gains when he takes up into himself the Michael impulse as it has been described.



In Lecture 6, Steiner ties together the animals with the periods of evolution and the organs of the human being. In summary, the human head was formed during the Saturn period (the period of the butterflies and birds), the human lungs and circulatory system during the Sun period (the period of the lions), the human digestive tract and lower organs during the Moon period (the period of the cows). During the first Moon period (Saturn reprise), the butterflies developed, during the second Moon period (Sun reprise) the birds and lions developed, and during the third Moon period the cows, reptiles and amphibians developed. The last creatures to develop were so digestion-oriented that they resemble long digestive tubes. These include toads, frogs, snakes, lizards, and the like.

[page 93] They are simply digestive organs which came into existence as animals. These last creatures appeared during the second Moon period in an extremely clumsy-looking form, and were in fact walking stomachs and entrails, walking stomach and intestines. And only later, during the earth period, did they also acquire a still not particularly distinguished-looking head system.

During the last phase of the Moon period, the human reproduction system came into being at the same time as fishes and snakes first appeared. The snake is likened by Steiner to the renal tubule which is in charge of doing the finest filtering in the human kidneys.

[page 94, 95] We have to regard the fishes as late arrivals in evolution, as creatures that only joined the company of the other animals at a time when man added his organs of reproduction to those of digestion. The snake is the intermediary between the organs of reproduction and digestion. Rightly viewed in regard to human nature, what does the snake represent? It represents what is known as the renal tubule; it originated in world evolution at the same time as the renal tubule developed in man.

The diagram above from 27 October 1923 shows the sparkling colors which radiate from Earth of the cosmic memories of butterflies, the cosmic thinking of birds, and cosmic dreams of bats. These form a corona of the Earth which entices humans in the time between death and a new birth back to Earth. Ever wonder of the awe with which we behold butterflies, birds, and bats? Here is an answer.

[page 97] The earth entices man back into incarnation by sending forth into world space the shining radiance of the butterfly corona and the rays of the bird corona. These call man back again into a new earthly existence after he has spent a certain period of time between death and rebirth in the purely spiritual world. It is, therefore, not to be wondered at if man finds it difficult to unravel the complex feelings which he rightly experiences when beholding the world of the butterflies and the birds. For the true reality of these dwells deep in the subconscious. What really works in them is the remembrance of a longing for new earthly existence.

It should be obvious that angels and archangels as spiritual beings have no need of wings for propulsion.

And yet, angels and archangels are pictured with wings. Why? Ancient artists who still possessed clairvoyance were inspired by the form of the butterfly which has a strong relationship to the archangelic form. Butterflies are actually gigantic forms contracted into miniature because of the heaviness of earthen substance.

[page 96] If you could separate from a butterfly everything of the nature of the earth substance, it would be able, as spirit-being, as a creature of the light, to expand to archangelic form. In the creatures that inhabit the air we have the earthly images of spiritual forms that exist in the higher regions. This is why, in the time of instinctive clairvoyance, it was the natural thing in artistic creation to derive from the forms of the winged creatures the symbolic form, the pictorial form, of the beings of the higher hierarchies.

Steiner has spoken of brain sand in several other places, [From Crystals to Crocodiles](#), [Nutrition and Stimulants](#), and [Occult Physiology](#), but in this next passage he gives the clearest description of the physiology that I have found. Without a pineal gland large enough to secrete brain sand, normal brain function is not possible. When one has spent a lot of time thinking, one's brain secretes brain sand which must be continually dissolved(6). What is living cannot hold the spirit, Steiner tells us, and therefore some non-living mineral is required to hold our nascent spirit-man(7) in the human being.

[page 105] When we follow the course of earth evolution — heat state, airy state, watery state, mineral earthly state — the human head has participated in all these metamorphoses, the mineral metamorphosis initially on the outside, in the decaying skeleton of the head — though this still retains a certain vitality. But the human head has participated in the earthly mineral metamorphosis in a way which is even more apparent. In the center of the human head within the structure of the brain there is an organ shaped like a pyramid, the pineal body. This gland, situated in the vicinity of the superior colliculi (corpora quadrigemina) and the optic thalamus secretes out of itself the so-called brain sand, minute lemon-yellow stones which lie in little heaps at one end of the pineal body, and which are truly the mineral element in the human head. If they do not lie there, if a human being does not have this brain sand, this mineral element, within him, he becomes mentally retarded. In the case of normal people the pineal body is comparatively large. In the mentally retarded, pineal bodies have been found which are actually no larger than hemp seeds; these cannot secrete brain sand.

It is actually in this mineral deposit that the spirit-man is anchored; and this immediately shows that what is living cannot harbor the spirit, but that the spirit in man needs something non-living as its center, which means that above all else it must be a spirit with independent life.

Part Three: The Plant World and the Elemental Nature Spirits

In Lectures 7, 8, and 9 Steiner gives a detailed description of the interactions of the plant world and the elemental beings of gnomes, undines, sylphs, and salamanders (fire spirits). In fairy tales and movies we see gnomes and dwarves always associated with mountains, but we see them walking freely outside the rocky substrates in which these elemental being actually live. For gnomes, rocky strata are like a living room or a large stadium, a place in which to roam and play. Gnomes are root spirits and are responsible for pushing plants up out of the ground.

[page 110] Plants send down their roots into the ground. Anyone who can observe what they really send down and can perceive the roots with spiritual vision (for this he must have) sees how the root is everywhere surrounded by the activities of elemental nature spirits. And these elemental spirits, which an old clairvoyant perception designated as gnomes and which we may call the root spirits, can actually be studied through Imagination and Inspiration, just as human life and animal life can be studied in the

physical world. We can look into the soul nature of these elemental spirits, into this world of the spirits of the roots.

The root spirits are quite special earth folk, invisible at first to outer view, but in their effects so much the more visible; for no root could develop if it were not for what is mediated between the root and the earth realm by these remarkable root spirits, which bring the mineral element of the earth into flux in order to conduct it to the roots of plants. I am of course referring to the underlying spiritual process.

The gnomes love the Earth's underground and treat it as their playground(8). They also bear an intelligence that sees and understands immediately(9) without having to shred what they see into particles as we humans do with our analytical logic. These root spirits, as Steiner calls them, carry their cosmic understanding with them on their travels through the Earth.

[page 110, 111] **These root spirits, which are everywhere present in the earth, get a quite particular sense of well-being from rocks and from ores (which may be more or less transparent and also contain metallic elements). They have the greatest feeling of well-being(10) in this sphere because it is the place where they belong, where they are conveying what is mineral to the roots of the plants. And they are filled with an inner spirituality that we can only compare to the inner spirituality of the human eye and the human ear. For these root spirits are in their spiritual nature entirely sense. Apart from this they are nothing at all; they consist only of sense. They are entirely sense, and it is a sense which is at the same time *intellect*, which does not only see and hear, but immediately understands what is seen and heard; it not only receives impressions, but everywhere also receives ideas.**

We can even indicate the way in which these root spirits receive their ideas. We see a plant sprouting out of the earth. The plant enters, as I shall presently show, into connection with the extra-terrestrial universe; and, particularly at certain seasons of the year, spiritual currents flow from above, from the flower and the fruit of the plant down into the root, streaming into the earth. And just as we turn our eyes towards the light and see, so do the root spirits turn their faculty of perception towards what trickles downwards from above, through the plant into the earth. What trickles down towards the root spirits is something which the light has sent into the flowers, which the heat of the sun has sent into the plants, which the air has produced in the leaves, which the distant stars have brought about in creating the plant form. The plant gathers the secrets of the universe, sends them into the ground, and the gnomes take these secrets into themselves from what trickles down spiritually to them through the plants. And because the gnomes, particularly from autumn on and through the winter, in their wanderings through ore and rock, bear with them what has trickled down to them through the plants, they are the beings within the earth which carry the ideas of the whole universe on their streaming, wandering journey through the earth.

The gnomes can be very grumpy with humans, considering us to be stupid with our paltry devices of human reason and logic. They know everything totally, and we can only know some things partially. This brings to mind the famously unpleasant dwarf known as Grumpy. One can imagine hearing Grumpy saying to the other dwarfs, "Why don't people stick their noses into the earth down to the depth of the plant's roots, and let what the sun says to the plants trickle down into their noses? Then they would know something! But with logic one can only have odd bits and pieces of knowledge." (Page 113) In addition they dislike anything that is earthly. They literally would like to escape because they feel in danger. The benefit to us from their antipathy is that they push the plant out of the ground into the air above the surface.

[page 113] Nevertheless they remain with the earthly — you will soon see why this is so

— but they hate it, for the earthly threatens them with continual danger. The earth continually holds over them the threat of forcing them to take on particular shapes, the configuration of the creatures I described to you in the last lecture, the amphibians, and in particular of frogs and toads. The feeling of the gnomes within the earth is really this: If we grow too strongly together with the earth, we shall assume the form of frogs or toads. They are continually on the alert to avoid being caught up too strongly in the earth and be forced to take on such an earthly form. They are always on the defensive against this earthly form, which threatens them in the element in which they exist as I have described. They have their home in the element of earth and moisture; there they live under the constant threat of being forced into amphibian forms. From this they continually tear themselves free by filling themselves entirely with ideas of the extra-terrestrial universe. The gnomes are really the element within the earth which represents the extra-terrestrial, because they must continually avoid growing together with the earthly; otherwise they would individually take on the forms of the amphibian world. And it is just from what I may call this feeling of hatred, this feeling of antipathy towards the earthly, that the gnomes gain the power of driving the plants up from the earth. With the fundamental force of their being they unceasingly thrust away from the earthly, and it is this thrust that determines the upward direction of plant growth; they impel the plants along with them. The antipathy that the gnomes have to anything earthly causes the plant to have only its roots in the earth and then grow out of the earth; in fact, the gnomes force the plants out of their true, original form and make them grow upwards and out of the earth.

Once the plant reaches out of the ground into the air, the water sprites or undines are the elemental spirits of the watery element which work in the sphere of moisture-air while the gnomes only work in the moisture-earth sphere. While the gnomes operate in the moisture-laden earth around the roots, the undines operate in the moisture-laden soil in the air directly above the surface of the soil. The undines act as chemists who foster the growth of the plant.

[page 115] These undine beings differ in their inner nature from the gnomes. They cannot turn outwards towards the universe like a spiritual sense organ. They can only yield themselves up to the movement and activity of the whole cosmos in the element of air and moisture and they therefore do not have the clarity of mind that the gnomes have. They dream incessantly, these undines, but their dream is at the same time their own form. They do not hate the earth as intensely as do the gnomes, but they have a sensitivity to what is earthly. They live in the etheric element of water, swimming and floating in it. They are highly sensitive to anything in the nature of a fish; for the fish's form is a threat to them. They do assume it from time to time, though only to forsake it immediately in order to take on another metamorphosis. They dream their own existence. And in dreaming their own existence they bind and release, they bind and separate the substances of the air, which in a mysterious way they introduce into the leaves. They take these substances to the plants that the gnomes have thrust upwards. The plants would wither at this point if it were not for the undines, who approach from all sides, and as they move around the plants in their dream-like consciousness, they prove to be what we can only call world chemists. The undines dream the binding and releasing of substances. And this dream, through which the plant exists, into which it grows when, developing upwards, it leaves the ground, this undine dream is the world chemist inducing the mysterious combining and separation of substances in the plant world, starting in the leaf. We can therefore say that the undines are the chemists of plant life. They dream of chemistry.

The next elemental beings which foster the life of the plants are called sylphs. These beings live in the elements of air and warmth and are particularly drawn to currents in the air, such as a flock of birds. In fact, a sylph flitting through air devoid of birds feels lost. When a bird then arrives, it feels its ego through

the waves generated by the bird's flight through the air. Through the sylphs birds become like the bearers of love.

[page 117] The sylph feels its ego through what the bird sets in motion as it flies through the air. And because this is so, because its ego is kindled in it from outside, the sylph becomes the bearer of cosmic love through the atmosphere. It is because its ego is kindled in it from outside, the sylph becomes the bearer of cosmic love through the atmosphere. It is because the sylph embodies something like a human wish, but does not have its ego within itself but in the bird kingdom, that it is at the same time the bearer of wishes of love through the universe.

The sylph is the light-bearer to the plant world and the force of this light augments the chemical actions generated by the undines. One begins to see how the elemental forces are at work in the soil, water, air, and light around the plants and to feel as a gnome must about what botanists try to convince us are merely chemical reactions in the material world which create the lush plant life we live amongst. No botanist can explain to me why my basil plants avoid seeding in the lush soil of our herb garden but love to seed between the tiny cracks in nearby paving stones. Apparently the gnomes must love to pull the roots down and push these healthy plants upward between these sturdy rock-like structures.

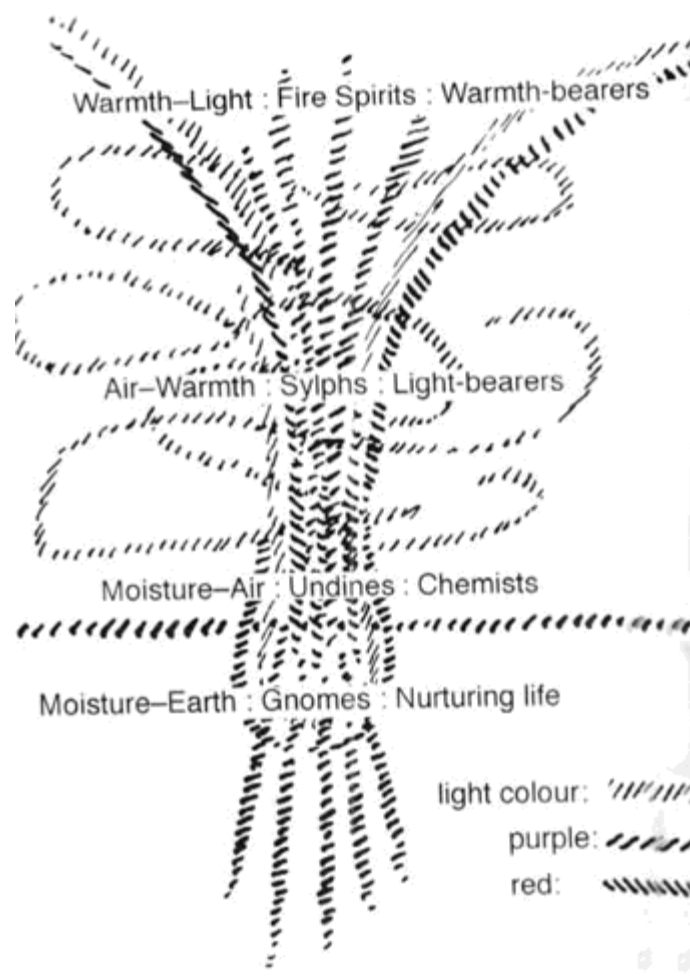
[page 118] Through the fact that the sylphs bear light into the plant, something quite remarkable is brought about. You see, the sylph is continually carrying light into the plant. The light, that is to say the power of the sylphs in the plant, works on the chemical forces that were induced in the plant by the undines. Here occurs the interworking of the sylph's light and the undine's chemistry. This is a remarkable molding and shaping activity. With the help of the up streaming substances which are worked on by the undines, the sylphs weave an ideal plant form out of the light. They actually weave the Archetypal Plant within the plant from light and from the chemical working of the undines. And when towards autumn the plant withers and everything of physical substance disperses, then these forms of the plants begin to trickle downwards, and now the gnomes perceive them, perceive what the world — the sun through the sylphs, the air through the undines — has brought to pass in the plant. This the gnomes perceive, and throughout the entire winter they are engaged in perceiving below what has trickled down into the soil from the plants. Down there they grasp world ideas in the plant forms which have been given shape and form with the help of the sylphs, and which now enter into the soil in their spiritual, ideal form.

If you find yourself snorting at the folly of this invisible-to-the-physical-eye scheme of plant growth, perhaps you have yourself been convinced that a plant has a female reproductive part (the carpel) which must be fertilized by the male pollen to create a seed capable of producing a new plant. This is the invisible-to-the-physical-eye scheme of plant reproduction promulgated by materialistic botanists. Not so, says Steiner, in fact, he calls it a grievous error! The truth is actually more complex and interesting than any botanist might guess who has not studied Steiner's work. The mother principle of the plant is found in the earth and the father principle is found in the heavens.

[page 118] People who regard the plant as something material will of course know nothing of this spiritual ideal form. Thus at this point a colossal error, a terrible error appears in materialistic observation of the plant. I'll give you a brief outline of this.

Everywhere you will find that in materialistic science matters are described as follows: The plant takes root in the ground, above the ground it develops its leaves and

finally its flowers, and within the flower the stamens, then the carpel(11). The pollen from the anthers — usually from another plant — is taken over to the stigma, the carpel is fertilized and through this the seed of the new plant is produced. That is the usual way of describing it. The carpel is regarded as the female element and what comes from the stamens as the male — indeed matters cannot be regarded otherwise as long as people remain bound to materialism, for then this process really does look like fertilization. This, however, it is not. In order to gain insight into the process of fertilization, that is to say the process of reproduction, in the plant world, we must be conscious that in the first place the plant form arises through the work of those great chemists, the undines, and the work of the sylphs. This is the ideal plant form which goes down into the ground and is kept safely by the gnomes. It is there below, this plant form. And there within the earth it is now guarded by the gnomes after they have seen and perceived it. The earth becomes the womb for what thus trickles downwards. This is something quite different from what is described in materialistic science.



At this point it will be useful to look at two diagrams of a plant which Steiner drew with colored chalk on 2 Nov 1923 which were redrawn in a pen drawing on page 112 and 120 of this book. The first one, above, shows how the four elementals work on the plant from the roots up. First the gnomes in the Moisture-Earth pushing up the plant from the ground and nourishing life. Then the undines in the Moisture-Air acting as personal chemists for the plant directly above the ground. Higher up the sylphs in the Air-Warmth bringing the spiritual forces of light to the leaves and branches. And in the upper regions where the flowers form, the fire-spirits (salamanders) in the Warmth-Light bearing warmth to produce seeds for the next generation of the plant.

The second diagram (shown in Steiner's original colored chalk drawing) illustrates a plant with two roots (white) below ground (the yellow chalk), two leaves on each side of the stem (white ovals), a flower at the top of the stem (two red ovals), with fire spirits in the flower (red circles), and the male carpel at the top (red circle atop the white circle). Now we are able to follow the process of reproduction of the plant aided by the elemental fire spirits.

[page 119, 120] Up here (see drawing), after it has passed through the sphere of the sylphs, the plant enters the level of the elemental fire spirits. These

inhabit the element of heat and light. When the warmth of the earth is at its height, or has reached a sufficient level, it is gathered up by the fire spirits. Just as the sylphs gather up the light, so do the fire spirits gather up the warmth and carry it into the flowers of the plant.

Undines carry the action of chemical ether into the plants, sylphs the action of light ether into the flowers. And the pollen provides what may be called little airships that enable the fire spirits to carry warmth into the seed. Everywhere warmth is collected with the help of the stamens, and is carried by means of the pollen from the anthers to the seeds in the carpel. And what is formed here in the carpel in its entirety is the male element that comes from the cosmos. It is not a case of the carpel being female and the anthers of the stamens being male. In no way does fertilization occur in the flower, but only the preforming of the male seed. Fertilization occurs when the cosmic male seed, which fire spirits in the flower take from the warmth of the universe, is brought together with the female principle that has trickled down into the soil as an ideal element at an earlier stage, as I have described, and is resting there.



For plants the earth is the mother, the heavens the father.

If you do not know about the work of the elementals, it is easy to accept that the carpel is the womb of the plant where fertilization occurs. This is a grievous error caused by anthropomorphizing the reproductive process of the plant world without understanding the underlying reality. Goethe was terribly annoyed because people talked about endless 'marriages' going on in the plants. It is the botanical equivalent of the famous phlogiston mistake in chemistry. Phlogiston was deemed to be a substance that left wood when it was burned. Lavoisier proved that oxygen was added to wood when it was burned, completely opposite to what official science had thought for many centuries. The Earth contains the maternal principle of all the plant world and underground is where the fertilization takes place when the seed enters the ground. In humans fertilization occurs when the male seed enters the womb of the human mother. In the plants fertilization occurs when the male seed enters the plant's mother, the Earth.

[page 121] And all that takes place outside the domain of the earth is not the maternal womb for the plant. It is a colossal error to believe that the maternal principle of the plant is in the carpel. This is in fact the male principle which has been drawn forth from the universe with the aid of the fire spirits. The maternal element is taken from the cambium of the plant, which lies between bark and wood, and carried down as ideal form. And what now results from the combined gnomes' and fire spirits' activity — this

is fertilization. The gnomes are, in fact, the spiritual midwives of plant reproduction. Fertilization takes place below in the earth during the winter, when the seed enters the earth and meets with the forms which the gnomes have received from the activities of the sylphs and undines, and which they now carry to where these forms can meet with the fertilizing seeds.

You see, because people do not recognize what is spiritual, do not know that gnomes, undines, sylphs and fire spirits — which were formerly called salamanders — are actively involved in plant growth, there is a complete lack of clarity about the process of fertilization in the plant world. Up there, outside the earth, nothing by way of fertilization takes place; the earth is the mother of the plant world, the heavens the father. This is the case in a quite literal sense. Plant fertilization takes place through the fact that gnomes take from fire spirits what the fire spirits have carried into the carpel as concentrated cosmic warmth on the tiny airships of the anther pollen. Thus the fire spirits are the bearers of warmth.

If the usage of the word salamander to refer to fire spirits seems strange to you, it was a familiar term to a friend of mine who worked in a Chicago steel mill. He was told during the winter if he got cold to "go over by the salamander" which was fiery pit of molten steel. Don't bees fertilize plants as they fly from flower to flower? Yes, but it is the salamanders or fire spirits which are attracted to the bees. The aura of each bee, visible to spiritual sight, is a fire spirit which carries cosmic warmth and to pour into the bees' "tiny airships" of anther pollen.

Once again the thought may arise in some readers, "If these elementals exist, why can't I see them?" It should be clear that our fairy tales indicate to us that ancient folk knew about these spiritual creatures and incorporated them into their tales. But the evolution of consciousness goes on constantly and our quantum leap forward in consciousness of the material world over the past 600 years accompanied our loss of direct perception of certain spiritual realities such as the elementals.

[page 127] The reason why this company of gnomes, undines, sylphs and fire spirits is not perceptible in the same way as animals, plants and so on, is merely that man, in the present epoch of his earth evolution, is not in a position to unfold his soul and spirit without the help of his physical and ether bodies. In the present situation of earth evolution man is obliged to depend on the etheric body for the purposes of his soul, and on the physical body for the purposes of his spirit. The physical body which provides the instrument for the spirit, that is, the sensory apparatus, is not able to enter into communication with the beings that exist behind the physical world. It is the same with the etheric body, which man needs to develop as an ensouled being. Through this, if I may put it so, half of his earthly environment escapes him. He passes over everything connected with the elemental beings about which I spoke yesterday. The physical and the ether body have no access to this world.

"Look sharp, like a Goblin!" is an idiomatic phrase in Germany, and is based on very old knowledge of how goblins and gnomes are ever-alert sentinels of the world, so much so that for a goblin or dwarf to sleep or even become sleepy would cause it to die. (Page 129) This is something Walt Disney missed when he named one of his dwarfs Sleepy.

Lecture 8 goes more deeply into the nature of the gnomes, undines, sylphs, and fire spirits, but I want to focus on the relationship of fire spirits and thoughts. Rightly understood, thoughts are like radio waves which flow through the air until they are caught by some antenna. Our brain does not originate thoughts but receives them, reflects them, and can create memories of them and words to describe what was received. To believe that our brain contains thoughts is as juvenile as believing that the mirror on her dresser contains beyond it another world that Alice could enter.

[page 134, 135] One finds that the human head only calls forth the illusion that thoughts

are enclosed inside the skull. They are only reflected there; their mirrored images are there. What underlies these thoughts belong to the sphere of the fire spirits. On entering this sphere one sees thoughts to be not only what they are in themselves, but the thought content of the world, which, at the same time, is actually rich in imaginative content.

There is another aspect of brain function which Steiner illuminates that is surprising — its connection with the process of elimination. He says that "The human brain is the further evolved product of elimination," and that this is why there is a connection between diseases of the brain and intestinal diseases, and also their cure. (page 137) The processes of the brain and the lower digestive tract both involve elimination, but in the head the process of elimination is carried further and results in our human brain(12).

[page 137] If you think of the human being as consisting of metabolism and limbs, of the chest — that is, the rhythmical system — and then the head — that is, the system of nerves and senses — there are certain things about which you must be quite clear. Down below processes are taking place — let us leave out the rhythmical sphere — and above processes are taking place. If you look at the processes taking place below as a whole, you find that in ordinary life they have one result that is usually disregarded. These processes are those of elimination: through the intestines, through the kidneys, and so on; and all of them have their outlet in a downward direction. They are mostly regarded simply as processes of elimination. But this is nonsense. Elimination does not take place merely in order to eliminate, but to the same degree in which the products of elimination arise something arises spiritually in the lower sphere of man which resembles what the brain is, physically, above. What occurs in the lower man is a process arrested halfway as far as its physical development is concerned. Elimination takes place because the process passes over into the spiritual. In man's upper sphere the process is taken to its conclusion. What below is only spiritual there assumes physical form. Above we have the physical brain, below a spiritual brain. And if what is eliminated below were to be subjected to a further process, if one were to continue the transformation, then ultimately such metamorphosis would give rise to the human brain.

And in addition we learn from Steiner that we owe our brain capabilities to the parasites which malevolent gnomes and undines give rise to in us.

[page 137, 138] You see, because gnomes and undines exist, because there is a world in which they are able to live, the forces exist that are certainly capable of giving rise to parasites in man's lower sphere; but at the same time, in man's upper sphere, this gives rise to metamorphosis into the brain of the products of elimination. It would be absolutely impossible for us to have a brain if the world were not so ordered that gnomes and undines can exist.

The sylphs are responsible for the poisons in the plant world, if the sylphs descend too far.

[page 138] It is right that when the sylphs develop their enveloping forces up above, as I have already described, where the light literally comes and touches you all over — for the bird world needs this. But if the sylph descends, and makes use in the plant world below of what it should employ above, a potent vegetable poison is engendered. Parasitic being arise through gnomes and undines; and through sylphs arise the poisons which are in fact a heavenly element that has streamed down too far, has descended to earth.

For gnomes the entire Earth is like the interior of a huge department store would be for a woman, a paradise full of wonderful things to look at and enjoy. But gnomes have no idea that the Earth exists in the way that we humans know it.

[page 143] They have not the least idea that the earth exists. Their idea is that there is a

space in which they perceive certain experiences: the experience of gold, the experience of mercury, of tin, of silica, and so on. This is to express it in human language, not in the language of the gnomes.

Every year about June or so, some news programs talk about the dead zones in the Gulf of Mexico as if it were some dreadful thing. But for the undines, such a zone of putrefying organisms is a delight!

[page 147] All this, however, is different for the undines. It causes them no unpleasant sensations; but when the millions and millions of water creatures which perish in the sea start decomposing, the sea becomes for the undines the most wonderful phosphorescent play of colors. It shines and glitters with every possible color. Especially does the sea glitter for them, inwardly and outwardly, in every shade of blue, violet and green.

From these so-called dead zones, the undines soar upwards and offer themselves as sacrifices to the higher hierarchies, in which they continue thereafter to live.

In Lecture 9 Steiner gives this summary of the four elementals.

[page 150, 151] Thus we see how these elemental beings are the intermediaries between the earth and the spirit-cosmos. We see the drama of the phosphorescent upsurge of the undines, which pass away in the sea of light and flame of the higher hierarchies as their sustenance; we see the upward flashing greenish-reddish lightning, which is breathed where the earth continually passes over into eternity, the eternal survival of the fire spirits, whose activity never ceases. For whereas, here on earth, birds tend to die at a particular time of year, the fire spirits make sure that what is to be seen of them pours out into the universe throughout the entire year. Thus the earth is as though cloaked in a mantle of fire. Seen from outside the earth appears fiery. But everything is brought about by beings who see the things of the earth quite differently from how man sees them. As already mentioned, man's experience of the earth is of a hard substance on which he stands and walks about. For the gnomes it is a transparent globe, a hollow body. For the undines water is something in which they perceive the phosphorizing process, which they can take into themselves as living experience. Sylphs see in the astrality of the air, which emanates from dying birds, something that makes them into more actively flashing lightning than they would otherwise be, for in itself the lightning of these sylphs is dull and bluish. And then again the disintegration of butterfly existence is something which continually envelops the earth as though with a shell of fire. Beholding this, it seems as though the earth were surrounded by a wonderful fiery painting; and there to one side, when one looks upwards from the earth, one beholds these lightning flashes, these phosphorescent and evanescent undines. All this shows us that here on earth the elemental nature spirits move and work actively, striving upwards and passing away in the fiery mantle of the earth. In reality, however, they do not pass away, but they find their eternal existence by passing over into beings of the higher hierarchies.

The title of this book is "Harmony of the Creative Word" and the Gospel of John begins with these words, "In the beginning was the Word, and the Word was with God, and the Word was God." What is the meaning of Word and how was it in our beginning? Steiner sheds light on that in this next passage and calls our attention to the chorus of voices proclaiming the Word that we humans might miss in our current state of evolution of consciousness where the voices of the gnomes, undines, sylphs, and fire spirit spirits do reach our ears and we have been unconscious of their presence in the world around us, up until now.

[page 156, 157] For the primeval idea, which had its source in instinctive clairvoyance, that the world was born out of the Word is indeed a profound truth, but the World Word is not some collection of syllables gathered from just a few sources; the World

Word sounds forth from a countless multitude of beings. Countless, countless beings have something to say in the totality of the world, and the World Word sounds forth from the concordance of these countless beings. The general abstract truth that the world is born out of the Word cannot bring this home to us in its fullness. One thing alone can do this, namely, that we gradually arrive at a concrete understanding of how the World Word in all its different nuances is composed of the voices of individual beings, so that these different nuances contribute their sound, their utterance, to the great world harmony, the mighty world melody, in the Word's act of creation.

And, of course, among those countless beings are our new friends, introduced to us by Rudolf Steiner in these pages, the gnomes, undines, sylphs, and fire spirits. If we do not attend to the presence of their voices in this cosmic chorus, we lack understanding into our skeletal system, our metabolic system, our rhythmic system, our nerves and sensory system.

[page 156, 157] When the gnome chorus sounds forth its 'Strive to awaken' this — translated into gnome language — is the force which is active in bringing about the human skeletal system, and the system of movement in general.

When the undines utter 'Think in the spirit', they utter — translated into Undine — what pours itself as World Word into man in order to give form to the metabolic organs.

When the sylphs, as they are breathed, allow their 'Live and create breathing existence' to stream downwards, there penetrates into man, moving and pulsating everywhere in him, the force which endows him with the organs of the rhythmical system.

And if one attends to the fire-spirit sounds that resound and stream in from the fire mantle of the world with a voice of thunder, then one finds that this sounding manifests as image or reflection. It streams in from the fire mantle — this sounding force of the word. And the nerves and senses of every human being, every human head we might say, is a miniature image of what — translated into the language of fire spirits — rings out as: 'Receive in love the will-power of the gods'. This 'Receive in love the will-power of the gods' is what is active in the highest substances of the world. When man is going through his development in the life between death and a new birth, this transforms what he brought with him through the gate of death into what will later be the human organs of the nerves and senses.

Part Four: The Secrets of the Human Organism

We have now reached Lectures 10, 11, and 12 of Part Four which begins with this quote:

'Physical natural laws, etheric natural laws, are the characters of a script which depicts the spiritual world. We only understand these things when we are able to conceive them as written characters from spiritual worlds.'

This series of lectures given to people with the purpose to foster a deep study of the human being. In a sense all of Steiner's anthroposophy has that as its goal, as *anthropos* means the full human being and *sophy* means science or knowledge. How is the human being related to the cosmos? Each system of the human body was formed during a different period of the evolution of the cosmos.

[page 163, 164] You see, when you move your arms and stretch them out, when you move your fingers, when you carry out any kind of external movement, everything in your organism which enables you to move your arms and legs, your head, your lips, and so on — and the forces on which man's external movements depend extend to the inmost parts of the human organism — all this was vouchsafed to man by our current planetary stage of Earth evolution. If, on the other hand, you look into everything connected with

the development of the metabolism, which is enclosed by man's skin, if you look at all the metabolic functions in the physical body, you have a picture of what man owes to Moon evolution. And you have a picture of what man owes to old Sun evolution when you look into everything in him that involves some kind of rhythmical process. Breathing and blood circulation are of course the most important of these rhythmical processes, and these man owes to old Sun evolution. Everything in man comprising the system of nerves and senses, which is distributed over the whole body in people today, we owe to old Saturn evolution.

Within each period of evolution there is a reprise of the previous periods in order. So in the Earth period we will go through a reprise of the Saturn, Sun, Moon evolutions. In the Sun period there was a Saturn reprise and in the Moon period there was a Saturn and Sun reprise. These are the reprises of Saturn that Steiner refers to in this next passage.

[page 164] In regard to all this, however, you must bear in mind that the human being is a whole and that world evolution is a whole. When we examine old Saturn evolution in the way I did in my *Occult Science*, we mean the period of evolution that aeons and aeons ago preceded Sun, Moon and Earth evolution. But this is only one Saturn evolution, the one that eventually gave rise to the earth. Whilst the earth is evolving, another Saturn evolution also takes place. This new Saturn evolution is contained within Earth evolution; it is, so to speak, the most recent Saturn evolution. The original one that led to Earth evolution is the oldest. The Saturn evolution which was part of the old Sun is more recent, and the one that was part of the Moon still more recent. And the Saturn that today imbues the earth and is above all responsible for certain aspects of its warmth organization, this Saturn is the most recent of all. We, with our human nature, are part of this Saturn evolution.

When we eat foods, they can be combinations of minerals (such as salt), plants, and animals. These foods must be completely altered before they can become part of our human body. Unless that transformation is complete, we will become ill from the food. We can ingest minerals, plants, and animal flesh, but minerals must be given warmth by our body, plants must take on a transitional airy form, and everything animal must be made into a liquid form before the human body can *digest* it.

[page 167] The metabolic system converts what belonged to man's surroundings into what is essentially human. It gradually changes everything mineral into warmth ether, everything vegetable to the gaseous, airy or vaporous state, and everything animal — that is, what animals produce in themselves — to the fluid state, creating the solid, organized form of the fully human element.

Food is dissolved in the mouth by saliva, the pepsin in the stomach, secretions from the pancreas and then from the gall bladder, etc. Each of these processes must be linked in a chain because when the next process in the chain takes over it and checks the previous metabolic process, which if unchecked would make one ill. Note that metabolic processes started during the Moon period of evolution and the circulatory processes started during the earlier Sun period. The circulatory processes continually heal the body while the metabolic processes try to harm it. It's as if divine wisdom had created the doctor in advance of the illness.

[page 170] Every metabolic process, if unchecked, causes illness in the organism. If, therefore, metabolism is to exist at all in man, other processes must exist whose beginnings are of an earlier date. These are the circulatory processes. The circulation produces continuous healing processes. So that we may really describe the human being by saying: During the old Moon evolution man first became a patient, but the human constitution is such that the physician preceded the patient. During the epoch of old Sun, man arose as the physician for his own subsequent constitution. It shows great foresight

in world evolution that the physician came into existence before the patient, for the patient in man was only added on old Moon. If we are to describe man rightly, we must work backwards from the metabolic to the circulatory processes, including, of course, all the impulses that underlie the circulatory processes. One substance induces quicker, another substance slower circulation in the widest possible sense. We do of course also have minor circulatory systems in us. Take any mineral substance, gold let us say, or copper. Introduced in some way — by mouth, by injection or in some other way — every substance is endowed with the power of influencing the circulation, changing it, restoring it to health, and so on. And what one must know, in order to gain insight into the essential healing processes in man, is what kind of processes every single substance in the world around us triggers in us to change the circulation. Thus one can say that the circulation is a continual process of healing.

What happens in smoking (and the use of other tobacco products) is that when the substance nicotine enters the body, the heart rate is increased in relation to the breathing rate. This throws the cosmic balance of our breathing and respiration out of whack and eventually causes sickness. Steiner shows us how to calculate our respiration rate from the cosmos and this allows us to check our respiration rate against our circulatory (pulse) rate and discover for ourselves if it is out of balance.

[page 171] You can, if you wish, work this out for yourselves. Recall how I told you that on average we draw eighteen breaths a minute. Here we find a remarkably regular agreement with the cosmos, for the number of breaths we draw in a day corresponds to the circulatory rhythm of the sun in its course through the solar year. The spring equinox of the sun traverses the entire zodiac in 25,920 years. In middle life we draw on average 25,920 breaths a day. The pulse beats are four times as many. The other, more inwardly concentrated circulation is influenced by the metabolism. The breathing cycle reflects our communication with the outside world, our reciprocal relationship with it. This breathing rhythm must continually restrain the circulatory rhythm, so that it remains in its proportion of one to four, otherwise our circulation would come into a quite irregular rhythm, and not the figure of 103,680. Nothing in the cosmos corresponds to this irregular rhythm, and man is severing all connection with the cosmos in this respect. His metabolism is tearing him away from the cosmos and estranging him from it. His breathing rhythm is continually pulling him back into the cosmos. This division and the way the breathing rhythm controls the circulatory rhythm represents the primal healing process that is continually at work in man. In a certain delicate way, every medical treatment must be designed to assist the breathing process (which in a way continues into all parts of the body) so that it can control the circulatory process and bring it back into harmony with the general relationships in the cosmos.

There is a common expression today that "What happens in Las Vegas remains in Las Vegas." This is true of the processes of the circulatory and nervous systems. They must be kept in harmony and what runs in each system must remain in that system and must be kept separate from the other systems or either inflammation from an errant circulatory system or tumors from an errant nervous system will occur. Steiner summarizes it neatly:

[page 177] What runs in the nerve must remain in the nerve, what runs in the blood must remain in the blood. If what belongs in the blood enters into adjacent tissues, inflammation results. If what belongs to the nerve enters into adjacent tissues, all kinds of lesions develop that are commonly referred to as tumors.

And yet the factors which can cause illnesses in the human body must be there as under certain circumstances, they are agents of healing. It is good to recall what Steiner says about "evil" — it is a good out of its time or place.

[page 177, 178] Here again, you see, we come into the domain of therapy and of healing processes. All this serves to show you how everything must be present in man, how above all an element of illness must be present so that in another situation it may become an element of health; it is merely that the wrong process has taken it to the wrong place. For if it did not exist at all, man could not exist either. Man could not exist if he were unable to get inflammations, for the inflammation-inducing forces must continually be present in the blood. This was what I meant when I kept saying that everything one gains in the way of knowledge must be won from a real knowledge of man. Here you see why an education carried out in an up-in-the-air, abstract fashion is really something absurd. Education must in fact always start from certain pathological processes in man, and from the possibility of curing them.

If this all seems too complicated for you, then perhaps you have read enough in just this review to grasp this simple dictum of Steiner, which I understand to be an expansion of the saying above Apollo's temple, namely, "Know Thyself":

[page 180]

**To find and know yourself,
Look all around you in the world.
To find and know the world,
Look into all the depths within yourself.**

And there is no better way to look into the world or into yourself than to have Rudolf Steiner as your guide and clairvoyant seeing-eye assistant. It should be clear that Steiner does not begin with abstractions about the world or the body. He doesn't peer into a telescope to learn about the cosmos, nor does he peer into a microscope (which he labels a "nulloscope") to learn about the human body. He makes observations about how the processes of the human body's systems interact together. Most importantly he avoids the deadly assumption that what happens in the human body is equivalent to what happens in a chemical laboratory. Human beings are not machines and deserve to be treated as individuals, not as diseases on a doctor's chart. "Here's the hernia patient. . . . etc." To recognize a person's name is to recognize their individuality and separate what is going on in them from what goes on in every other patient with the same disease.

[page 183] You will have gathered from what has been said so far that man's relation to his environment is very different from what modern minds often conceive. It is so easy to think that what exists in man's surroundings, what belongs to the mineral, plant and animal kingdoms and is then taken into the body, that these external material processes which are investigated by the physicist, the chemist and so on, simply continue on in the same way in man himself. There can, however, be no question of this for one must be clear that inside the human skin and its processes everything is different from outside it, that the world inside differs entirely from the world outside. As long as one is not aware of this, one will continually assume that what is examined in a retort, or investigated in some other way, is continued on inside the human organism; and the human organism itself will simply be regarded as a more complex system of retorts.

The powerful passage above inspired me to write this poem as a powerful retort to the chemists who distill natural concoctions in their chemical retorts and claim to improve the health of their customers by doing so.

A Powerful Retort

A glass retort allows
chemicals to be distilled
according to physical principles —

The glass retort neither participates
in the chemical reactions
nor modifies them in any way.

If the glass retort accelerated
a chemical reaction,
it would be called a catalyst.

The human being is a powerful retort.
It is not an inert retort
like a glass retort used for distilling.

The human being catalyzes and distills
minerals into warmth ether,
plants into an airy stage,
animal matter into a watery stage,
during our metabolism
which powers our limbs, breathing,
and thinking processes.

This is Steiner's powerful retort to materialistic science.

~^~

If what the materialist chemists claim were true then a child should be able to eat the same foods as an adult, and yet we know that babies cannot accept any food which is not a liquid, any food that is mother's milk or close to the ingredients of mother's milk(13).

[page 185] A child is as yet quite unable to change what is lifeless into the warmth etheric condition; he has not enough strength in his organism. He must drink the milk which is still so nearly akin to the human organism in order to bring it into the condition of warmth ether and apply its forces to carrying out the truly extensive shaping and mold that is necessary during the years of childhood to produce the human form. . . . If you take some external substance and wish to test its value for human life you simply cannot do this by means of ordinary chemistry.

The human organism must exert enough force to bring the external mineral substance into warmth ether, and if it doesn't achieve this, the substance remains as a foreign inorganic matter and is deposited as such in the body. (Page 186) Gout and diabetes are two common examples of such a condition. In gout it is uric acid crystals which are deposited in the muscle tissue of the lower limbs and the result is extreme pain which persists until the conditions, usually overeating, which caused the crystal deposits, are reversed. In diabetes, it is sugar in mineralized form which is deposited.

The Swedes say this about the weather, "There is no bad weather, only bad clothing." What is it about cold weather which causes one to catch a cold? If one is not wearing the appropriate clothing for the conditions one finds oneself in, then one is unable to adjust one's individual warmth quickly enough. Good clothing prevents colds by allowing one to do this.

[page 187] That is the inner process of catching a cold. To catch a cold is a poisoning by external temperature, of which the organism has not taken possession.

You see, everything in the external world is poison for man, actual poison, and it only becomes of service to him when, through his individual forces, he lays hold of it and makes it his own.

The ancient Pythagoreans strived to be superb thinkers and they still had enough native clairvoyance to perceive the astral nature of certain plants used for food. Steiner relates:

[page 192] In the case of plants that are strongly imbued with astrality, for example peas and beans, even the fruit will remain in the lower human organism and be unwilling to rise up to the head, thus producing a heavy sleep and dulling the brain on waking. The Pythagoreans wished to be clear thinkers and not involve digestion in the functions of the head. This why they forbade the eating of beans.

The rhyming of beans and Pythagoreans was too neat for me to avoid a short poem to help me remember the connection of beans to thinking and to those who first noticed the connection. Here it is:

Peas and Beans and Fruit

**The Pythagoreans were human beings
who would eat no beans.
They wanted to think in clarity
so in all charity,
They urged others to avoid the astrality
of peas and beans and fruit.
There's nothing to it,
the Pythagoreans said,
If you wish to keep your head from sleep
and remaining awake and clear.**

**You must avoid those peas and beans
which produce a dulling sleep
To keep you from that clarity of thinking
and let you avoid that feeling of sinking
Which makes you want to stay in bed.**

**So get this into your beans:
You must stay away from beans.
For human beings, who away from beans keep,
will find no dulling sleep
To dull their thinking
or keep them sinking into bed.**

**So if you want to think in clarity,
keep away from peas and beans and fruit.
In actuality, there's nothing to it.**

Steiner has on several other occasions mentioned that the human beings does not require the complex proteins in animal meat unless one has a very short intestinal tract such as the lion and other meat-eaters naturally have. In fact, eating a diet of meat easily leads to overeating of protein which can make one more susceptible to infections and other illnesses. Some people have short digestive tracts, but probably a minority of people. In any case, Steiner refuses to tell individuals what they should eat. He simply gives the facts of nutrition as he knows it and allows individuals to decide for themselves. This is a healthier approach, in my opinion, than most Western doctors take with their patients. For their part, they seem to be mostly quoting statistics as if one could accurately choose what's right for oneself from statistics. And if you don't choose to do what their statistics indicate you *should*, your doctor will likely get upset or even

angry at you. Such an "I-know-what-you-should-do" attitude of Western doctors towards their patients does not serve either the doctors or their patients well. Steiner rarely uses the word *should* as an injunction for his listeners and readers to do some thing or another. He lays out the facts as he knows them, sometimes he is a minority of *one*, and you get to decide what is best to do in your life. In this case he uses *should* to refer to something he strives to avoid doing for himself in the spiritual science he founded and promoted. As you read this next passage, imagine yourself hearing such advice from your personal doctor, "I give you the information about diet and you decide what's best for you." It would be surprising and refreshing, would it not?

[page 195] This brings us to something about which I can only speak on a soul level, for anthroposophy should never campaign for anything, should never advocate either one thing or another, but should only present the truth. The conclusion people draw from their own lives are their own personal affair. Anthroposophy does not lay down rules, but puts forward truths. For this reason I shall never, even for fanatics, lay down any kind of law based on what an animal produces from its plant food. No dogmatic commands shall be given in regard to vegetarianism, meat-eating and so on, for these things must be a matter of personal judgment entirely and it is really only in the sphere of personal experience that they have value. I mention this in order to avoid giving people the idea that anthroposophy entails advocating this or that kind of diet. What it actually does is enable people to understand any form of diet.

We saw earlier that milk was important because it contains form-building forces for the child. These forces are especially directed to the head of the child from which its development proceeds. But what about an older person? Do they require milk?

[page 196] If at a later age man wishes to retain these form-developing forces, it is not good to promote them by drinking milk. In the case of the child what ascends into the head is able, by means of the forces of the head which are present until the change of teeth, to radiate form principles into the whole body; in an older person the process is no longer present. In later age, the whole of the rest of the organism must radiate form-giving forces. And these form-giving forces for the whole organism are particularly strengthened in their impulses when one eats something which works in quite another way than is the case with the head.

You see, the head is entirely enclosed. Within this head are the impulses used in childhood for the shaping of the body. In the rest of the body we have bones within and the form-giving forces outside, so that the form-developing forces must be stimulated from outside. While we are children these form-giving forces in the head are stimulated when we give milk to the human being. When we are no longer children these forces are no longer there. What should we do then so that these form-giving forces may be stimulated more from outside?

What we need is an adult equivalent to the form-building forces found in milk and those forces can be found in the honey made by bees. The consumption of honey is especially important for adult human beings. Not a lot of honey is required, however, because it is only the form-building forces which are important.

[page 197] A stock of bees is really a head open on all sides. What the bees are doing is actually the same as what the head does within itself. The hive we give them is at most a support. The bees' activity, however, is not enclosed but produced from outside. In a stock of bees we have under external spiritual influence the same thing as we have under spiritual influence inside the head. We have honey inside the bee hive and when we eat and enjoy honey it gives us the form-giving forces that must now be provided more from outside, with the same strength and power that milk gives us for our head during the years of childhood.

Thus while we are still children we consume milk to strengthen the form-giving forces in a process that comes from the head; if at a later age we still need form-giving forces we must eat honey. Nor do we need to eat it in tremendous quantities — it is only a question of absorbing its forces.

Have you noticed that milk is important for babies and honey for adults? What would be an ideal place to live? A land flowing with milk and honey. The ancient people who searched for such lands knew instinctively the wisdom of form-developing forces in the child and adult that Steiner is sharing with us in this book.

[page 197] Thus by fully understanding the outer world of nature one learns how forces that help development must be introduced into human life. And if we would conceive a land where there are beautiful children and beautiful old people, what kind of a land would this be? It would be a 'a land flowing with milk and honey'. So you see ancient instinctive vision was in no way wrong when it said that the lands people longed for were those flowing with milk and honey.

Many such simple sayings contain the profoundest wisdom and there is really no more beautiful experience than first to make every possible effort to experience the truth, and then to find some ancient holy saying abounding in deep wisdom, such as 'a land flowing with milk and honey'. That is indeed a rare land, for in it there are only beautiful children and beautiful old people.

We look at the human body today and see only half of its reality unless, in addition to flesh and bones, we perceive it at the level of mind and spirit. We would not know, for instance, that the bones can lead us into hatred and the blood into confusion. But the ancients could perceive such things directly by looking at a person.

[page 201, 202] No matter how long one studies a bone, if one only does so with the eye of present-day science, one will be never be able to say this bone is what leads man astray into hatred. And to whatever degree one is able to investigate the blood according to the principles by which it is investigated today, one will never be able to say: This blood is what leads man astray into lack of human understanding.

In times when initiation science was a primal impulse matters were certainly quite different. Then one turned one's gaze to the physical, bodily nature of man and perceived it to be the counter-image of what instinctive clairvoyance provided at the level of mind and spirit.

Hatred in the human being, if we do not release it before we die, stays with us until we encounter the second hierarchy of spirits in the life between death and a new birth.

[page 206, 207] Having gone through the gate of death, however, he finds that his further development is not his own concern alone, but the concern of the whole world order, the wisdom-filled world order. First of all he finds in the other world beings of the third hierarchy, angels, archangels, archai. In the first period after man has passed through the gate of death into the world lying between death and a new birth these beings stoop downward and mercifully take from man the coldness which comes from lack of human understanding. And we see how the beings of the third hierarchy assume the burden of what man carries up to them into the spiritual world in the way I have described, by passing through the gate of death.

It is for a longer period that man must carry with him the remains of human hatred, for this can only be taken from him by grace of the spirits of the second hierarchy, exusiai, kyriotetes, dynamis. They take from him all that remains of human hatred.

Only by the grace of the second hierarchy can we progress past the midnight hour of our existence and

begin our return to Earth in a new lifetime. Were it not for their assistance, we would be annihilated completely.

[page 207] And then the human being arrives in the region between death and a new birth where the first hierarchy, seraphim, cherubim, thrones, have their abiding place, which I described in my Mystery Play as the midnight hour of existence in the spirit(14). Man would be quite unable to pass through this region of the seraphim, cherubim and thrones without being inwardly annihilated, utterly destroyed, had not the beings of the second and third hierarchies already taken from him in their mercy human lack of understanding, that is to say moral coldness, and human hatred. And so we see how man, in order to find access to the impulses that can contribute to his further development, must at first burden the beings of the higher hierarchies with what he carries up into the spiritual world from his physical and etheric bodies, where it really belongs.

A popular song during the last quarter of the twentieth century was "These Boots Are Made for Walking" and it was about a woman who was tired of being put down and ignored by her man and who said in the song that she would reverse the order of things when, "One of these days, these boots are gonna walk all over you." The idea that the boots could think for themselves didn't seem strange in the context of the idiomatic speech of the song, but Steiner might say that it indicated a spiritual truth that our feet have an innate knowledge of our karma which oftentimes our head does not possess.

[page 209, 210] As we go about here on earth, we only have our poor head as the organ of our mental images and our thoughts. But thoughts also accompany our chest, thoughts also particularly accompany our limbs. And the moment we cease to think only with the head, but begin to think with our limbs, in that moment the whole reality of karma is opened up to us. We know nothing of our karma because we always think only with that most superficial of organs, our brain. The moment we begin to think with our fingers — and just with our fingers and toes we can think much more brightly than with the nerves of the head — once we have soared up to the possibility of doing so — the moment we begin to think with what has not become entirely material, when we begin to think with the lower man, our thoughts are the thoughts of our karma. When we do not merely grasp with our hand but think with it, then, thinking with our hand, we follow our karma. And even more so with the feet; when we do not only walk but think with our feet, we follow the course of our karma with special clarity. That man is such a dullard on earth — excuse me, but no other word occurs to me — comes from the fact that all his thinking is enclosed in the region of his head. But man can think with his entire being. Whenever we think with our entire being, then for our middle region a whole cosmology, a marvelous cosmic wisdom, becomes our own. And for the lower region and the limb system especially karma becomes our own.

We perceive but half of the actuality of the world around us if we perceive it only with our physical senses, and likewise, any biography written of one's life by someone who only perceives with physical senses will portray only half of one's existence — the part between life and death — and the other half — the part between death and a new lifetime — will be ignored.

[page 213] When man's life between death and a new birth — his life in the spiritual world — is beheld . . . one can describe his experiences in that world in just as much detail as his biography here on earth. So we may live in the hope that, when we pass through the gate of death, all that we take into the world of the spirit as lack of understanding and human hatred may be given back to us again, and ennobled through human forms being created from it.

People are always asking questions of this tone, "How did we get in the mess we're in?" They seem to

love asking the question, but I wonder how many of them have ever tried really hard at finding the answer to this question. And of them how many would do the hard work to understand the answer if someone laid it out on the table for them as Steiner has done? See for yourself what he has to say about how our civilization came to be the way it is. It is not surprising that the two illnesses Steiner chose almost a hundred years ago to use as metaphors for our civilization's sorry shape should be the very same physical illnesses which plague so many people today.

[page 213, 214] In the course of long centuries something very strange has come to pass, however, for the present stage of human evolution. It no longer proved possible to use up all the forces of human lack of understanding and human hatred and make them into new human forms in the world of the spirit. Something was left over. In the course of the last centuries this residue has streamed down on to the earth, so that in the spiritual atmosphere of the earth, in what I may call the earth's astral light, there is to be found an infiltration of the impulses of human hatred and human contempt, impulses that exist exterior to man. These have not been incorporated into human forms; they stream around the earth in the astral light. They influence man — not individual human beings but the relationships which people form with one another on the earth. They influence civilization. And within civilization they have brought about what compelled me to say, in the spring of 1914 in Vienna(15), that our present-day civilization is invaded by a spiritual cancer, by spiritual ulcers.

In 1914 he was speaking of the time immediately before the Great War which after the second great war in 1940 became called World War I. He was aware of the spiritual illnesses in the world, what he called the "utterly diseased tissues of civilization." He saw the parasitic tendencies of civilization in his time. If he were alive today, no doubt he would see even more parasitic tendencies in our time. Mistletoe is a parasite that cannot live in the earthen ground, but can only live off of living plant tissue. Much in our civilization is like mistletoe, but it lives off of the products of the human mind. "Change your thoughts and change your life" was the motto of Donald Curtis in his book entitled "Your Thoughts Can Change Your Life" written in the mid-twentieth century. What Steiner is telling us is that we can change our mind and change all of civilization!

[page 215] Much in our modern civilization has no connection with man. Like the mistletoe — spiritually speaking — it lives on what man brings forth from the original impulses of his mind and heart. Much of this manifests in our civilization as parasitic existence. To anyone who has the power of seeing our civilization with spiritual vision, in the astral light, as it were, the year 1914 already presented an advanced stage of cancer, a tumor; for him the whole of civilization was already invaded by parasites. But then something further is added to this parasitic condition.

And now he gives us a quick summary of material he covered in the earlier lectures of this book dealing with the elementals, material which if he had not covered, we would not be able to grasp what he is telling us now. He is revealing how two poisons fill our culture. A parasitic culture which ignores elemental law and spirituality which is converted to poison when it enters people.

[page 215] I have described to you in what may be called a spiritual physiology how the nature of the gnomes and undines, who work from below upwards, gives rise to the possibility of parasitic impulses in man. Then, however, as I explained, the opposite picture presents itself in contrast — for poison is carried downwards by the sylphs and the elemental beings of warmth. And so in a civilization like ours, which bears a parasitic character, what comes down from above — spiritual truth, though not poison in itself, is transformed into poison in man, so that our civilization rejects it in fear and invents all kinds of reasons for this rejection. The two things belong together: a parasitic culture below, which does not proceed from elemental laws and therefore contains parasites within itself; and spirituality that comes down from above and as it enters into

civilization is taken up by man in such a way that it becomes poison. When you bear this in mind you have the key to the most important symptoms of modern civilization.

"This is all well and good," you might be thinking, dear Reader, "but why doesn't Rudolf Steiner offer a solution to the problems he raises?" If that question or one like it arose in your mind, perhaps you are unaware that one of the medicines for what ails civilization that Steiner proposed was right-thinking education. He actually created a form of education which bypasses the entire process of parasitic poisoning mentioned above. He gave a lecture on education to the workers at the Waldorf-Astoria Cigarette Factory in Stuttgart, Germany and after the lecture the workers and managers asked him to start a school for their children which operated on those principles he had expounded. That led to the founding of the Waldorf Schools which now operate around the globe, in greater and greater numbers every year. (In Australia they are known as Steiner Schools.)

[page 215, 216] And when one has insight into these things, the necessary educational aspect will, of its own accord, reveal itself as the right medicine for our civilization. Just as a rational therapy evolves from a true diagnosis, a true pathology of the individual, so a diagnosis of the sickness of a civilization reveals the remedy; the one calls forth the other.

It is very evident that mankind today again needs a kind of civilization that comes really close to the human heart and the human soul, and springs directly from the human heart and the human soul. If a child, on entering primary school, is introduced to a highly sophisticated system of letter forms which he has to learn as a . . . b . . . c, etc., he does not relate to this in heart and soul. He has no relation to them at all. What the child develops in his head, in his heart and soul, by having to learn a . . . b . . . c, is — spiritually speaking — a parasite in human nature.

During his years of education a great deal is brought to the child of this parasitic nature. We must, therefore, develop an art of education that works creatively from his soul. We must let the child give form to colors; and the color forms that have arisen out of joy, out of disappointment, out of every possible feeling, these he can put on paper: pleasure and pain. When a child puts on paper what arises out of his soul, this develops his humanity. This produces nothing parasitic. This is something which grows out of man like his fingers or his nose! — whereas, when the letters of the alphabet, which are the product of advanced civilization, are imposed on the human being, this does engender a parasitic element.

Steiner has given us the diagnosis of the illness that civilization is infected with and now he has also, like a good doctor of medicine, provided the therapy needed. It will come, not in some drug-de-jour as so many cures in the twenty-first century, but in a revolutionary way of teaching our precious children so that the parasitic poisons are eliminated by the very form of education they receive from the youngest age through to high school. Imagine a school system which encourages teacher to progress through each grade with their pupils, so that they come to know each child individually in a way no mass-produced educational system can ever encourage or deliver. This may sound fanciful and impractical to you if you have never been in a Waldorf School or never had a child in a Waldorf School or known a Waldorf School teacher, but I guarantee you that further study of Waldorf Schools will fill you with awe and wonder at the results they produce(16).

[page 217] The moment the art of education lies close to the human heart, to the human soul, the spiritual can be brought to man without becoming poison. First you have the diagnosis, which finds that our age is infested with carcinomas, and then you have the therapy — yes, it is Waldorf School education.

Waldorf School education is founded upon nothing other than this, my dear friends. Here the thinking about the cultural sphere is the same as that applied in the field of medicine. This is the specific application of what I spoke about a few days ago, namely, that the being of man progresses to the development of the spiritual from below

upwards, from nutrition through healing, and that one must regard education as medicine transposed into the realm of mind and spirit. This strikes us with particular clarity when we wish to find a therapy for civilization, for we can only conceive this therapy as being Waldorf School education.

You will readily be able to imagine the feelings of one who not only has insight into this situation, but who is also trying to develop Waldorf School education in a practical way, when he sees the general effect of this carcinoma of civilization giving rise to conditions in Central Europe that may seriously endanger this Waldorf School education, or even make it altogether impossible. We should not reject such thoughts as these, but rather make them the impulse within ourselves to work together wherever we still can in the therapy of our civilization.

If some parent has had a problem with a modern Waldorf School, most likely that person was educated in a state or private school that did not use the Waldorf principles and they are filled with the same kind of parasitic and poisonous thinking that the Waldorf system strives to eliminate from the children who will lead the next generation of our civilization. In them lie our best hope for curing the illnesses of civilization — of extirpating them, pulling them out at its roots — and those roots grow in the great majority of our children of today, up until now. It is up to each one of us to ensure that our children's education will be free of the parasitic and poisonous ways of thinking from now on.

Hopefully this review will prompt you to read the entire book. As a reviewer, I can only serve up a sampling of the full banquet this book contains. Taste these morsels and if they go down well with you, you may wish to buy a ticket to the feast. If so, you can become part of the great endeavor of our time: changing civilization one person at a time!

----- *Footnotes* -----

Footnote 0. The word pixilated is an early American expression, derived from the word 'pixies,' meaning elves or elemental spirits. People used to say, 'The pixies had got him,' as today we would say a man is 'weird.' Note the ambiguity: 'writing with pixels' could be called using 'pixilated ink'.

[Return to text directly before Footnote 0.](#)

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**Footnote 1.** This drawing and the other colored drawings in this review were drawn by Rudolf Steiner's own hand on black paper with colored chalk on the date shown in the bottom of the drawing, e. g., 19 Oct 1923 for this one. These color reproductions are assembled in one book, [Rudolf Steiner Blackboard Drawings 1919-1924](#), and by matching the dates of the lectures and the plates, I was able to locate the color plate from which the ink drawings were produced in a book of lectures such as this one.

[Return to text directly before Footnote 1.](#)

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Footnote 2. My Matherne's Rule #7 is Do it right away, kid. It speaks to the instant application of learning, among other things. [Read it here.](#)

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**Footnote 3.** Presumably so-called 'superior' and 'inferior' planets. — Ed. [RJM Note: In a geocentric display of the Solar system, the order from Earth outwards is Moon, Venus, Mercury, Sun, Mars, Jupiter, and Saturn. Historically Mars, Jupiter, and Saturn are called superior planets, and Venus, Mercury, and

Moon, inferior planets. Note that the names of Venus and Mercury are reversed from their accepted astronomical naming order. Steiner acknowledges this in the cryptic parenthetical sentence: "I am drawing this in the sequence customary today in astronomy; I could also draw it differently." ]

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Footnote 4. One can see these symbols incorporated into a beautiful set of stained glass windows of the St. Charles Borromeo Catholic Church in Destrehan, Louisiana. [John](#), [Mark](#), [Luke](#), and [Matthew](#).

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**Footnote 5.** The lectures are published in the book entitled, [Man in the Past, Present and Future and The Sun-Initiation and Moon Science of the Druid Priest](#), and abbreviated MSDP.

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Footnote 6. Steiner said in [Nutritions and Stimulants](#) that coffee is the drink of journalists and writer because the nitrogen in caffeine contains the forces necessary to dissolve any excess brain sand.

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**Footnote 7.** Spirit-man In his [Gospel of Matthew](#) lectures, Steiner said (page 189) "This blossoming flower of one's 'Son of Man' reaches up to the spiritual world to the Spirit-Self, Life-Spirit, and Spirit-Man that together stream down towards one." In [Angels — Selected Lectures](#), Steiner explains these three future developments of humankind as follows: (Excerpt of my summary from review) "In Lecture 2. The Three Encounters, Steiner tells us that the three future stages of development of humans will be Spirit-Self, Life-Spirit, and Spirit-Man in three stages of post-Earth evolution, namely Jupiter, Venus, and Vulcan. The first encounter with our Spirit-Self occurs during the cycle of the day, the second with our Life-Spirit during the cycle of the year, and the third with our Spirit-Man during the cycle of our lifetime. These three meetings are described in detailed in my review of [Cosmic and Human Metamorphoses](#). Considered in another way, they are, firstly, the diurnal meetings with our Genius; secondly, our annual meeting with our Life-Spirit which depends on the nearness of Christ during the period between Christmas and Easter; and, thirdly, our once in a lifetime meeting with our Spirit-Man or Father-Principle sometime between our 28th and 42nd year."

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Footnote 8. In the fairy tale "Snow White" each of the seven dwarves were given a name and it occurs to me that each of these names may illustrate a feature of the gnomes or root spirits. The one named Happy would see the underground as his playground. [Return to text directly before Footnote 8.](#)

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**Footnote 9.** This would be the attribute of the dwarf named Doc, who wore eyeglasses and bore a studious look.

[Return to text directly before Footnote 9.](#)

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Footnote 10. This dwarf might be the one called Sleepy.

[Return to text directly before Footnote 10.](#)

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**Footnote 11.** A structure at the heart of the flower, consisting of the ovary containing the ovules, and the style bearing the stigma. In botanical works usually referred to as 'the female reproductive organ of flowering plants'.Footnote on page 119 by the Translator.

[Return to text directly before Footnote 11.](#)

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Footnote 12. One cannot read this without thinking of the many impolite but expressive idioms which link products of elimination and our brain and thoughts.

[Return to text directly before Footnote 12.](#)

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**Footnote 13.** There has been a tendency in recent decades for chemical companies to believe that they can produce a better baby formula than the child's own mother in her breast milk. This belief is based on the erroneous assumption that Steiner reveals above. The evidence derived from switching poor countries in Africa from mother's milk to chemist-designed baby formulas seems to prove the companies wrong and Steiner right.

[Return to text directly before Footnote 13.](#)

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Footnote 14. See Rudolf Steiner's mystery drama, [The Soul's Awakening](#), Scenes 5 and 6, which portrays the cosmic midnight of Johannes, one of the characters.

[Return to text directly before Footnote 14.](#)

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**Footnote 15.** In these lectures in Vienna in April 1914 published in [The Inner Nature of Man and Our Life Between Death and Rebirth](#). Rudolf Steiner Press/UK in 1994. [Return to text directly before Footnote 15.](#)

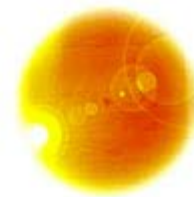
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Footnote 16. One caveat: there are parasitic people who bring their children to Waldorf Schools and then see all kinds of problems because they basically misunderstand the principles laid down by Rudolf Steiner and create problems which they publicly and vociferously complain about. One should not be put off from investigating Waldorf education simply because of half-truths spread by certain well-meaning, but poisonous malcontents. [Return to text directly before Footnote 16.](#)

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