

Agriculture Course – Lecture 1

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My first foray with the Agriculture Course took place when in the summer of 1961 Ehrenfried Pfeiffer stopped me along Hungry Hollow Road. He asked if I would form a study group. He suggested this as he said he would like to join a group but not be a group leader. He said he would like me to try to evolve a group, taking on leadership. He would like to participate. He said his experiences were usually that when he was in a group he became the dominant figure and then others became passive. I told him that I would have to think it over. I asked him what he might like to study. He said, of course, the Agriculture Course. After some days I returned, told him that I would try to be helpful. I wasn't so sure about group leadership, but felt it would be worthwhile to try to gather a group who might work together and include him as he had expressed such a desire. About a week later I returned to him, saying I had made a plan, and had asked about a dozen individuals to get together. I said I had worked out topics from the first lecture, had assigned them and asked individuals to come together to share. His immediate reaction was that this was not the way to go about things. I answered by saying that he had said I should go ahead and that was my method of going ahead. With this he shrugged his shoulders with a smile, and said "Well, let's try it."

Our first meeting took place in mid-November 1961, a Saturday evening. I think it was about the 20th. The members of this group were Dickie Vibber, Howland Vibber, Alice Heckel, Fred Heckel, Emmy Van Vurmb, Hans Van Vurmb, Stella and Arnold Brugger. Margaret Selke was invited but didn't come. Erica Sabarth was included. Walter and Eva Leicht were included but did not join in at first. Ehrenfried Pfeiffer, of course, was to be part of it. We had our first meeting but Ehrenfried couldn't come because he was ill. After the meeting I was called by Adelheid, saying that he was at home in pain. I went to see him only to find that he was obviously having a heart attack. The next ten days were very difficult. In the end, on November 30 he left the earth, dying of a very severe heart attack.

The group went on to work with this course, several times over. This went on for nearly four years. We actually went from house to house in the Threefold Community. The method I devised was generally accepted and individuals made their contributions and there was a continual rotation and sharing by those who attended. This work came to an end when we were asked to bring the activity to the Main House. Others in the community then joined in and the effort to stimulate preparation, to have different people

contribute, did not work. So approximately 1965, 1966, also with the opening of the Fellowship Community, this group work came to an end. Now turning to the course itself, various things have been written about it. In one of the first conversations I had with Ehrenfried Pfeiffer he shared his feeling that this was one of the best courses Rudolf Steiner had given. He commented that other courses weren't nearly as good. At the time I felt that he was a bit supercilious in making such comments. However, as the years have gone by, I've had occasion to try to work with other courses. I have become deeply impressed that Ehrenfried Pfeiffer's assessment was and is correct. There is a profundity in this course which is absolutely incredible. The concreteness of this course asks that we change our view of the world around us. The course is direct and it's stimulating. It is almost exhilarating to be placed in direct contact with Nature. The world of the farm can be approached as an individual. The domain of agriculture can be undertaken in a quite new way.

Let us turn to the first lecture. For a long time I rather puzzled about the introduction. Rudolf Steiner begins by talking about the being of Anthroposophia. He indicates that what he is giving is actually a gift of this Being. Most think of Anthroposophy as a body of knowledge – not a spiritual being who imparts knowledge. The course thereby seems to be a product of the exchange between Rudolf Steiner and a spiritual being who gives the anthroposophical content out of the spiritual world. So that the first tasks can be to try to pose to oneself who this Being is. Who is the Being who carries the wisdom of man, can share this with initiates such as Rudolf Steiner, and then help us to understand the task of working with the earth, enculturating the earth? How can this Being help evolve a new agriculture? This being we might consider to be a supersensible spiritual being, but is a being, who if we take this course seriously, can relate not only to man, revealing his deep workings and wisdoms, but can show how man's wisdom throws light on the whole world of nature. In addition, nature has to be placed into the planetary, zodiacal, starry worlds.

The quality of the introduction further indicates that the course is, in a way, a festival. If we note the time of the year when the course was given it is near the time of midsummer, midsummer solstice, the time of St. John. Those who have worked in nature know well how as one draws towards this time of year what a rather special time it is. It is possible to look out into the burgeoning nature, its transition from growth and flowering, to one where gradually with the increase of the light of the sun, the vegetative flowering

passes over into the domain of fruit. We can say nature begins to show new beingness. We can think that this is the time nature is baptized by fruit and seed. The plant grows in order to be baptized. The time of St. John, of the Baptist, unfolds in the course of the year in order to be able to incorporate a lofty, supersensible element which comes to expression in fruit and seed. Midsummer is the time when nature in the wonderful garment of green passes through other colors to become concentrated in the color of the fruit. We can speak of Mother Nature to whom something quite new is being born – fruit and seed. A kind of a new birth is occurring. There is a growing of a being who will increase. On the other hand, there is a part of this Mother Nature that will decrease, the purely vegetative. If we consider the rising sun, the increase the sun, this light globe-sphere, we can think that it points to the Father Spirit of the heights. We can contemplate how out of the depths of the earth there also rises a Motherly Nature being. To this mother-earth nature the seed and fruit can be born – as a child is born to a mother. We might consider this as a baptism, and at the same time a birth. There is a possible decrease of the nature-mother on the one side and a potential evolution of the spirit on the other. The purely vegetative decreases while the seed/fruit increases. The new can begin to appear in nature. The new here is not the new life of spring. The new here is the life that's going to carry on into the future through fruit and seed.

Though such a contemplation can be a bit abstract, in fact it's not abstract if we work in nature, permitting the sun, it's blinding light and heat, to daze us. In this circumstance, dazed by light and heat, the outer sun can become dark while from within the soul itself a light can shine forth. This blaze of outer light, of outer sun, blinding the human being, as it were beheading the human being, permits an inner light to evolve. This inner light that rises while the outer blaze of bright sun becomes darkened speaks to the beheading of John but also an increase that is connected with the evolution of the child born in the light of the inner human being. This is a mighty festival occasion for the human being who can walk in the bright daylight of the sun, sense the darkening of outer light, with a concomitant rising of inner light. This is a kind of an inner midday soul birth. It can occur as a sacramental process at the height of noon, at the height of midsummer. This soul condition is one of a soul-like woman – a midday soul-woman. This midsummer woman I would call the being of Natura. This is a being who not only appears as an inner light-soul-being but also appears with tonality with music raying in from far distances of the circumference. For one who stands in the middle of nature thus, the heights and distances ring as the musical

element, a mighty cosmic harmonious element enters the soul which produces the festival aspect of this time of year.

In this way I would gradually approach this “festival” cycle of Rudolf Steiner’s – The Agriculture Course. It’s a very special gift to mankind. Coming out of the spiritual world, spoken by Rudolf Steiner, it’s a gift to be cherished. It permits us to sense that we can again and again enact a solemn St. John festival in the name of this course.

For a moment I would like to diverge from the course to discuss the midsummer festival. I do this because our current study of 1992 corresponds with midsummer time. In order to discuss the midsummer festival I would like to turn to the being of Mary. For quite some years I’ve tried to consider how one can find so many different expressions, so many different views of this being, the being Mary. By looking to, looking into and looking at this Mary being it seems to me that we can be helped in approaching this midsummer festival.

If we start with the polar season to summer we have winter. In midwinter we celebrate a solemn festival. We celebrate a festival when the sun is at its low point. The moon and the stars are in ascendancy. Darkness tends to envelop the earth. The outer air becomes crisp and clear. The earth becomes hard and crystalline. The star world and the dark earth with a shining moon signals the time of the year when we speak of a virgin birth. At this time we speak of the Virgin Mary who conceived the Jesus child. This being we can say was conceived in a state of virginity. This opens the door to many questions. How is such a thing possible? How can there be conception and a virginal soul state as well? So at one point it might be well to tackle this problem. Here I would think it’s sufficient to say or contemplate that a virginal state is possible when in fact the human soul is able to converse with an archangel. The archangel of conception we know as the Archangel Gabriel. This the winter festival, the Christmas festival, is connected with the birth to a virginal being. Virginal then can possibly be considered to be a state where there is a birth, be it physical or soul/spiritual, as long as the event is enveloped in the being of an archangel. This, of course, is no usual state of existence. This state of soul is a rather lofty state where human thinking has been deepened into feeling and the feeling is able to birth content which enters as inspiration. The birth, if it is physical has to occur so that the soul is immersed in the spiritual archangelic while conception occurs. This state of events Rudolf Steiner tells when discussing the Nerthus Cult of the Northern Mysteries. Here we can say that the soul has become pure and

virginal, even with physical birth. We now celebrate the festival of Christmas, commemorating the birth, the birth of a Jesus being, but with more careful perusal we also celebrate the purity of soul that must accompany such a birth. It is an archangel state of soul.

If we move on now to spring we come to a time when the outer nature that has been dead begins to come to life again. In the Northern Mysteries – 3000 B.C. – it was the actual time of celebrating the Nerthus Cult. Today Easter has gained other perspectives. Today Easter is not the time of virgin birth. It is the time of the renewal of life – physical life. Nature itself bespeaks a resurrective process. In Christendom we speak of the resurrection that follows the suffering, the crucifixion, the descent, and mediates the process of ascension. Nature in a way enacts resurrection. This in Christendom portrayed in deeds a spiritual being Who incarnates, goes through suffering, dies, descends earthward and then resurrects from earth to reascend into the cosmos. If we now look for a Mary figure at Easter time we actually come to two. We come to the Mary Magdalene, who has sinned and who bears witness to the events of the death and the resurrection. She is a semi-clairvoyant who could see what was occurring. We also then have the second, the sorrowing, suffering Mary. We can call her Mother Mary. Though we can speak of a Mother Mary, if we contemplate the death, crucifixion, resurrection we actually are not struck by the mother element but the suffering Mary. This is a suffering of the deepest kind. Just as Mary Magdalene suffers her sins – and thereby can “see” – so Mother Mary accompanies the process of crucifixion, descent, and resurrection, not clairvoyantly but in a condition of deep inner suffering. This death, suffering, resurrective process could be considered to be that of a hallowing process, the making the soul holy-pure. Many, particularly Abraham Lincoln in his Gettysburg address speak, of the dying making the earth holy-hallowed. here with Mother Mary we can consider the hallowing of the suffering soul. The soul is not only purified as in the case of the virginal soul but the soul is sanctified and hallowed, becomes holy. Here we can consider not only an archangel entering the soul but an archai and even a higher spiritual being. In this way the soul is indwelled – while the physical is also transformed. The sinner becomes seer, the sufferer can carry lofty spirituality while the physical is transformed by spirituality to appear once more – living.

In Christendom this is often spoken to as the dying in Christ. Out of this comes the Mary soul principle, sinning, suffering and gaining life in relation

to the living physical. Here we then make the transition from the soul in which virgin birth process can occur, to one where there is a hallowing, there is a sanctifying, there is a deepening of that soul so that another step in soul enfoldment can occur. The soul can live to transform sin and the Fall of materiality. The soul can transform the materiality of human existence. Now let's turn to midsummer. Here again we can think of a Mary. This is not a pure soul Mary, if we contemplate the virgin birth at Christmas. This is not the hallowed birth of the soul at Easter – a suffering of soul birth for the life in the human organism. The midsummer Mary is related to a birth into the substance of nature. The soul of midsummer Mary is born into the world that surrounds man. We can think of an ensouling of nature. We can speak of a nature Mary. Here we can think of the lush growth of midsummer that is coming to its peak, the first hint of a decrease of the life, pure life element and the birth of seed and fruit. This can speak to the human soul, to a birth, a kind of natural birth. Here nature becomes a kind of a Mother Nature. It's not Mother Earth, but Mother Nature. It seems to me that one of the most beautiful depictions of this “mother in nature” with a birth, a birth in purity, is so well depicted by Matthias Grunewald in the Isenheim altarpiece. Here we see a female being, sitting in nature, red-robed. From the bottom of the robe is a silvery light reflection. From the heights above the head to the left one sees a golden, father-like element. Heavenly angels play in the gold and then descend toward the nature mother being who holds a child in her arms. The scene is one of nature in full life. The scene is also one of the blossoming of the red rose. The scene is one of depicting nothing but the greatest of purity of nature – of the living soul of nature. In this depiction by Matthias Grunewald we see an empty potty. We can see there is no excreta as far as the bowel/bladder is concerned. The bath is not used. There's no sweat, it is all totally pure. The vessel standing at the portal of the musician's sanctuary contains an absolutely pure, clear liquor of life. The pure waters, the pure red rose, with the gate in the back with the cross reminds one of the whole Rosicrucian process of purification. The purity of the rose, the purity of the clear waters all bespeaks the birth of a child being to the being of Mother Nature, Mary Nature. I gather this is the same being that in the Middle Ages was known as Natura.

Thus at midsummer we can think of the lush growth, the green of the plant, the red of the rose, the blue of the sky, the silvery moon reflected below, the gold glow above. All of this hints to the mighty imagination that Rudolf Steiner has given for midsummer. Something of a pure artistic rendition of this seems to have been painted by Grunewald. Matthias Grunewald sets this

nature mother, Mother Nature, Natura being in a most wonderful way, color-filled, expressing an experience of the beingness of nature at this time of the year. It's then that the soul can feel quite newly born in nature. The soul can feel as if the greatest heights of the Father God plays into the soul, the Mother element is present and a Son soul birth can occur.

If we wish to continue our contemplation of the soul Mary element we have to move on from the virgin, to the hallowed, to the nature Mother Mary, Natura. The next step we have to make is into the cosmos. Here we have to consider how the pure color element of Mary ascends into the light of the sun. The sun is darkened, the stars shine. We are carried from midsummer to Michaeli when gradually the outer sun fades and the light of the stars begin to shine. Now what is needed is not a darkening of the outer bright sun but what is needed is the revelation and the flaming glory of the garment of Mother Mary in the cosmos. Here we have to speak of the cosmic destined mother as Mother Substance of the Cosmos. We have to speak of the matter or Mother Substance in its glory, in its divine state. The nature soul mother element has to become glorified in the domain of the star astral world, radiant mother aura substance has to follow from the Nature Mother or Natural Mother Substance. Thus we have to see a step further of the soul development, the soul born as Nature Mother, has to transform living nature substance to a higher state. This is the task of the child born in the Mother Substance. The goal of the child is to grow for the glorification of Mother Substance, of matter. The child must become full grown man. This man – true man we call Christ-man. In relation to substance we have to speak of radiant, glorified matter, or mater gloriosa, as has been depicted to us in the second part of Goethe's Faust.

Thus our journey with the soul's Maries leads us to various transformations and birth. Pure soul, hallowed soul, nature substance soul has to be elevated by a new birth which can create glorified-radiant substance. This is not substance destroyed with atomic explosion – it is newly created with substance of man. The step then is into nature where nature becomes Mother Nature, where the Mother Substance of the soul spirit exists for a birth in nature. Through the human soul as spirit evolution there is a transformation of this nature substance into glorified substance or mater gloriosa. We have to think not only of the soul and its birth and its purification but its taking hold of the matter in the world and evolving it to further states of existence. The soul as mother requires birth, evolution of this birth, the working of this birth, so that the child actually brings about glorified substance. I gather this

is the substance that is carried into the future by man. This becomes a part of the further evolution of substance in the world. This is the substance that keeps our physical earth alive. This is all part and parcel of the story of the Mary principle, the soul birth Mary which can sustain birth and then birth into matter and its transformation.

A demonic, devilish opposite of what is described here, I take it, is in fact what is happening today with materiality. Materiality is subjected to subnature forces. The materiality that we have is subjected to electromagnetic accelerated gravitational force systems where there is a bombardment of solid substance so that instead of radiant glory evolving out of substance one has actually horrendous explosions as we have been witnessing in the last nearly fifty years with atomic explosions. The opposite process to this, I gather, is actually the taking of substance and subjecting it to a rhythmic alteration so that then its nature becomes radiant as is the case when substance is rhythmically put through the process of potentization. Rhythmic dilution and proper movement may well create a radiant condition of matter. This is an appropriate condition of matter, not the condition which is the result of atomic bombardment or explosion. This discourse about the mother soul element, the Mary natures, is very important. This course is actually nothing but a revelation, a new revelation, of the dynamics and working of matter on earth and in the cosmos. Matter has to be used for healing as well as nutrition. Here in this course stands totally new avenues, totally new approaches to that which we generally consider to be matter which we image as cosmic systems shrunken to atoms.

Now let's move on with the course. The introduction, as just noted, points to the festival occasion of midsummer. It points to the being of Anthroposophia. But the introduction also points to the whole domain of the earth as it is a part of a much, much larger cosmic system. It's to this cosmic system that Rudolf Steiner turns in discussing the earth in its relationship to the moon, its relationship to the watery element, to rain. His discourse concerning Professors Gustav Fichner and Schleiden brings in humor. It is not the wisdom of the professors that prevail – that of the women who wash clothes by the phases of the moon. Professor Schleiden, the intellectual, felt that there was no relationship between the cosmos and the earth, the working of the moon, the rain and the earth. Professor Fichner and both wives knew the facts. It's this orientation that Rudolf Steiner is trying to give us in this introduction. He does so by pointing to the rain, the moon, the earth, also the needle of the magnet. He indicates that the plant, notably the root, is very

much connected with the earth. There follows then that the remainder of plant is very much connected with the systems of the cosmos. Notable in this discourse is that the simple folk, the simple farmer had a sense about these matters. This can no longer be relied on.

A totally new sense for the relation of earth and cosmos has to be acquired. A totally new relation between plant and cosmos has to be attained. A totally new relationship between the knowledge process of the past and the knowledge process of the present moving into the future has to be unfolded. The older peasant truisms have to give way to a knowing insight into earth, cosmos, plant, animal and mineral – and particularly man.

One of the deepest insights that will have to come will be that of materiality and particularly the condition of materiality called protein. It's the element of protein that is crucial to the existence of man on earth. It's the protein which we can say is crucial for the future of the earth. It permits man to be present on the planet. As we shall see it is protein, or the basis of existence, that comes directly out of the cosmos. How are we then to make our way to understand these new dimensions of existence?

The first possibility of doing so is to consider the human being and the earth. A first condition of humanity that we have well to consider as a basis for earth existence, is that of humor. The humor makeup of man, the humoral, the etheric makeup of man is crucial. This determines how the physical existence will go. It is this which has to be cultivated as culture in man; this in turn can influence the physical. Thus the impact of peasant humor. If we turn to the earth we have to speak of something similar in the earth. This is not humor, but humus. The contrast of humor and humus becomes the contrast of two major cultural evolutions on earth which are crucial to mankind's existence. Perhaps we can spend a minute and trace this evolution, the evolution of humor, the evolution of humus.

Let's first turn to humor. Humor in a way is the revelation of the life in the soul in a balanced fashion. Humor evolves the human being through life, through his soul. This points to cultural evolution. In order to look at cultural evolutions it is well to go back to the significant point of man's evolution, evolution from race to culture. For this we have to look at Atlantis, at the Sun mystery of Atlantis. Until Atlantis we have racial evolution. We have the racial evolution of Polarean man, then Hyperborean man, then Lemurian man, then Atlantean man. In the middle of Atlantis racial evolution in a way

comes to its culmination and begins to give way to cultural evolution. In the Sun mystery there begins a work to evolve man not now out of race, out of that which is given to the physical cultivation of man, but to the cultivation of the soul which will carry man into further states of existence. As we know, in this mystery center those souls were cultivated, initiated, so something new could come into human evolution. Human evolution actually determined earth evolution from then on. This evolution began with something new – with souls who had lost faculties given by race. There the first steps were taken so that man could gradually come to incarnate his individuality. Through his individuality man could take his own evolution in hand. It is Manu, the great Sun initiate, who was given this task and began a process which became post-Atlantean cultural evolution.

If we follow this evolution we are told that Manu migrated from Atlantis to the area of Ireland. We don't have to consider this purely physical. There was something almost superphysical involved with this migration. This migration touched down into the region of Ireland. There was a migration – an evolution that went through northern Europe into northern Asia to Mongolia. We are repeatedly told by Rudolf Steiner of this migration, how Manu took souls through northern Europe into Mongolia to establish the center for cultural evolution in the Gobi Desert. We can consider, that on the way souls were left in northern Europe to form an impulse for a culture later on. The cultural center developed in the region of the Gobi Desert sent streams out into the East, into India. We have repeatedly been told of the Indian cultural evolution. Then we were told how out of the Gobi cultural center a most significant impulse was sent into the region of Persia. An impression I have now is that this helped establish the Colchis mysteries where I suspect – but don't know – that Zarathustra incarnated and radiated his influence into the whole region of the middle and southern middle east regions. We are told how Orpheus came out of this Colchis mystery. We are told how Zarathustra gave over his membership so that Hermes could incarnate in Egypt 3000 B.C. We are told how the ether member of Zarathustra could so work so that his etheric organism could serve the work of Moses in 1500 B.C. We are also told how out of this center impulses could go into the region of Sumer and Assyria to begin to establish the enculturation of the human being, particularly his enculturation so that he could develop the earth.

Thus the thematic consideration of the human being and his humor opens the door to an immense possibility of contemplating cultural evolution of man.

Race governs the hereditary-physical makeup of man – culture the etheric-humoral.

Now let's take the opposite and consider not the cultural evolution of man but the cultural evolution of the earth. This we would have to call agriculture. The product of this evolution I would like to consider as bringing forth not humor, but humus. It's the transformation, needed transformation of substance of the earth so that the earth can remain a possible vehicle for life, can remain and alive for reproduction for nourishment in man – through the plant. This dealing with the earth and transforming the earth for earth culture, for agriculture, I wonder if we can't look at it from two perspectives. The first perspective, to see that in fact that impulse from Zarathustra emanated into the region of the Tigris and Euphrates. There the evolution of agriculture in the area – the Fertile or Green Crescent took place. Here we have the birth of agriculture which is traced from 8000 to 6000 B.C. Rudolf Steiner intimates that Zarathustra and his workings streamed into this area of the world. The Assyrian, Chaldean, the Babylonian cultures all somewhat have to be taken into consideration here, although each one is somewhat distinct and hopefully we can take up these distinctions at a later time. Thus we can see the evolution of agriculture as coming out of the cultural evolution of man. This stream we can trace back to Atlantis, to the work of Manu, the coming forth of Zarathustra and Zarathustra working, so that the earth itself can be transformed. Zarathustra then gave over his membering so that the further earth working could occur in the middle east. Hermes and Moses are two of the major individualities who bring that impulse to further evolution in the region of the middle east and Egypt.

I'd like to contemplate another possible origin of agriculture and that is one that surfaced in Egypt along the Nile River. The time, the origin of the earth being cultivated there has generally considered to be about 3000 B.C. There are some suggestions this cultivation began before 3000 B.C. I have the great question whether we don't see here in the Nile culture a different impulse working. I would like to suggest that the first insurgence to work the earth here came not from Atlantis but from Lemurian origin. Here an impulse comes from the south, working north rather one working from west to east and from north into the south. This working of the Lemurian impulse from east to west and then north brings the agricultural impulse of the Nile valley into relationship with the mysteries of Lemuria. As we know from many indications from Rudolf Steiner there was this immense impulse in Egypt, in the Egyptian mysteries, to return to Lemuria. We do not hear of the same tendency in the Persian epoch, to return to Lemuria but rather to

Hyperborea and to Atlantis. One can contemplate a mingling of these two major cultural impulses however. I wonder if it isn't helpful to make this distinction for the moment.

If we want to continue this contemplation it's quite possible to consider that the mysteries of Polarea could be located somewhere in relationship to the east, in the region of Asia, China, Malaysia. The time of Polarea would not carry the present earthly conditions. More astral-physical conditions existed. This also would make it understandable that in the far east there was this immense striving to find Brahma or the original Word, the original God man of Polarea.

If we continue these contemplations we can then contemplate Hyperborea in the northern lands. Again, it's not an earthly impulse or an earthly culture. It's a superearthly culture. It's a sun culture. It's the time of the recapitulation of Sun evolution. It's in Hyperborea that the impulses originated which were taken up in the Atlantean Sun mystery. The Hyperborean impulse can be seen more north to south.

By this depiction we have placed agriculture as evolving out of the time of Polarea in the East, the time of Hyperborea in the north, the time of Lemuria in the south, and the time of Atlantis in the west. The racial element falls away, man comes to earth and man then has to evolve from racial man to cultural man. In order to manage this he has to unfold an earth culture, an agriculture. One side of agriculture, we can contemplate flowing from west/north into the south. The other impulse of agriculture we can consider flowing from east to west in the south, then in a northerly direction. This places our agricultural contemplation within the directions of the earth as related to the racial originally. With the advent of culture the earth is not racial-cosmically determined but begins to be part of the evolution of man as an individuality. By this means one can contemplate not only the unfoldment of the individual but also the individual element within the earth. It's by this means then that we have to come to be able to address the agricultural individuality that has to unfold on the earth just as with the human being his individuality has to unfold. The expression of cultural evolution in humor is a brief way of stating this. The other aspect of this evolution is that of the evolving the earth through agriculture. Its epitome is expressed when one speaks of humus. The evolution of both impulses we can trace back to the mysteries.

Agriculture Course – Lecture 2

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Let me now turn to a semi-central theme of the introduction to this course. This theme is not developed, but grounded in this course. In a way we might consider that the whole of the Agriculture Course is grounded in this theme. The theme is that of economics. Rudolf Steiner indicates that it is the individual, the farmer, the one who deals with the earth and the fruits of the earth, who has to become a true economist. It is the farmer who gets his hands into the earth, works with this earth, transforms it, humus-izes this earth. Without humus, plant life cannot come forth. It is this humus-ized earth and the connection with this process that makes it possible for new judgments to come forth for the sake of the economic process. This is a very radical idea, that the economic process should come from the earth, should come from the activity of the limb and that judgment should be made from this domain. This is something that has not been realized. There are those who now begin to consider and see that the farmer, as economist, is very important. The limiting factor in existence is the earth itself. What happens to the earth, how it is worked, how the substances are transformed in the earth, how the products of the earth go into the world, this is part of the life of the farmer – lived in all details. This is going to determine the earth's future and mankind's, as well.

As I have already indicated, the culture of man, the creating of the humor, the living element for the soul in man, this is the work of the cultural epochs of evolution. If these epochs are traced carefully, they will be seen to flow from the world of the stars. The working of the spiritual world, the working of the spiritual world in relationship to the course of the sun and the zodiac, this is the story of the origin of impulses for culture. Through culture, man is embedded in the stars. We can call this humor culture. The opposite of this we can see as agriculture or humus culture. Here we have to consider the earth and what is to happen to the earth. This earth if it goes its own way, will fall into decadence and fall out of the cosmos. What we need is to see how it is embedded in the cosmos, how it can remain part of the cosmic system. This we will have to take up in a few minutes when we discuss the role of the planets, silica and calcium.

However, before we approach the earth as a cosmic body, we have to consider how man will lift the earth into another sphere of existence, and this is the economic process associated with farm products. Rudolf Steiner asked that economic judgments arise from the hand that works and toils.

Economics must grow out of the brow that sweats and the limb that strides this earth. The root, the leaf, the blossom, in a way, has to be a guide for this economic development of the earth. An unfolding of the plant demands a tending of the earth. In the plant stands an etheric condition and revelation. The condition of the earth will determine the future of plant. Without plant life, there is no animal life. Without plant and animal life, there is no place for man. The trick is to see how plant, animal and mineral have been the outcome of man's evolution. We have lost track of this. It is important to find man's connection with nature in order that the earth can be worked and worked in an economic fashion.

For a brief time, let us make a journey into the economic world to see how this might be important, might be a major consideration for the farmer. To do this, I would like to turn to a few indications of Rudolf Steiner's in relation to economics. What I have to say is but a "drop in the bucket", as it is often said. However inadequate, let me try to wrestle with this subject. If we look at the sphere of economics, we want to find how it can be a mirror of man, how it can be seen in the light of Anthroposophy. I now will try to share some ideas I have arrived at from Rudolf Steiner's indications in his lecture cycle on World Economy. Here he likens the economic process to that of the human circulatory system. Thus by investigating the circulatory system, we might throw some light onto the economic process that is so crucial for the farmer to take up.

If we look at the circulatory system, we can see that it is made up of fluids, fluids in channels. These fluid channels in turn are embedded in a general fluidic makeup of the body. The non-circulatory fluids are the cellular fluids; the fluids outside cells are interstitial fluids (fluids outside cells). The vascular system is a specifically channeled system. These channels can be differentiated, three-folded. The three systems are the arterial system, the venous system and the lymphatic system. When we speak of the vascular system, we often refer to the arterial system that is an image of the human ego. If we include the venous and lymphatic systems, we have images of the etheric organization in the venous system and a reflection of the astral organization in the lymphatic system. For the moment it is well to focus on the circulatory system as a three-folded fluid system, reflecting our etheric, astral and ego organizations. Let us begin with the arterial system. The arterial system we can relate to the present, the venous system carries the past, and the lymphatic system reaches into the future. It is the ever-present arterial ego system that mediates between the past and the future. It is always active in the present, the eternal present. This we will have to keep in mind.

If we look at the circulatory system, we can see that a large segment borders on the digestive tract. This is the venous system. This venous system leads over to the pulmonary tree – the lung. There in the lung arises the arterial system. The blood flows from the digestive system to the pulmonary tract. If we take digestion as our point of departure, we can consider that the venous system is exposed to that which is digested. It receives the products of digestion (but not only.) As we are told out of Spiritual Science, this product is reconstituted substance. Some is destroyed in digestion, some substance is not destroyed and therefore is more nature related. This activity of digestion we can use as an image of the actual production process that is a part of the economic process. When we work the earth, plant the seed, and permit the plant to grow, our activity is concerned with the creation of a product. When we dig clay from the earth, work the clay, bring it to the potter and let the clay be transformed into a dish or a pot, we create a product. Today, it is not often and usually not possible to experience all the steps taken from the basic earth condition to the final product. It is, however, possible to speak of the product as transformed earth substance. The transformative digestive process and product creation is our comparison here as we follow digestion to venous circulation.

Now let us turn to the process of breathing. This leads the air via the lung to the arterial system. Here there is a direct consumption of substance. This consumptive process is one where there are no major transformations. There is actually a taking up of air and minute particulate matter from the atmosphere. Here we are dealing, not with product, but with consumption. For certain, there may be minor changes in substances (some) that go on in the pulmonary tract. By and large, there is a meeting and a direct taking up of substance in a warmth and aeriform condition without significant alterations. This is particularly true of oxygen, carbon, nitrogen, hydrogen, etc. Today it is known that the air is filled with very fine particulate matter, and that the atmosphere contains micro-compounds of most substances that are present from the earth, plant, animal and human kingdoms. Thus we can see the venous side of the circulatory system exposed to the transformative digestive system. There arises a product. On the other side with breathing, the arterial component of the circulatory system is exposed via the lung to air and to direct consumption – to direct contact with the environment. Breathing- consumption and digestive-production both can be compared with the economic process. Between the venous and arterial systems are the capillaries. These latter micro-vessels permit a continuous flow – a circulation – an economic circulation.

If we then continue our line of consideration, placing the venous and arterial systems in the center of our economic process, we can note, that which is produced or even that which is consumed, has to be, in a way, distributed ? thus circulation occurs. From this circulation then is an inner consumption of the consumed substances and products. This is known as nourishment – a nourishment for the inner organs. This nourishment is needed by individual organs of the larger organism. The individual organs lie adjacent to the circulatory process and are nourished by the untransformed and the transformed materials of the world.

In addition, there is a delicate stream of nourishment that accompanies the direct consumption of substance. This is the cosmic etheric stream of nourishment. In addition to transformed digested substances, there is a stream of newly created substance. This lives with the production process of digestion. This is the second stream that nourishes our soul. We will return to a more complete elaboration later. The whole nourishment process occurs within a mobile-living-circulatory fluid system that is penetrated by etheric-levitational forces. This is an ethereal fluid system. This fluid-ethereal system can be used as an archetype for the economic process. In this system there is production and consumption and a flow of cosmic forces and cosmic substance. This is a general dynamic of the circulatory system as a whole. The significance of nutrition via the senses is not reckoned with today. The ethereal-cosmic flow through the senses is not known. The transformation of material in digestion is quite well studied. However, the creation of new substance through digestion – cosmic substance – is unknown. However, it is the processes connected with these circulatory systems that Rudolf Steiner uses as an archetype for economics, as best as I can see at this time. (editor – 1992)

In the consumption and production and through circulation, nourishment exchanges occur. It may well be that this serves as a basis for the monetary exchange process in the economic sphere. We have to see that all of this is liquid ethereal process. So we can think that consumption/production, which is related to the earthly or the transformed earthly, is raised into an etheric domain that serves as an economic archetype. In a way, we can think of this as a fluid, mercurial process. There is movement, but a movement in substance states as well. There is interplay of all states of matter – solid, watery, airy, and warmth – this is mercurial. The process in the fluidic state is essentially mercurial. This mercurial system is one which flows, has checks and balances. The salt of the consumed earth substance and the sulphury of the transformed and created substance is balanced by the

mercurial fluidic system. The mercurial is the balancing system that belongs to healing, as well as to economics.

It is hardly the case today that we see our economic process embedded in the etheric where the mercurial – the staff of the mercurial – can evolve. Today it is just the economic system that needs to be healed first. Unfortunately, our present economics is a materialization of an etheric mercurial process that probably will need to be gasped in a much more spiritual and living way.

If we think thus, we come to consider the economic process not purely as physical activity. We come into the domain of the watery- mercurial where we can seek spiritual being. A spiritual being of this domain I gather is Winged-Hermes (Raphael-Hermes). We can ask if this is a being that can help heal the domain of economics. Such a consideration is not impossible if we look to the etheric-penetrated circulatory system as an archetype.

Now let us continue further. Let us consider that in the upward direction, the circulating fluids – the blood is drawn into the senses, into the brain and the central nervous system. In the senses the blood comes into direct contact with the world. In the brain-nervous-system, the circulatory system is carried in the cerebrospinal fluid – in the fluid-etheric. An ethereal system – the circulation – rises into an even more ethereal system in the brain and falls in the senses. With the senses, the outer physical world is taken hold of directly. The fall of the blood in the senses and the rise in the floating brain-nerve system permits world contact for perception to occur, while the ideal content arises in relation to the fluid supported nervous system. The sense world is met through a circulation that does not float in fluid, as is the case with the nervous system. The work of man in sense perceptive activity is to flow with the circulation and enter the outer world at the point where capillaries meet the world – capillaries of the eye or the lung, etc. This perceptive activity has to be reflected in the buoyed brain system where the blood rises to float and serve in conceptive activity. The work of valuing – creating values may be connected with this complex set of circumstances. The sense perceived and the rising-floating conceived gives a basis for object grasped and idea valued. I would suggest that this lays the foundation for value creation – for the creation of economic values. This valuation process takes the created into the realm of the mental where it can be seen in relation to the future – to the processes of economics. Here the products of economic activity – the associated work – also gain value. Values place the given object or the created product in the light of the spirit. With valuation, the given or the created can be seen in the light of the future. This leads to capitalization and the process of budgeting.

The process of planning, this means capitalization and budgeting, leads man into the future. Valuation raises the given or the product into the province of the soul where judgment and the future come into play. The given world or the transformed world demands work, physical work in the creation of value. The relation of the soul to sense life means this is actually physical work. This creating value and planning or budgeting requires physical work. Value creation, budgeting, planning is a sense related activity, is physical activity. Now if we turn to the blood in relationship to the inner organs of man, (not so much the brain, but more the heart, lung, kidney, spleen and liver), we will note that in every organ blood is destroyed. There a continual etherization process in relationship to the blood as it passes through the circulatory system. The capillary system is a major system in all organs in which it is involved in the gradual transformation or destruction of blood. In our inner organs, red cells particularly are rendered sensitive to destruction. There appears to be a very intense destructive like activity of the red blood cell in the heart – in the musculature of the heart. This has been suggested by some physiologists. We know well of the destruction of the red blood cell that occurs in the spleen-liver-gall system. In these organs there is destruction and further chemical transformation of the destroyed red cell. The result is the bile pigments – related to iron metabolism. The not so well known process in the heart may also occur. Here the red blood cell, as it traverses the finer vascular system of the human myocardium, the human heart muscle, may well be destroyed. (Pigment formation does not occur.) Very little is said about this process. One has to dig in older literature to find reference to this possibility. The heart muscle circulatory system I am referring to is called the Thebesian system. It is the system that links the outside of the heart with the inside of the heart, the epicardium with the endocardium. Here there appears to be a migration and a destruction of the red blood cells within the heart muscle itself. This destruction with the liberation of the proteinaceous material and iron substance from the red cell, I would call an etherization of the blood. This etherization occurs, as already noted, in many of the inner organs, but the etherization process in relation to the heart is particularly important. Here one comes up with a kind of freed ether that is not connected with the surface of the human organism – with the senses. This is an etherization not related to excretion. As we know, with most organs where substances are excreted, ether forces are freed. With the heart, which is a muscled organ, it is quite possible that freed forces arise, without subsequent excretion or secretion. This is an etherization process that liberates the formative-forces of a cell that is close to death. The form, the physical state of the red blood cell is changed. Substance is very likely

released into the muscle itself and is handled metabolically. My contemplations lead me to consider that these ether forces are used for quite new life. This is a basis for a totally new aspect in life.

My question, is this not the basis for conscience, including economic conscience? The etherization process could make it possible for man to come to a much loftier view of what is occurring in production, distribution and consumption because of what enters the ether streams from the heart. The whole economic process becomes morally imbued at this point. Here is a valuation system of the heart that is not connected with the outer physical world, but purely with the etheric streams in the economic world. I would like to think that this process of etherization of the red blood cell in the human heart could be the true basis for our banking system. Here the heart bank process, one that is carried out in the ether world, is related to the moral astral domain. This is a process – a heart, a bank process that might accompany the economic process. This could be an ethereal sun moral process. Of course, this is not the basis of our banking system today. The current bank system follows the sun around the world, but it is the physical sun, the physical sick heart, not the etheric-moral heart. Our world bank should be a world heart of moral deposits. Whether or not the judgments from this world come out of true conscience, come out of a true moral value system, this is a grave question. This process of the human heart and its relationship to the blood system of man would have to be researched a great deal in order that those in the position of banking could come to a very new relationship with the banking system and the human heart. The spiritual course of the sun – the festivals of the season – would become a first necessity. As we know our life with banking has begun to suffer tremendously. The whole banking system has come under question. Immoral revelations have poured in on us in the last several years with the force of an avalanche or a torrential down pour. The sense of responsibility to the world has not been a part of the moral life of our banks. Conscience has to be taken seriously in order that the well being of the economic process can be maintained. My view is that banks have to carry the moral through a new moral conscience from the ether world.

And now we come to the final region of the economic process, that is, activity of physical labor. Here lives the origin of our lymph. Here the activity involves muscle and bone. The nerve of the limb is involved. The etherization process of the blood-muscle, the astralization of the blood-nerve and the egoization of the blood-bone take place. Myoglobin transformation (etherization), myelin-neural (editor – myelination) (astralization), and

proteinaceous-mineral destruction (egoization) take place in work with the limb. This is spiritual activity. These are spiritual activities and the substance transformation of the organism may well lay the basis for the valuation of the human being – the capitalization of the whole human being. The spiritual worth of man is established by the deeds of the limb, arms and legs – substance change in the human organism is a spiritual activity. Without the limb, man's own worth – economically – morally cannot be established. It is the farmer who can establish this worth for the world, as the farmer has to work with his limb. The cognitive act of man is an activity based in the physical world. The limb activity is based in the spirit. Limb work is spiritual activity – head work is physical activity. So Rudolf Steiner tells us the lymph flow carries this spiritual activity into the future.

Possibly we could summarize the first lecture by saying Rudolf Steiner tries to indicate that the earth belongs to the cosmos. The magnet – the magnetic needle, points to a relationship with the whole earth. The plant points to a relationship with the earth and cosmos. Silica and calcium are carriers of activities related to the cosmos. We can also say that the economic process has to be included in the whole of the earth. In every case we try to see and consider the earth as a cosmic body, as a part of a whole. The earth carries plant on and in its being. The plant is sun related. As a possessor of silica and calcium, the earth influences the plant, which is earthly and cosmically related.

Now if we move onto the second lecture, we come to an important challenge. We are asked to work to unfold an agriculture/farming process so that the farm can be the carrier of individuality. The question then has to be addressed: How are we going to do this? What kind of individuality is this? How will we perceive it? How are we going to work with it? How will we help unfold it? The agricultural individuality then is described. It is described as a being whose diaphragm is the surface of the earth. Under the earth is the respiratory nerve/sense system. Above it is the abdominal digestive metabolic system. The agricultural individual is made up of the mineral, plant and animal. It is constituted as a mirror of man. We might consider that man has been created in the image of God. Here we are told that the farm can be made in the image of man. We need the Sophia image of man in order to undertake this. This is no theoretical affair. We have to understand the earth. We have to understand the plant and the animal and man as well. The anthropomorphosis (anthropomorphism) of the kingdoms of nature around us means that we have to first comprehend man – man in

wisdom. This determines our next step, to see how we can anthropomorphize nature and the cosmos. This is but a first step on a long path.

In order to give us an orientation, Rudolf Steiner suggests that we look at the earth as a diaphragm. We can ourselves then consider the diaphragm of the human being. The diaphragm is a round, semi-round, dome-shaped structure. It's dome rises from the abdomen into the chest. In the case of the earth, it is the other way around, that the dome rises from the chest of the earth into the abdomen of the atmosphere. The diaphragmatic constitution of the earth is the reverse of the diaphragmatic constitution of man. If we ask where this reversal comes, we can say it comes from the fact – that which exists in the etheric is often just the opposite of what we have in the astral and in the physical world. That is to say, if we move our hand up, the astral is active in the upward moving of the physical hand, but the etheric organization, etheric hand moves downward. This reversal process can be considered here so that this view of the earth organization is seen as an etheric view. We are being introduced into the etheric world. We can also enter the ether by contemplating the plant. The plant is an outer expression of the etheric. The approach to the individual of the farm or a being upside down is then the stimulus for us to consider what are the processes in the ether world.

Let us for a moment look further at the diaphragm of the human being. Just below the diaphragm is the liver. Just above the diaphragm is the lung. The heart in a way sits in the middle of the lung. However, in the case of the liver, gall and spleen, they do not sit in the middle, but at the extremities of the dome-shaped configuration. In both cases the lung as well as the liver tend to be concave in their center. The surface of both organs is convex – their outer surface. In a way and in terms of the plant world, this configuration is a reflection of the blossom, of the astrally determined structure of the plant. In case of the two organs, lung and liver, in man, we would have to imagine that they grow out of the stalk and living nature of the enteric canal – the gastro-intestinal canal. This etheric-physical entity, the enteric canal, is like the stem and leaf of the plant – the inner organs, liver and lung, bud, blossom and flower from the canal.

With this contemplation, we have an image before the mind's eye. The individual who remains abstract will have difficulty because he has to take the idea of plant and blossom and transform this picture into the concrete organ configuration of enteric canal and organs. This is actually so very

typical of Rudolf Steiner who gives ideas that can be grasped and made into a visual image, which in turn have to be transformed.

If we now visualize the lung below the surface of the earth and the liver above (with the abdominal contents), we have to take another step in our contemplative imaging. We have to think away this picture and now consider how the diaphragm of the earth can be considered and discussed in terms of substance process. The indication is that the substance of the diaphragm, the matter of the diaphragm, is actually clay. Clay is a bit more related to silica than calcium, but it has a definite relationship to both. The matter or chemical element makeup of clay is calcium aluminum silicate. We might say then that between the silica below the diaphragm of the earth, and the calcium process above the diaphragm in the abdominal cavity of the farming individual, between these two we have the earthy clay mineral mediating substance that incorporates both silica and calcium in its makeup.

What we have spoken of as the lung, diaphragm and liver, man from below up, here we can now consider in terms of matter, silica, clay and calcium. We now no longer talk about physical structures (lung, diaphragm, liver) but we can consider matter, material substance. We have to see how clay can act as a diaphragm or we can ask how clay is active as a chemical substance process connected with diaphragmatic activity, with breathing.

Silica, clay and calcium are chemically described, active entities involved in diaphragmatic process. This diaphragmatic activity relates the earth to the cosmos as man's diaphragmatic activity relates the inner being of man with his surroundings, with the atmosphere. The earth (lithosphere) through this diaphragmatic chemical makeup is related to the hydro-atmosphere of our environment. It is into this configuration that we have to now image the plant.

The plant grows roots into the pulmonary sub-diaphragmatic area of the earth. There is a growing rooting in the siliceous region of the earth – under the diaphragm. The clay diaphragm is a bit like the plant stalk that rises up into the leafy region of the plant. The leaf in turn rises into the flowering region of the inflorescence of the plant. The chemical diaphragmatic process of the earth permits the chemism of the earth to relate itself to the structuring of the plant. The clay chemism of the earth diaphragm is carried into the plant itself. In the plant, there arises a diaphragm as well. The diaphragm is the leaf.

If we want to now compare the diaphragm of the earth with the diaphragm of the plant, we can compare the mineral chemical makeup of the surface of the earth (clay) with the chemical biological makeup of the leaf. With the leaf we have chemism occurring on the upper side. This chemism is very much connected with light. There is a production of color substance, chlorophyll and chromogen (color) substance on the surface of the leaf. The substance of phloem arises here. On the under surface of the leaf there is a breathing process which occurs – a taking in of air, particularly carbon dioxide. We can imagine the siliceous root process rising in the stem and then giving rise to the diaphragm of the leaf or plant, true plant being. There on the upper surface, we have a liver metabolic process and on the under surface, a lung, breathing process.

Below there is a breathing in, particularly of carbonaceous substance. Above on the surface of the leaf, there is light metabolic process that permits the gradual transformation of the carbon into a living substance – that is chlorophyll. With this contemplation, we have passed over from physical structure to the breathing and respiratory metabolic side of the plant. In its chemism evolving chlorophyll, we become active in the life of the plant. Chlorophyll is a living carbonaceous substance. Into this substance, magnesium and a magnesium carrying substance enters as active respiratory substance. Magnesium is sensitive to light and on the other hand to its carrier, a hematin-like substance. The hematin is very similar to the hematin of human hemoglobin. Chlorophyll is in many ways like the hemoglobin in man. Instead of globin (proteinaceous), chlorophyll is largely a carbohydrate-like substance. The carbohydrate of the chlorophyll contains a nitrogenous bearing substance called pyrroporphyrin, a fire porphyrin. This in turn carries magnesium. The chemical diaphragm of the leaf or chlorophyll then is a kind of clay pyrroporphyrin, a silica-like carbohydrate, a calcium-like pyrroporphyrin that contains magnesium.

Viewed in this way we can think of clay as an earth substance very much connected with aluminum. Albumin mediates between silica and calcium. We have previously noted that clay is embedded in siliceous and calcium processes. Clay is a mediator in earth respiratory process. In the case of chlorophyll, we have a siliceous-cellulose- carbohydrate substance on the one side and on the other a calciferous- proteinaceous one. In the middle is the metal-magnesium.

Cellulo-proteinaceous Substance

Magnesium

Cellulose Substance

Leaf Substance

Now if we look at the major metallic mediator substance on the surface of the earth, we come to aluminum. As we know aluminum is quite a poisonous substance as far as the human being is concerned. If we look at magnesium, we can say also that it is poisonous, not so much as aluminum. It is needed in the metabolism of our organism. Magnesium is a little closer to the human being, but if too much magnesium is consumed, it can also be poisonous. In both the case of aluminum and magnesium, we are dealing with substances that vary in their kinship with man. These metallic substances, the one very much a part of clay, the other very much a component of the leaf, are chemically active substances. They can be considered as the material basis for two diaphragms, the diaphragm of the earth and the diaphragm of the plant. They create the basis for the chemism of respiration.

We can now move on and ask how is it with the human being. If we are not concerned with the physical diaphragm as such, where can we find a kind of chemical diaphragm? Where is man's chemical diaphragm? If we look at the human makeup, we can consider the red blood cell and its functions as a possible diaphragmatic vehicle. The red blood cell is very much the carrier of a vehicle – mediator – for respiratory metabolism. Let us look at the red cell. It is a living cell essentially on its way to death. This cell generally has a life of a little more than a season, somewhere between 90 to 100 to 120 days. This is the life span of the red cell. It is close to the seasonal rhythm of our earth. It has lost most of its life. It is described as a biconcave disk. I would call it the red cell, a sarcophagus or a coffin that carries its content that is also dying. This dying content is the hemoglobin that is involved with the respiratory diaphragmatic process in the human being.

Let us look at this chemical diaphragm within the grave, the red blood cell. There we find hemoglobin. Part of hemoglobin is a proteinaceous material globin. This in turn carries a pyrrolic porphyrin, which is also a proteinaceous material. This in turn carries iron. As best as we can tell from research, this iron is a kind of crystalline state – quite metallic. Some suggest that it carries magnetic fields. In order for a cell to be able to carry this crystal of iron, the cell has to die. The diaphragmatic respiratory substance hemoglobin is an integral part of the death process. The globin and the porphyrin carry poisonous substance, which is iron. Iron is a poisonous substance. It helps dampen life. It is carried in a coffin/sarcophagus, red blood cell. Iron's fundamental thrust is to dampen life. The diaphragmatic-

activity of the hemoglobin is to mediate the chemical process of respiration – related to the inner and outer of the human organism. Hemoglobin carries an agent of death activity so that the red cells can serve the life of an organism.

Looked at in this way, we then have three diaphragms. We have the diaphragm of the earth, the diaphragm of the leaf and the diaphragm of the red blood cell. In each case, there is a metallic substance involved. Aluminum is connected with the earth diaphragm, magnesium with the leaf diaphragm, iron with the human chemical diaphragm. This is the materiality, the matter, the substance, which is connected with respiratory process, giving birth to new substances in respiratory metabolism. I would like to call these three metals, mother-father metals, mother-father substance. They are poisonous mothers-fathers. They have to dampen life to give birth to respiratory metabolic processes involving substance. These three carry and mediate a kind of respiratory diaphragmatic chemical process for three regions of existence. The three regions of existence are that of the earth, that of the plant and that of man. I would describe these as three mothers-fathers of existence. The three mothers-fathers make the respiratory process, the diaphragmatic process, possible for the life of the earth, for the life of the plant and for the life of man. This means life is controlled, it is dampened. This mother-father activity makes respiratory metabolism a possibility. We can ask what makes these metals poisonous. Let us first consider the sheen of metals. They further have a certain structure. They also have certain sound quality; sound is connected with each metal substance. The metals relationship with light and sound bespeaks a relationship with the world that we call astral in nature. These metals have an astral relatedness and therefore in themselves are a bit poisonous. The astral carries poison – creates poison. Astral sensitivity is built not on a straight line of evolving life. Astral or sensitive life is based on a slight dampening of the living so that what is dampened releases forces for the soul. In the case of metals, the sheen and tone are soul qualities. I would suggest that we look to these two qualities as the poison activity in the three substances we are discussing. They hold rampant life. They give a direction to life. This control of life is connected with respiration. Respiratory life makes the earth, plant and human metabolic processes subject to possible soulness. The step toward soulness, in the case of the earth, makes earth available for plant life. The soulness of the plant in the metabolic evolution to flower makes the plant available to animal and man. The human blood can be the carrier of soulness because of the dampening effect of iron. We have three materials involved in the

transformation of life to birth soulness. I like to think of these three substances as matter (mother-father) – they bring life into the condition of further birth and evolution. In this way, the earth, plant, man and animal participate in a kind of cosmic soulness. The earth, as a part of the cosmos, is the father-ground of existence. Whatever the plant, animal and man carries of the earth is based in the principle of fatherliness. The life of the earth is transformed by the metallic element to make the earth into a living mother-like cosmic body.

Thus we considered conditions of life, growth and reproduction carried by the processes of calcium. We have also to consider the calcium processes of nourishment that permit action. But in addition, we have to consider how the calcium processes (as well as the silica processes) lay the basis for breathing activity, which in turn is transformed into respiratory metabolic process. This permits matter to serve as matter for the soul in freed ether forces. The plant needs an adequate siliceous process in order to nourish man. The plant needs an adequate calcium process in order to support reproduction. This duality permits breathing. In addition, respiratory metabolic transformations are needed for an organism to serve soul life. We have to place the plant between the pole of nourishing and reproducing – silica process and calcium activity – that forms the ground for breathing – an activity that relates the inner and the outer. However, another step in respiratory-diaphragmatic chemical process is required for the life of the soul. Life is very much connected with nourishment, is very much connected with the reproductory process – the dampening of life is required for soul-life. This leads to respiration – a metabolic process. Respiratory-metabolism in turn can serve as a basis for soul life that can be individualized. When we seek the individuality, we have to come to the breathing-respiratory process. It is in the breath and respiration that the soul encounters the blood that carries iron in the sarcophagus of the red blood cell. Here soul birth can occur. The oxygen of the air awakens the iron activity of the red blood cell so that respiratory activities – semi-catabolic activities take place in the life of our blood. This is not just vegetative life – it contains an element of soulness. The life freed in the dampening of inner organ life, meets the life of air. Here the soul can become active. In like fashion, the life of the earth has to be tempered – balanced in a way. The aluminum process in clay gives rise to the colloidal systems of our soil – to clay. This colloidal system, impregnated by humus, becomes the birthplace of the plant life of the farm. The soulness is manifest in the plants growing on a farm. This soulness has to be extended to the animal life that lives in association with

the plants and returns life to the earth via manures. This earth, plant, animal – physical, etheric, astral makeup of the farm lays the basis for ego birth. Ego birth permits an immense differentiation of our earth. The earth can be individuated in given regions where human beings work to permit individual birth in the image of man. This assumes that the human being evolves so that an individuality is present, is at work. As we know, for many of us the evolution of the true individuality is, in fact, a spiritual task so that the farm individuality can not come to birth unless first the human being takes a spiritual path to be able to come forth as a true individuality.

Now let us turn to the plant that is described in this second lecture. Rudolf Steiner is trying to lead from morphology to chemism to individuality. He tries to help us gain such a perspective with the plant. Not only the farm needs individuality, but the plant does as well. We need to be able to read the plant script in existence. The root of the plant – its morphology is a script. A vertical-solitary taproot is the reflection of cosmic activity. Where there is a branching or arborized root system, here the earth activity is predominant in the form. The taproot process is more a siliceous process, but a cosmic one. The lateral branching root system is more a calcium process. We can thus read from the root configurations. Roots are a script that tells about the earth and cosmos.

Rudolf Steiner then goes on to tell us about the color makeup of the plant. This permits us to read the workings of the planetary domain. The colors express planetary workings. Rudolf Steiner relates the color green of the plant to the Sun. Red is connected with Mars, white or yellow with Jupiter and blue with Saturn. Thus we can look at the root and gather a sense for the working of the earth or the cosmos. We can also look at the color of the plant to get a sense for the working of the outer planets as determinative of that color. We then have a cosmic-earthly structure in the root and a planetary-sun expression in the colors of a plant. Form and color are expressions of our ether system – inscribed in our plants. We can use the root formation and plant coloring to orient ourselves in the ether world. This is to help us to step across the threshold into the ether world. We need to be able to read in this world. By this means, we can carefully pull up a plant, look at its root and become oriented in relation to earth and cosmos. We can gaze on the plant in the garden, in the field, in the pasture, and sense the planetary world active in colors. This is the beginning of becoming aware of a cosmic script. We are learning the ABCs of an alphabet. These are very practical indications for reading cosmic workings.

Very interestingly, Rudolf Steiner then develops the ether workings further. He speaks of light and warmth. Both are connected with the life of our planet. Both have two different qualities. There is a light that is above the earth and a light that is below the earth. We can say it is in darkness. The light above the earth is living, the light below the surface of the earth is dead. Just the reverse is the case with warmth. Above the surface of the earth, the warmth is dead and below the surface of the earth, it is living. Light dies into the earth. Warmth is enlivened in the earth. Here again in relationship to the ether world, we have a reversal. Light in entering the earth domain is much more connected with sub-earthly forces, with electricity, magnetism, etc. The warmth that is not living is taken up by the nature within the earth, the soul nature within the earth, the organisms within the earth, so that we have a sphere of living warmth below the surface of the earth. Thus in sense perception, we have the possibility of meeting a living light and a dead warmth. The living light we have to transform in order that we do not lose consciousness and the dead warmth we have to enliven so that we can have a soul. These are all interesting transformations in the region of light and warmth, in the region of physical light and physical warmth, ether light and ether warmth. In every case, we are dealing then with reversals and transformations that are connected with the ether world. In the case of light and warmth, we are dealing with transformations that have to do with that which we call the astral and that which we call ego. Living ether warmth is necessary for the human ego to be able to take hold of the dead physical warmth that is a part of our earth evolution. Outer living light (which is darkness to ordinary consciousness) is necessary in order that the human being can awaken so that there is the possibility of bringing forth an inner light that is soul in nature, that can be the carrier of the human soul functioning in thinking, feeling and willing.

What can be noticed in this lecture is that Rudolf Steiner has led us to take another step. In lecture one he mentioned the processes of nourishment and reproduction. Then he took up breathing. From there he advances in this lecture to respiration and then to sentient life. With the sense and sentient life, warmth and light come into question. Here the human soul can find an anchor – in ether light and warmth. The sense processes and soul activities are needed in order that we can contemplate individual consciousness. Now in order to complete this farming individuality, we also need the animal. Here Rudolf Steiner describes the animal as constituted from the play between the sun and the moon. Notable with the plant, it is constituted out of the earth-planetary ether world and the astral star world. The animal,

however, is constituted very much out of the zodiacal-astral and the planetary-ether world. The front of the animal is connected with the zodiac and the sun – the hind portions with the moon. Earth is least important. The animals' life is not merely that of growth, nutrition and reproduction. The animal lives to move. The animal is "up-rooted". We therefore have to look to the movement processes in the cosmos. We can look to the animal astral, the zodiacal activities of the cosmos. Here we look to the movement of the sun in relationship to the zodiac. In the case of the animal, we have to incarnate the zodiacal animal activities in movement and in form. The animal form is not static like that of a plant. The animal is ever changing in the way it takes hold of the ether. Here we do not speak of inner and outer planets, but we speak of the zodiacal processes, the zodiacal animal circle, the sun and in particular the inner planets. Just as we spoke of the earth with its silica and calcium in relation to the inner and outer planets in considering the plant, we now speak of the inner planets in relationship to the zodiac in order to have some appreciation of the animal. Therefore, the animal in movement, in its activity of movement within space, permits us to gaze on the ether sphere of the inner planets and the sun in relationship to the zodiac. We then can read the zodiacal ether cosmos in our animals. This is needed to supplement the picture of the planetary world in relationship to the earth given by the plant. We then complete the entire configuration of the cosmos. This configuration includes the earth, the planets, and the zodiac. This we need in order that the soul astral life of a being with egoness can be incarnated in the makeup of the form – to birth individuality. Earth mineral, plant life and animal sensation are needed as a basis for the individual birth of the form.

Agriculture Course – Lecture 3

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Let us again make a quick review. In Lecture I, the earth was placed in a cosmic context. This was done by speaking of calcium and silica in relation to the planets and the moon in relation to rain. The earth and farmer are also oriented to the universal by discussing a new economics that is based on the work and knowledge of the farmer. The knowledge is gained from the work of the limb, the inter-relationship of all aspects of the earth come to be reflected in world economics. The point of establishing the earth as a cosmic body, and the economic process as a universal process, is so that the human individuality can unfold the farm as an individuality. This is needed for the proper nutrition, reproduction and propagation of mankind, as well as the living world, that is the plant and animal. All has to be attended to. This is the work of the farmer.

As we turn to Lecture II, we have considered that the earth, which is a part of the cosmic process, breathes. Man as a single being and as a universal being, also breathes. We tried to establish how this breathing process can be looked at by considering the respiratory activities as three matters – mothers. One of the three mothers establishes the life for the earth which is the support for the plant. The plant carries a mother which is to support the seed, and the human blood carries a mother (matter) which is the support for human individuality. As we look at breathing, we have to consider the movement process. Breathing describes a movement process for air. To consider breathing without considering air does not make much sense. Thus we can say that not only do we have to consider the earth, the plant and man in the breathing process, but we have to assume the condition of the atmosphere – the airiness of existence that has been established. This places the human being, the earth, the plant and also the animal, into the time of Atlantis and post-Atlantean evolution. This is the time when atmospheric conditions of the earth were established as we know them today. If we speak of breathing, at an earlier time, Lemuria and Hyperborea, we have to consider more of a digestive process. The breathing, respiration and then sense activities evolved out of a kind of digestion where the atmosphere was living and proteinaceous very early in evolution. We gather this from our biblical texts, but also Rudolf Steiner has elaborated this very extensively. Early breathing was a digestive-like activity as we know digestion today. The way in which Rudolf Steiner speaks about breathing is to first consider the surface of the earth as a diaphragm. He shifts from the physical

diaphragm or the physical surface of the earth to the physical human diaphragm. He leads this over to a chemical diaphragm. It is for this reason that I elaborated the activities of the clay as the earth diaphragm, chemically constituted. Chlorophyll is a chemical substance which constitutes the chemical diaphragm of the plant. And I have suggested that hemoglobin is the diaphragm for the human blood in the respiratory process.

In order to have a breathing earth, we need clay. Clay mediates between silica and calcium. In order to have a real breathing in man, a semi-chemical process with the movement of the blood, with the red cell and hemoglobin, is a necessity. Our further considerations were to look at the aluminum of clay, the magnesium of chlorophyll, the iron of hemoglobin. They are all three metals, poisonous to life in their natural state, and they serve an essential role to mother the respiratory process.

As we move onto Lecture III, we have to make a significant step into physiological, chemical, bio-chemical considerations. This, at the same time, permits us to make a step from the breathing process to that of respiration. In terms of the general physiology and chemistry of our day, we will have to speak of respiratory chemistry. The breathing is more involved with the exchange of gas, gas moving in and out of an organism. However, respiration from a chemical and technical point of view has to do with material transformations connected with oxygen-aerobic metabolism. Therefore we have to speak of respiratory-metabolic activity related to the airy condition of matter and in particular to the element of oxygen. This is a step from an activity of movement to that of chemism.

In the air, we have a condition of materiality. We have light-ether which is the determiner of the airy. In respiration, we have to consider what occurs in the fluidic domain. The state of liquidity is where chemical-ether is determinative. Here we can find the transformations of substance as they relate to the respiratory process. This is a significantly deeper layer of activity than breathing – the movement of air. Respiration is a more inward expression of the transformations of materiality. This takes us to the transformations of those substances which are siblings-daughters-sisters, and are born of and carried by mother substances. The mother substances of breathing lead to the transformations of the daughters in respiratory metabolism. These transformations of the siblings-daughters in turn lead to the birth of individuality. The astral body (ether-body also) is connected to breathing, but respiration is connected and involved with the individuality, the individuality principle, the ego.

An ego principle is involved in the mineral kingdom, the plant kingdom, the animal kingdom and the human kingdom. We are making a step by considering the chemism and chemical transformation of materiality in order to comprehend the birthing of the individuality in the kingdoms of existence. There is a refining, a delineation. An individuation process, as respiration, is established. This is the condition of kingdom formation. Ego or individual principle can establish kingdomness on a chemical level. In fact, it is not possible to speak of a kingdom without an ego. Therefore, chemism is also vital.

Ego, as far as I can see, typifies the mineral, plant, animal and human kingdoms. Rudolf Steiner has made many efforts to distinguish the group ego process of the mineral, which lives in the domain of the Thrones, in the first hierarchy. The plant ego activity exists in the sphere of the Kyriotes, in the second hierarchy. The Spirits of Motion, Dynamis, work as a group ego to establish the animal kingdom. They exist within the second Hierarchy of spiritual beings. It is with the human kingdom that we can also speak of a group ego being, which is determined by the Spirits of Form. However, in the case of this kingdom, each individual can become a kingdom unto himself. It is with this significant high degree of individuation, that we have to make our way. As we make our way to this individuation process, we have to take up respiration – or sibling activity of matter – mothering activity which gives rise to daughter activity or a son activity.

As we approach this very complex problem of understanding the individuation, and transformations of materiality for unfolding of form individuation, we have to take up a totally new view of chemistry. This chemistry is introduced by Rudolf Steiner in this lecture. This is a totally new world of chemistry. Some have wrestled with this chemistry, not too many. Further steps will have to be made. Here I will try to share some thoughts that I have carried for many years, searching to find a way to approach this chemistry – the material basis of the spirit, or the material basis of individuation. I realize how germinal this all is. It is a small step on a long and new path.

It is well known by those who have looked into the history of this Agriculture Course, that Rudolf Steiner invited eurythmists to be present. We can ask why? He obviously wanted the farmer, the gardener to be there. My understanding was that he was also hoping that physicians and therapists interested in healing substances would be there. As I understand it, his wish was not met. I gather that Rudolf Steiner asked Ita Wegman to take the

agriculture work into the Medical Section. She declined this. I believe that this has been very significant for both the medical work and the agriculture work. These two fields are intimately bound. The fact that they are separated in the fields of knowledge has created immense problems in civilization. This division probably will continue to create problems within the Anthroposophical Movement as long as its union is not cultivated with an intense and devoted work. Human physiology, the human psychology, the human spirituality, have to be seen in relation to the earth and nature that is so much the province of the farmer. The living earth, the living plant and animal have to be worked with by the farmer. The atmosphere, as well as what is outside man, has a correspondence within man. A careful working between those concerned with man and nature is necessary. Here the artist is needed. By this means, correspondences can be found and taken up. It is in the correspondence between nature and man that leads us to an understanding of substance as it relates to nutrition, propagation, healing and the creativeness of the spirit in man.

Now if we go back to the eurythmists invited to this conference, we can think that this is not so easy to understand. However it seems to me that if we look at what is being given here in the form of a new chemistry, then the need becomes more evident. My thesis is that in what Rudolf Steiner has given as a description of the five chemical elements, the five siblings, requires the artistry of word, music and movement for elaboration. The eurythmist can help evolve these sisters-siblings that are sketched here in this lecture. With this said, let us now turn to these five beings.

As we know, these five beings, five siblings, five sisters, five offspring are known as carbon, oxygen, nitrogen, hydrogen and sulphur. Generally they are known as chemical elements. Their existence has been known since the 16th Century with the unfolding of chemistry through the investigation of Lavoisier and others. Today it is known that the air about us, the chemical constituency of the air is that of carbon, oxygen, nitrogen, and hydrogen. Of course, other trace elements, sulphur and the like, have to be added. But the largest percentage of air, in its elemental make up, is made up by these four siblings.

If we look to a description of carbon, oxygen, nitrogen, hydrogen and sulphur, we will note that the chemistry of our day describes the elements in atomic form. That is, if we shrink the cosmos, the sun at the center with revolving planets, if we shrink this cosmos to an unimaginably small entity, we come to an image of the atom. We reconstruct that cosmos into the form of an atom in our imagination. The nucleus, with encircling electrons, is one

mental picture of the basic form of all matter. Thus we take our thought-image picture of the universe, reduce it to even smaller than the minutest possible size and then investigate matter in the light of this image. We then study the basic forms of materiality. Since the nucleus of the atom is so small (we imagine), it is almost negligible. By this means, the atom becomes a spatial entity, a shrunken cosmos, which is largely composed of electricity, electrical orbits – like the orbits of planets. The electricity of these orbits determines the behavior of our shrunken cosmic particle. Thus we have a spherical, or box image of the universe. We have shrunken sense experience and spatial imagination to an infinitesimally small dimensional mass – the atom. We have eliminated most materiality – as the nucleus is highly insignificant (though it gives “Atomic Weights”), and what we are left with is an electrical planetary system that determines the behavior of this shrunken universe. It is interesting that we investigate materiality in the light of this imagination. It is not realized that this is an image because research can verify this image. Physics says that matter is actually constituted by substance whose configuration is the atom. This is an “electrified” view, essentially the mass is that of the “electron” – a mass of electricity. What is not realized is that one can establish conditions to reveal what one wants to. The mode of scientific investigation is created by our mental make up and activity. It is so strange that the scientist of our day does not reflect and realize that our view of materiality is mind dependent. Certainly there is no fallacy in being able to put substance into special conditions. Certain revelations will be produced. These can verify our idea. The huge synchrocyclotron, the current atomic studies – all show that we can understand materiality from this point of view. It, however, takes some careful thought and self-reflection to realize that the material of our universe could be subjected to other considerations. Then other revelations of the materiality could be made. The problem is that if this is done, those who hold the “religion” of the atom, are very easily unseated. Much of civilization has been so trained now that the bulk of mankind can only think in terms of this particulate atomism. It is considered uncivilized, unscientific, in a way uncultured, not to think of materiality in the form that it is promulgated today by science. We can easily see that the science of our day is actually a semi-religious system with rituals and altar celebrations. The work of our laboratories, the physics laboratories and our huge atomic research plants, these are the altars of the religion of science. This religion has produced dogma, as well as astonishing revelations about matter. However, this is Ahriman’s laboratory and work. We would have to think

that we can reconstitute the laboratory process to see if materiality can come to expression in its inner essence in other ways.

One way in which materiality appears to behave differently than the aforementioned Ahrimanic religious ritual system is to undertake the rhythmic dilution of substance. A substance has to be shaken, succussed, as it is rhythmically diluted. The process of succussion with sequential dilution is what we call potentization. When this is done, quite new and different revelations of materiality can be made. This is different than the revelations of physics, bio-chemistry or physical biochemistry as we have today. As you know from recent years, this potentization process has begun to be investigated. The first investigation of potentization by means of laboratory research was undertaken by Lily Kolisko at Rudolf Steiner's suggestion. If the thesis I am developing here is correct, that means that potentization gives us another view of materiality. Then it becomes crucial to undertake this research much more extensively. This would help give a counter balance to the shrunken cosmic electrical particulate view of matter espoused by the religion of science today.

I have taken up this line of consideration only to indicate that those who are living in this century, living in the present day, will immediately be faced with what is promulgated as the religion of our time, that is, particulate atomism and its electrical view. A step in the direction of another consideration of materiality, as far as I can see, is posed by succussion and multiple dilution methods. Several other methods to express the workings of matter would be important. From an Anthroposophical perspective, several other scientific methods have been evolved in laboratory research to wrestle with this problem. Chromatography, either circular or column chromatographic methods have been evolved by Kolisko and Pfeiffer. The crystallization technique of Pfeiffer or the drop method of Schwenck are further methods of investigation. These latter three techniques are mostly involved with the attempt to create conditions where material can be considered to be the carrier of force systems which bring about form. All of these various considerations have to be made as we approach what is placed here before us as a new chemistry. This is totally new. This chemistry was introduced by Rudolf Steiner telling us that there are five sisters, or five siblings – five beings – not five different atoms.

For a good number of years I have wondered why he speaks of sisters. If they are sisters, we have to ask, where is the mother or where is a brother? How about a father element? It is just such questions that led me in previous considerations to take up the three mothers, the three mothers that are connected with breathing. Following this line of thought, I would here have

to say that I will have to try to take up a fourth mother, who is the mother of the five siblings. We will have to look for a brother or son that has been born to the fourth mother. So I contend that there are not only the five siblings, the five sisters, but we need to look for a sixth sibling – a son.

My suspicions here are that Rudolf Steiner's language is, in fact, fairly precise. He is introducing something of an alchemic consideration. If we look at alchemy, we then have to turn back to several thousand years BC in Egypt. In this culture there was profound consideration of the dark earth or alchem – earth substance. In this old culture, we come to the Mysteries of Isis and Osiris, as a basis for this approach to the earth as the dark earth. It is with the Mysteries of Isis and Osiris that we come to speak of the Trinitary elements – the Father, the Mother and the Child – (Isis, Osiris and Horus) – or brother and sister (Isis and Osiris). My suspicion is that it is with the Egyptian mysteries that we begin something in human cultural evolution that permits us to make a path towards the point that we have come to now – that is the knowledge and working of substance. We have to find chemical parentage and sibling activity in order to make our way to the individual. We are entering into the region or domain of chemism or chemistry of the dark earth as it pertains to the unfolding of that that is truly individual – this is alchemy. This points us back to a long, long history in man's cultural evolution.

With that said, let us now turn to these five siblings. These five are described in a semi-anthropomorphic form. They are largely described in their dynamic workings. Rudolf Steiner began the discussion of dynamics in relation to substance, in the first lecture where silica and calcium were spoken of. The dynamics, the inner workings, the form and action of silica and calcium are presented. The dynamics of silica and calcium as this pertains to nourishment and reproduction or propagation is also presented in the first chapter. The form activity of substance and the dynamic life activity of substance is elaborated further here in relation to these five siblings.

If we start with the first sibling, we are introduced to a dark being. We are introduced to carbon or the dark being in the earth. We have to look at coal substance. If we trace this carbonaceous matter from its dark condition to its earlier states, we have to think that coal was actually plant substance. Plant substance grows in relationship to the sun. It is actually sunlight substance that has fallen to the earth and has become the black materiality of coal. Its other two forms, that of graphite, which easily mixes with clay, and that of the diamond, which has a distinct relationship to form and light, are older forms of carbon. Our present carbon-coal we associate so much with the structuring and form expression in the plant with its cellulose. In the human

being and in animal, we speak of carbon in relationship to basic substance in the organism. Without carbon, we could not have the major chemical provinces of substance that is carbohydrates, proteins and fats. It is carbon that gives not only the backbone for these major substances, but its chemistry is, in fact, identified with the chemism of the living, that is organic chemistry. As mineral, general chemistry is based in atomistic thinking of about 107 elements. Organic chemistry is based in the carbonaceous form transformations of substances. If we do not have carbon involved in the chemism of a process, then today's science does not consider the chemistry to be organic chemistry or the chemism of the living. To be true, we can say that not all organic chemistry is chemistry of the living. I would, however, like to suggest that organic chemistry has its basis in the living, even if it is reduced to a bare minimum of livingness when organic transformations are brought about in the laboratory. However, what is important here is that the basic considerations in organic chemistry, the basic considerations of changes and transformations, the morphological and chemical changes, are connected with carbon.

In this setting, in this lecture in considering carbon, Rudolf Steiner baptizes carbon with the name of "the former". "The former" is not only a name, but is also an activity. Carbon is the vehicle for form. It is the physical basis for form. It is the dynamic for form. Carbon expresses form. There may be formative elements inherent in the carbon itself. However, when one speaks of the former, it also suggests that carbon might be a carrier of formative forces. Carbon might be a vehicle. Carbon can bring outer expression of form. These three aspects, former, vehicle and expresser are necessary in order that we can say that carbon is needed for life, life of the plant, animal and man. Carbon is an orderer, so that form can come into expression.

Without carbon, we would have formless expression in the world. We would have living chaos. If we go back to calcium and silica, we can think of the carbon with its formative element, influenced and directed by the silica and the calcium. Thus the formative of silica and calcium can work with, into and through carbon.

Rudolf Steiner further indicates that this carbon being, this black lowly being, is the substance of the "Philosopher's Stone". He does not elaborate in this course how this can be the case. However, even in his Introduction to Anthroposophy in 1924, Rudolf Steiner gives some very important hints how this lowly carbon can become the Philosopher's Stone. He tells that this comes about through the fact that carbonaceous material within the human being is given off in the breath. This carbon material in the breath when seen by a consciousness that can maintain itself when free of the body, this

carbon then reveals itself to be radiational carbon, radiating of light. This is the carbon of the human being that is given over to the living – to the plant, to the earth. In expiration, we give off a form of carbon which has been transformed through man's metabolism. When it is given off, it is radiant material. This radiant carbon has to be taken on by the plant. This is new life substance for the plant. (We breathe in our fellow man's radiance). As we know, approximately 20% of the carbonaceous material of plant life is given by man, by his carbonaceous excretion in expiration.

Thus this carbon being, which in its mineral state can be black as coal, grayish-silvery as graphite and light reflecting – resplendent as diamond, in its mineral condition can express and give rise to form in the transformations of chemistry or bodily metabolism. Carbon can become a vehicle for the formative and can itself carry the activity of forming. From its three forms in the mineral world (coal, graphite and diamond), we meet carbon in its non-living form. In the manifold transformations in the living world, we meet other aspects of carbon. Lowly carbon can be raised to great heights in the mineral and become endlessly transformed in the living plant. It is endlessly transformed in the living and through man, becomes the basis for expressing a radiant resurrecting activity. Such contemplations could possibly be worked at by eurythmists, art historians, insightful chemists, true alchemic physicists and striving therapeutic farmers. A deeper life is required for such an approach. Meditative life is needed.

If we move onto the second sibling, we have oxygen. Oxygen is the “Mover”, the “Mobilizer”, the “Transformer”. Again, the being of oxygen is described in mobile terms – anthropomorphic. That which wants to assume forms, that is carbon, has to be able to be moved and transformed. It is our being, oxygen, that permits this transformation. The ever mobile, the ever changing, has to live in relationship to the form in order that the form can become transformed. Our sibling, or sister, oxygen, is a crucial being, worker, in the world of chemical transformation, permitting the ever changing to occur. In terms of its existence, the atmosphere is constituted of approximately 20% of this substance or we can say 20% of the beingness of our atmosphere is the work of this being of oxygen. The being of carbon plays a relatively small role. I believe about .4%, of carbon (considered with oxygen in a sisterly relationship) exists in our atmosphere. Our atmosphere, then, is a great, garmented “mother-being” who carries these siblings in her vestment. Without the being of oxygen, the soul life of man would be unthinkable. Here one would have to say that the life of respiratory chemistry, the life of oxidation would be unthinkable. Oxidation is a transformative process in all of nature, in the mineral kingdom, the plant,

animal, as well as man. It is very much of an important being in inorganic, as well as organic chemistry. It is crucial for the chemism of living transformations. Oxygen is the essential being in bringing about the breathing process which is crucial to our discussion here. Oxygen is the crucial element-being which permits the respiratory process in terms of chemical substance, living transformation in relation to egoess. As we know, it was not discovered until Lavoisier undertook his experiments in the 16th century. I would like to suggest that this being was brought to incarnate physically out of the living world of the atmosphere. Oxygen was forced to be born out of the garment vestment of the sphere of the breath – “atma-sphere”.

It seems to be important that we consider the being oxygen within the atma-breath sphere. I would distinguish this oxygen from the O₂ that we have forcibly removed from the atmosphere. To be true our atma-sphere is dying and our forceful intervention there accelerates this process. Oxygen is a being who can be subjected to elemental conditions, mechanical compression, electrical dissection, and mechanical imprisonment. This gives us bottled gas or bottled oxygen. To say that this is the condition of oxygen in the atmosphere seems to me to be a bit lacking in thoughtfulness. Even our researchers suggest that oxygen lives in an even more nascent being state called ozone. This is crucial to the life of our atmosphere. Too much life is not healthy. Just as we can say that too much living oxygen process or free radical process in the human organism, free radical chemism, brings about disorderly states in chemism, so we have to consider that the non-living state of oxygen is also important. With both living (ozone) and non-living (O₂) oxygen, we are referring to a being – not an “atom”. To be true, “atomism” can be brought about to create an “atom” sphere, but this is a further individualization and, I would say, death process of this being. Such contemplations are necessary for a new chemistry. Certainly, Rudolf Steiner has given these descriptions in hopes of further progress in chemistry. I find it a challenge when he suggests that a modern Christianity cannot be evolved without a totally new chemistry.

Let us now go on to nitrogen. Again, all of this is very introductory. I hope to be able to develop this further. This is, at the moment, the best that I can do and offer it, share it as a first consideration, even if I have pondered these matters for a good number of years.

The being of nitrogen is addressed as “an imitator”. On the one hand, this great imitator is able to take up the form that is carried by carbon and is able to imitate the mobility of oxygen, that is, the mobilizer. The imitative mediating role of nitrogen is depicted in a very lively way in this lecture.

The imitator of form, the imitator of mobility, the mediator-imitator activity permits that which is mobile and that which is fixed to be brought into relation with one another. There is at work a weaving in between, making a relation between two opposites – that is fixed form and the ever mobile. This weaving is enacted by nitrogen. This same process is described as “the mercurial” in relationship to higher functioning of materiality. But here, something of a semi-mercurial like working is brought in relationship to nitrogen. Nitrogen is approximately 80% of the sibling beingness of the vestment of mother-substance (matter) of our Atma-atmosphere. This is the sphere of the garmented mother. This garmented mother-being, I would like to think, lives within the whole cosmic sphere of what we would call the father element. This atmosphere, mother-sphere, permits respiration. This sphere is very much filled with the activity of the being that we are discussing here. By and large, we are told that this being is inert and not significant. Rudolf Steiner indicates, however, that nitrogen is very important. Nitrogen is very much the basis of our soul life in the material world. With nitrogen, we become further concerned with respiration and, as well, the transformation of materiality which opens respiratory chemism to a kind of chemical soulness. The nitrogen man in man is a being of mobility permitting soulness. It permits mobility, but also permits a mobility that is then open to soulness – to astrality. Here we then have to think not just of the chemism of substance, the transformation of carbon by oxygen, but the mediation of the two so that a quality of soulness can take hold in chemical transformations. This now distinguishes and makes a third distinction necessary. We have to distinguish between breathing, respiration and the soulness that is connected with respiratory metabolic chemism. The highly imitative activity of nitrogen brings out of the atmo-sphere a substantiality that permits plants, animals and man to be related to soulness. When we read in the Books of Genesis (King James Version – editor) that God breathed the living soul into man, we are not told that he just breathed life. God breathed the living soul that has transformed breathing to physiological chemistry to respiratory chemism and to soul chemistry – nitrogen chemistry. The Old Testament points to the birth of soulness into matter at that time. Soulness is the beginning and on the way to the process of individuation. This begins with a mobility that is then open to soulness. Here we speak of soulness when we consider that which we call astrality. Astral substance has soul working. This we have to bring very much in connection to nitrogen. It is, therefore, that Rudolf Steiner tells that our human inner astral organization identifies with the astral organization around us, initiates it and therefore when necessary the human being gives off some nitrogen to compensate for

changes in nitrogen in the atmosphere. This is, of course, well known today with the “bends”. In “bends” there is a liberation of the nitrogen from the blood into surrounding tissues. Nitrogen, as gas, leaves the blood – enters the cells as gas and produces illness. Decompression chambers have been constructed in order to take care of this illness connected with nitrogen, so that this illness does not occur. This is a gaseous nitrogen man in the organism. When the atmosphere changes rapidly, this nitrogen man in the blood wants to escape into the tissues. With decompression, it can enter the environment. A proper pressure relation between nitrogen in man and outside man has to be maintained.

Nitrogen is present as material substance in all of our tissues and fluids in proteinaceous material. This being of nitrogen in protein makes it possible for the plant, animal, even mineral to become, in a way, slightly ensouled. The paths and workings of imitative mediating, the working of nitrogen, penetrates all corners of existence. Its perception leads to a kind of prickly-sticking sensation. I associate it with the very clear sweet smell that follows the stroke of lightning. If we compare this smell with carbon, particularly carbon dioxide, in the case of the latter, we experience a dampening of sensation. With oxygen, we can experience a slight stimulus and a slightly sour taste. Therefore, Germans call oxygen “sauerstoff”. The sensation producing quality of nitrous oxide is captured by the German who calls it “stickstoff”. Thus we can actually perceive these beings in our atmosphere by the use of the senses. However, Rudolf Steiner is giving a much more occult objective basis for perceiving and comprehending the functioning of the sibling nitrogen, as well as other siblings.

The functioning of this being in relation to the earth, Rudolf Steiner gives in this lecture when he speaks of the papilionaceae, the leguminosae. This is a plant family which inbreathes nitrogen, places it into the earth. Nitrates are formed by this plant family. The forming of the little nodules on the roots of these plants, the formation of rhizomes, has been extensively studied. The nodules form as the result of a symbiotic infestation of the root of the plant by the rhizobium bacteria. As a matter of fact, a description of this nodule formation can be found in the July 3rd, 1992 edition of the publication Science, published by the American Assoc. for the Advancement of Science. What we see is that it takes a bacterium, which is plant-animal, a plant-animal activity to produce the nodule and bring the plant in relation to nitrogen substance of the atmosphere. This plant family produces an earth inbreathing, as it were, in relation to nitrogen. Rudolf Steiner indicates that all other plants, the non-leguminosae, produce an outbreathing nitrogen process into the cosmos. The being of nitrogen then is depicted as a being

who distinguishes the leguminosae from all other plants. Nitrogen produces an inbreathing and outbreathing in relation to plants and thereby relates the breathing of plant life to respiration. Ensouled plants, cosmic ensouled plants, bring nitrogen into the earth. In the same way, man produces a respiratory balance with the cosmos. He not only breathes, he respire. By this means, man develops an intimate soul-relation with the atma-sphere, the breath sphere of existence around him, Atma-sphere is the sphere of mother-substance – father-cosmos related.

Let us take another view of this nitrogen beingness. We note that it always has to be balanced. We note that what is inside has to balance the outside. What is above has to balance the below. What lives in the plant as pure life has to be raised to the sphere of nitrogen. The whole plant world is divided between the leguminosae and the non-leguminosae. This is a totally new way to seek an understanding of the plant world. The plant, through the leguminosae, then becomes an expression of a breathing process connected with nitrogen. This nitrogen in turn is given over to the earth. While this is occurring in the plant and man, we can contemplate how this respiratory process serves to rekindle the atmo-sphere. Our atmosphere is ensouled by the plants and man. The earth is ensouled via the plant – leguminosae. The soulness lives in the life of the plant chemistry to enter into the make up of the earth. Man as a meditative, sentient being, then is able to unite himself with the plant and the mineral earth. In a higher state of consciousness where one can see the radiant quality of the carbon, here, with nitrogen, the clear seeing becomes clear smelling. Clairvoyance becomes clairsentience. A part of man's being enters into the sphere of atma and there can begin a life that is connected with the plant and the earth. A human being who can follow these two processes, he has to develop quite new faculties. Clairsentience has to unfold out of clear sensing. The intense life process in the atmosphere, the oxygen being 20%, is of such magnitude that consciousness is lost. This same process in man has to be dampened. But in the case of nitrogen, so very extensive, 80% of the atmosphere, our sentientness is awakened. Our sentientness lives in the respiratory process.

Now let us go onto hydrogen. We are concerned here with the fourth sibling. Again it is described in a very living way by Rudolf Steiner. This sibling is described as a “chaotizer”. That which formed, was transformed and became sentient, now can be chaotized. This permits the entrance of something new – a new birth. The fire hydrogen being opens substance that is living and sentient – to a fire process that opens substance, formed soul-substance to fire-spirit- substance. In German, it is called water substance because it explodes and burns in the air to form water. It is airy in nature and explosive

in activity. Its watery-fiery disposition opens respiratory metabolism to the potential of being individualized. Hydrogen is formed in the atmosphere in extremely small amounts. I believe it is .02%. When hydrogen is in larger concentrations it becomes explosive. It is explosive, highly explosive. It is shattering. It is not radiating, but fire explosion substance. This adds a dimension to substance which becomes not only soul-sensitive, but individually oriented. Quite new impulses have to enter into the substantiality so that individuality can be expressed in and on a substance level. A chaotic condition is needed for individual incarnative activity in substance.

If we talk about the being of fire, the chaotizer, the eliminator of form, of life, and of sentienticity, we can see the possibility of a door opening to something higher. We then come to the fifth sibling, that of sulphur. Sulphur is here described as that which “wets” substance and permits the indwelling of spirit in matter. The Individual is inspirited. Sulphur is a part of the substance of most protein. A good number of proteinaceous substances are sulphur bearing. The being of sulphur works into and brings about a direct relationship with the spirit. The chaotizing fire substance has to be able to receive the erectness of the spirit. The baptism by fire is accompanied by the wetness of sulphur’s spirit orientation. Sulphur, as mineral, is very complex in its behavior, existing, like carbon, in solid form. The proteinaceous material in the body is known today as organized carbon, oxygen, nitrogen and hydrogen. The role of the sulphur in proteinaceous chemism is to permit the embedding of spirit into substance. Substance thereby gains a relation with the spirit. Through nitrogen, substance gains soul relationships. Through hydrogen, substance gains individuality. Through sulphur, substance is spirit related. I would like to suggest that a distinction can be made between non-sulphur bearing proteinaceous material and sulphur bearing materials. The non-sulphur bearing protein let us call protein. The sulphur bearing protein, let us call albumin. Protein is the work of four sisters. Albumin is the work of five sisters.

If we look at sulphur, we know that it is antipathetic to life as we know it. It extinguishes life altogether. Those exposed to sulphur can live only very short periods. Man becomes suffocated. The stench of sulphur bearing substances is very marked. Sulphur is not a major component in the mineral world though it works there in relationship to many minerals. In our recent consideration, the mineral to which it is very much connected and related is that of antimony. As oxygen is very much related to carbon, hydrogen, nitrogen, and to many of the other chemical constituents of the earth, so sulphur is related to antimony. It is therefore important that as we consider

the five sisters, we also come to antimony. Antimony, a metallic substance, is very closely connected to sulphur. Iron is also connected to sulphur, but more so to oxygen. Sulphur brings a cosmic relation with fire substance and albumin. Iron and antimony both bring the potential for cosmic formative activity.

Antimony, as we know it, is extremely important in the organism as a process. It works there as the “antimonizing process”, but not as antimony substance. It stands in juxtaposition or as a polarity with the albuminizing processes. The albuminizing process we have identified as the working of the five sisters, that is, the living proteinaceous material that is raised to the spirit with sulphur, to become albuminous. By the activity of the four siblings, working with the fifth, sulphur, we find human living substance becoming able, as material substance, to serve as mother substance (matter) for further individualization activity. The individuation is a further step in cosmic process. By this designation albumin, I do not mean the albumin of today’s chemistry, which stands in juxtaposition with globin. The albumin here being spoken of is the mother substance for the five sisters. This is a fourth-mother which can permit further individuation of the spirit. This albumin is an archetypal substance that is present as physical material, spirit wetted. There is further possibility for individual activity in relation to the spirit in this matter. This is substance, a unique substance sought for in the Mysteries of Samothrace and Eleusis, as well as by the true Rosicrucian Alchemist. It remains for us to discover, as best as I can see. The chemistry given here is meant to go in this direction. This takes us back in time to the point in earthly cosmic history when man is born as soul and as spirit in relation to the cosmos, as well as the earth. This is the time and cosmic condition when our current atmosphere came into existence. This is the time of the birth of the rainbow – Atlantis. Before this period, the processes predominated in the sphere where now our air exists – with much more sulphur.

To recapitulate our steps, we have noted the formation of the atmosphere. The atmosphere has evolved together with the birth of man as an individual. This individual birth is necessary for the further evolution of the human form and activity.

Now I would like to go on to consider this atmo-sphere in its unfolding. In pursuing this, we will try to approach the Mother substance or the Mother beingness that birthed the five siblings. We, however, have to consider that a sixth sibling was anticipated and was the precondition to the birth of the other five. This sixth sibling has to be considered with the other five sisters. This sixth sibling – a brother, was a son of the mother substance. This sixth

sibling – brother (male) is born of the mother substance in order for individual birth of man to occur. The sixth sibling I have mentioned is antimony.

Let us continue our considerations by looking at the evolution of the atmosphere – the atom-sphere, atmo-sphere, atma-sphere. From spiritual science we are told about this evolution. We are told how it was living, a living, substantial domain. In fact, we might consider that the first condition of earth evolution was the atmosphere. Out of this warm-air congealed the watery and then the solid. The atmosphere, in gradually losing the watery and solid, became an airy and warmth filled sphere. This atmo-sphere was the domain for the gradual birthing of man, of mankind. This atmospheric birth preceded man's earthly – lithospheric birth. As the atmosphere evolved, so did the birth of man progress – the birth of the human individuality – the ego – the "I".

Next I would like to make the unusual effort to try to depict the birth of the human being as ego being. As we know, the physical, etheric and astral were born on Saturn, Sun and Moon respectively. With Earth evolution, the ego was born to man. I would suggest we view this as a cosmic birth process. It probably is well to consider this in some detail.

Let us begin back with Saturn evolution. We are told that the physical was born. It is born through the sacrifice by the Thrones – of their own substance. On Sun, the etheric was given by the Spirits of Wisdom (Kyriotetes). Their gesture of creation was of bestowal giving, not sacrifice as with the Thrones. On Moon, the Spirits of Motion or Dynamis, through resignation, were able to birth the astral. It is then on earth that the ego is born, out of the sphere of the Elohim. These Elohim had evolved already and were able to bestow a physical form principle on Saturn, an etheric form principle on Sun, an astral form principle on Moon and finally on earth they are able to give birth to an Ego principle. They are always birthing a form principal – a form dynamic. This birthing we would have to describe as a death process, as far as the spiritual world is concerned. With the activities of the other hierarchical beings, the Thrones, Kyriotetes, and Dynamis, there is still a connection with that which is created and the creators. However, in the case of the birthing of the human ego by the Spirits of Form, there is an actual total separation of the birthed element and the creator. This is a birth that is a death – total form separation. The created is removed from the creator – to go its own way. This is death – total separation.

At the outset of Earth evolution, we can describe a racial condition of man. Man is called Polarian man. At that time, the ego bestowed by the Elohim was united with the atma substance of that

time. This ego-atma substance was then still one with the hierarchical beings. We can say that the ego was at one with Atma, one with Brahma, at one with the “Word” of the created. The Word brought forth atma-sphere substance. At this point, the human being is a unitary being within the divine. Man is a racially, divinely determined being. At this point, the atmosphere (atma-sphere) contained all the substances as potential which were to unfold later. In a way we can say this is totapotent substance – this is atma substance. This is the first mother substance – first mater-matter. This mother substance is at one with God, we can say. This is mother substance of the father ground. The substance of this Polarian period of existence is determined by what was given on Saturn, worked through that evolution and then worked through by the Kyriotetes of the Sun, then the Dynamis of the Moon and finally taken in with ego birth to give rise to Polarian man. Man then existed in the sphere of Atma, in the atmosphere. To depict this spatially, I suggest that as we consider today’s earth orientation, we consider that this process hovered in atmospheric existence in the region of the east in the current lower thermosphere.

Let us progress to the next stage of evolution, where we find not only warmth totapotent (totipotent – editor) substance, but we encounter the airy condition that mingles with this warmth. The watery and solid has not yet come forth. It is at this time that the sun exited from the earth so that a certain living element was withdrawn. The living element that played into the substance or atmospheric substance of that time was sun irradiated. The atmospheric earth into which the ego then made a next step in being born, lived in this airy-warmth enlivened substance. This then is no longer just physical substance. Sun irradiated substance becomes living substance. This being substance is taken with the sun at the time of exit. It is at this time that the tree-like equisetum appears in the airy warmth while the human ego was being born in the light and warmth of the exited sun. The equisetum process has been termed siliceous, silica process by Rudolf Steiner. It is out of this living substance, this silica process, this atmosphere process, that later our silica of today has risen. As this siliceous, airy plant arose in the air, man’s ego was being born from atma substance, the living Budhi-substance. With the physical atma birth, the ego was still within the bosom of the spiritual world. With the second stage of earth evolution, Hyperborea, Hyperborean man becomes an ego being with a first separation from the divine. So the birth of the ego is from divine existence, accompanying substance transformation into life. Man is a racial being at this point, still determined by the hierarchical-spiritual world. If we consider this phase of evolution still connected with atmosphere, we can locate this evolution in relationship

to our present earthly cosmic configuration as taking place in our north. The atmospheric evolutionary process, I would suggest we consider as taking place in the region of the North Pole of the earth, in the outer reaches of our atmosphere. The process is still one within the region of the atmosphere. During Hyperborea, solid earth as such had not yet precipitated out of the atmosphere. Man is still a racial being. The ego is still racial ego. The birth of the ego is from out of the physical-divine to the living divine.

The next stage of evolution we speak of as the time of Lemuria. It is a mirror of Moon evolution. This is a time when we still have to consider the human being as ego being, coming forth slowly out of the hierarchical world. The substance, the atmospheric substance, is now not only that of livingness, but is ensouled. At this time, the ego is born into soul like substance. This soul-like substance is brought about by the astral animal world working into the original atmospheric substance. Rudolf Steiner tells that animal forms appeared within the atmosphere that is now airy and very much penetrated by water, very much penetrated wateriness. (The animals appeared as apocalyptic forms – lion, bull, eagle – man). The substance process is described as a calcium process. We can imagine the original atmosphere as tota-potential (totipotential -editor) substance. The siliceous process from Hyperborea worked into this substance to bring about what later became silica. At this time of Lemuria, the animal astral element works into the original atmospheric substance to bring about what has been termed by Rudolf Steiner as the rain of calcium. This rain permitted animal forms to appear within this atmospheric substance. Man at this time was born as ego out into the animal substance to become a soul. The ego now becomes, not only being, but soul being. The soul-nature of man begins to evolve at this time. This is a continued slow birthing of the ego and, at the same time, the evolution of the animal-like substance. The substance is calcium process. Later this process gives rise to proteinaceous matter. We can, likewise, in looking back to the Hyperborean period, consider that the cellulose like substance or plant substance, is laid as a potential as the siliceous processes occurred. This was plant like substance. In the time of Lemuria, not only was water present, but it was animal-sensitive water. This water substance was animal substance created out of the original atma-word substance. We can call this water-substance – protein.

These three steps in early earth evolution speak to the racial birth of man. Man is of mankind – a Polarian man, then a Hyperborean man, and then a Lemurian man. The latter man I would suggest we consider as still atmospheric, but beginning to touch the watery-earthy, the living substance, which is somewhat congealed by the exit of the moon. The moon was

withdrawn from the earth in the latter part of the Lemurian period. It is probably well to consider that this process took place in the southern region of our earth. Lemuria came into existence in the southern polar earth region and hovered at first in the watery-heat-filled-light dampened atmosphere. We are then seeing the gradual evolution of substance. We see it evolve as the ego nature or individuality of man is being born. This ego nature is first racial and cosmic racial – Polarian, Hyperborean, Lemurian. A true relationship with the earth does not begin until the latter period of Lemuria, as the Lemurian evolutionary period came to an end through the ferocious play of fire. Lemuria was destroyed by fire.

Our next stage in evolution is to consider the actual physical birth of the human ego. For the first time the ego actually touches solid matter. Matter has become solid, though solid in the form of ash. We have to consider then that the matter is no longer in the region of the atmosphere, but has actually descended and become solid. At this stage, earth matter is invested with electricity, magnetism and gravity. In order for this to occur, a tremendous activity has had to eventuate. Spiritual beings known as elemental spirits have had to be born to the third hierarchy, bringing about the conditions of materiality, the airy, liquid and finally the solid. The human ego being can be born into the warmth of the earthly materiality, but this warmth materiality is still very living and airy, not compacted-solid. The ash form of earth is somewhat living by virtue of the fact that it is invested by the condition of the ether called warmth-ether. The human ego for the first time actually touches physical earth existence by dint of the fact that the warmth-ash nature is penetrated by warmth-ether. By this means the ego actually is finally able to become an earth ego. This gives rise to the racial evolution of man known as Atlantean man. The time of Atlantis is considered to be the fourth stage of evolution and the first time of true earth consolidation. Prior to this time, the evolutionary process took place within the domain of the atmosphere. With Atlantis, and the solid being drawn out of the atmosphere, as well as the liquid, we finally have an atmosphere that begins to resemble the condition of the atmosphere today. What has to be noted, however, is that at that time, the atmosphere had to contain still a tota-potential (totipotential- editor) living substance. It is into this substance that the ego is born. It is warmth, warmth-ether substance, giving rise to ego birth. To this warmth-ether substance, I would give the term albumin. I would distinguish it from the protein that is created by animal working, by calcium process. This is albuminous substance process brought about by the ego entering into the living substance. At this stage of ego birth, one still has to speak of racial unfoldment. Atlantean man is still racial.

This racialness of Atlantis is slowly divided by a sevenfolding of man. This sevenfolding gives rise to the different continents of the earth so that the earth substance is, in a way, secreted out of the atmosphere and created in space to give rise to, we can say, Atlantean, but planetary determined humanity. This still is racially determined man. The substance of this birth we can say is albuminous. Man's existence is still one of existing with the living atma-sphere, but the earth substance is taken up as an outer garment. Only slowly did man descend out of the atmosphere to dip into the hydrosphere and then the lithosphere. The lithosphere of earth was raised into the hydrosphere by man. Man is actually an airy-watery being on earth. The solid is cared for by elemental beings. In early Atlantis, man was just beginning his limb formation. With the separating out of the hydrosphere from the atmosphere, we would have to consider the unfolding of the abdominal regions of man in relation to the watery, the limbs in relation to the solid, and the breathing process unfolding with the airy. Only as the ego begins to unfold and evolve, as somewhat of an independent entity, does the atmospheric substance, the albumin, become differentiated, four-folded, and become carbon activity, oxygen activity, hydrogen activity and nitrogen activity.

We then have to focus on this atmosphere, this living atmosphere with living substance, which was breathed. This was the birthing condition of the ego, as earth ego. Man's earthly ego was able then finally to leave the hierarchy of the Elohim. The ego had to work into this albuminous substance and with the assistance of spiritual beings had to begin to cloth itself with an astral, etheric and finally a physical body. As these steps in development occurred, we can consider that slowly the living, albuminous substance became differentiated. This living albuminous substance, a kind of mother substance of the Atlantean condition, began to differentiate so that we can speak of the birth of the siblings that we discussed earlier. We can say that the ego working to constitute a physical body gave rise to carbon out of albumin. The ego working to constitute the etheric body gave rise to oxygen. The ego working to constitute an astral body gave rise to nitrogen and finally the ego working as fire being gave rise to hydrogen out of the albumin. All these four substances were, in a way, born out of the mother substance of the Atlantean atmosphere, and we finally see the present condition of the atmosphere coming into existence. The atmos (atma) siliceous and calcium substances were already in existence for man's higher ego existence – Atma, Budhi, and Manes.

What I have just given then is one possible means of contemplating carbon, oxygen, nitrogen and hydrogen. These four siblings were born of the Mother

atmo-sphere of late Lemuria, early Atlantis. I would like to suggest that the fifth sibling, the being of sulphur, was born when the most evolved of the Elohim were able to bring forth a respiratory process in man. This is the time of a further evolution of breathing. Breathing became respiration with the advent of the higher soul nature of man entering into the differentiating albuminous substance of Atlantis. I would like to consider that with the breathing of the “living soul” into man by Jahve, by the Elohim, albuminous substance received the impulse to bring forth sulphur. This is a further transformation, a further differentiation of “mother substance”. Sulphur as the fifth sibling, was born (actually was in process throughout Polaria, Hyperborea and Lemuria). Through the sulphur process, the mother-born carbon, hydrogen, oxygen and hydrogen could remain in relation to the higher make up of man. With the birth of the sulphur, higher man, that is Manas, Budhi, Atma, was able to remain in connection with the earth-born ego. Sulphur was able to work into the actual transformations of the differentiating albuminous substance so that an inner respiratory process, with the transforming of this albuminous substance, could occur in relation to the earth, as well as cosmos – the higher membering of man. The indwelling of higher man brought about the advent of the sulphurous sibling, a birthing wherein the sulphury permitted the four siblings to begin to develop in an inner transformative process which we now can refer to as respiratory metabolism of albumin.

The five-sister beings are born of the albuminous mother. They are invested by the substance processes that are brought over from earlier evolution. We can speak of the mineral substance process that is brought over from Polaria, the plant-cellulose substance process that is brought over from Hyperborea, the animal-protein substance process that is brought over from Lemuria. The sibling transformations connected with respiration have to swing with the activities of Polaria, Hyperborea and Lemuria. The five sisters are ever transformed, influenced by silica and calcium processes from Hyperborea and Lemuria and the primal matter brought over from Polaria. Primal matter gives birth to the mineral, the plant and animal substances with the five sister transformations. Mineral, cellulose (carbohydrate), protein and albumen are brought about out of primal matter by plant, animal and human ego working. Fat substance we can consider to have arisen out of the atmosphere of Atlantis before the ego was born physically into ash. Plant cellulose matter arose out of Hyperborea. Protein substance arose out of the original atmosphere in Lemuria and finally fat-like substance arose in Atlantis out of the atmosphere substance. Primal matter becomes the living

mother substance that births the siblings and permits mineral, plant, animal and human albumen and fat substances to arise.

Now if we consider these substances in the atmosphere, they are breathed in by man. Outer substances of the atmosphere are breathed in. These substances are born as man's ego is born or born with man's ego. However, within man there is a process of transformation related to breathing. We call this respiration. This is respiratory metabolism. It is substance transformation in man related to breathing, the atmosphere and higher man. However, this respiratory metabolism is dependent upon a yet further differentiation that permits the single individual to live in the breathing and respiratory metabolic activity. The atmosphere and breathing relate man to the cosmos. Respiration relates man to the earthliness of the organism and the spiritual. But for the true singular ego to relate to the human organism, the earthly, a sixth sibling is needed as already indicated. This is antimony. With the birth of antimony, we can then for the first time consider that a being of the cosmos, an individual, can be brought into the inner working of man, in all aspects of bodily life. In order for this birth to occur, a very special cosmic circumstance had to come about, Venus and Mercury had to come into existence. This permitted transition in the cosmos from outer to inner – outer and inner planets. The substance antimony was born to carry the organs of the cosmos into man. This lays the foundation for breathing or respiration and for the creation of man's inner organs out of the cosmos. As we know, Rudolf Steiner has described the workings of carbon, oxygen, nitrogen, hydrogen as meteorological organs in the atmosphere. The working of the atmosphere as organs, as organ substances, has to be taken into man to become the inner organs of the human physical makeup when man becomes an earthly being. From Rudolf Steiner's indications, we can consider that man's four main organs are actually an antimonized transformation of the five sistered albumin. The antimony and antimonizing process permits the entry of the cosmic meteorological to become the working of man's organs, so that man can carry on the albuminous process in his organism. This process has to be open to the activity of the single individual also. The outer albuminous activity through antimony becomes inner organs and metabolic activity for the single individual. Individual metabolic activity is known as the activity of will. The four sisters are taken into man, and work in association with the fifth sister. This is a metabolic process. The four sisters are meteorological organs. In man they become the organs which function metabolically – create albumin with the aid of sulphur activity. As we know, Rudolf Steiner has indicated that the carbon atmosphere organ gives rise to the formation and function of the lung. The oxygen activity of the

atmosphere becomes anchored in the liver. The atmospheric activity of nitrogen, meteorological activity becomes transformed and is indwelled in the kidney. Finally the hydrogen atmosphere organ is transformed to become, within man, the organ and function of the human heart. These four main organs thereby become the basis for the unfolding of the albumin in man. It is the living albuminous condition that permits the birth of the ego into the physical and is crucial for man's continued existence. This albumin is however, further transformed and in man becomes individualized by the working of antimony.

By virtue of this meteorological transformation into inner organs, there can be a gradual individualization of the entire human organization. This is a most inward process that comes to expression as a next step in the processes of the metabolism related to will.

We have come to this point by considering breathing, respiration, metabolism and now will-metabolic activity. These processes have evolved out of the cosmos. They then can unfold within man. The five sister activity and the antimonizing activity brings about the possible birth of the individual in activity. Man thereby can evolve out of a racial condition into one of singular individuality in activity – true single individual-unique birth can occur. This follows with the steps of being born with breathing, respiration, metabolism and will. The human individuality, the real singleness of man unfolds in this way. This requires the sulphur and antimony processes so that the higher nature of man can be born and also the true singularity of the human ego can come to expression in the world.

As I have tried to indicate here, this is a very lengthy process in the evolution of matter. Incredible transformations in original archetypal substance have had to occur. This is an exceedingly complicated process, far more than I think has been considered today. One can say that the whole spiritual world has had to work at the evolution of this materiality in order that man as a true and single human being can come into existence and express himself. The reason for trying to detail this evolution of matter is to indicate that the substances of the earth, as we know them today, are the expression and by-products of the actual evolution of this process which makes singular individual ego birth possible. Man is born out of racialness into true unique individuality by the process of the substances of existence going through transformations. At first the spiritual world has worked upon substance. Then man as ego has become active at the beginning of Atlantis. The Mother albuminous substance was actually differentiated by the work of the human ego itself. This permitted the true birth of the human ego out of the world of the divine, out of the world of the group soul. The evolution of

substance, the transformation of the atmosphere, the bringing about of the earth itself, is then seen as an act of man. This is an unfolding of the human ego so that eventually this true independent individual (unique being) can be born for active-creative existence. This long contemplation is necessary for if we do not have individual man, we certainly cannot have the birth of an individuality of a form. We now have the earth, we have nations and we have peoples. We do not yet have true individualities who can give birth to the being who can become the individuality of a form, of a specific location on earth. We are striving in this direction.

To make this story even more complex, I think we now have to consider how the earth itself was constituted out of this atmosphere. Rudolf Steiner indicates that this occurred in Atlantis. He speaks of the various Mystery Centers of Atlantis as slowly bringing about earth man. The earth was configured and differentiated through the mysteries and the incarnation of man. From the Atlantean Mysteries, guided by super-human beings, Avatars – earth-man came into existence.

The Saturn Mystery gave rise to the earth that became the Americas. The process of the America's formation came from the Saturn Mysteries. These mysteries gave rise to the glandular system within man. Thus a bringing about of the organization in man corresponds with the creation of a given region of the earth.

A next stage in Mystery working is the Jupiter working. This gave rise to the human senses. The earth counterpart of evolution for the development of the human senses was the bringing forth of Europe. We have to contemplate how slowly the earth formed itself out of the atmosphere as man formed his varying makeup and the earth itself was configured. At this early time of Atlantis, man was planetary man, but also earth-man at the same time. We can consider the earth to be man as well.

As we progress to the Mars Mysteries, it is here that the blood system of man is created. As this occurs, the Mongolian-China continent is formed on earth. Earth settles out of the atmosphere. Man's organization is constituted as this occurs.

Next comes the Moon-Mars Mystery which gives rise to the blood and the brain of man. The earth region of the Middle East is constructed at the same time.

As we pass to the Venus Mystery working in man, planetary workings of the atmosphere-ether world, the nerve-plexus, the sympathetic nervous system, is formed in man. Outwardly, the region of India and Malaysia came into being on earth. The region of our abdomen, the nerve-plexus of the abdomen

and then gradually the other nerve-plexuses form as the great continent of India and Malaysia come into existence.

And finally we have to consider the Mercury Mystery that gave rise outwardly on the earth, to the continent of Africa. In man the lymph and glandular system evolved with these continents.

The final organ to develop was that of the heart, the organ of the Sun Mystery itself. The Mystery was the central mystery of Atlantis and came about with the unfolding of Atlantis itself.

In this way we contemplate how gradually the earth is congealed out of the atmosphere, out of this same atmosphere as the human configuration. Slowly the various systems are constituted. Out of the living albuminous substance of the atmosphere, man's inner organs are brought about. We then see that the gradual birthing process of the ego is accompanied by the formation of man's various physical organic makeup. The inner organs are constituted and at the same time the earth formation comes about. This is an immense process of the unfolding of man and earth simultaneously. The continents with races and languages can be contemplated. The various racial origins in the cosmos can be discovered. Man comes to earth. His individual configuration becomes possible. It is built on what the planetary world and the earth give to the individual for further evolution – for cultural evolution. It is the spirit now that evolves the human being. It is no longer the physical and racial that brings forth and births the ego. The ego is therefore, born out of the spirit. The earth ego, we can speak of as the lower ego. The higher ego we can speak of as being born out of and remaining in contact with that which is spiritual. This spirit can become determinative and can become the universal link of all who become individuated. Those who become individuated can retain a universal link. The impressing of the individual and universal into the earth is the reason for giving birth to the individuality of the form. This means the earth can become highly differentiated, but at the same time, each differentiation bears the impulse of the universal. It would seem to me that not until we accomplish this extreme individualization of the earth, which bears the universal, that we can find the much sought for unity, unity with incredible diversity. This we seek. With this unity, it is possible to consider extreme individualization without destruction.

With this line of reasoning, we can consider how absolutely crucial it is that the individuality of the form comes into existence. It permits the single individual to exist on the earth and at the same time participate in the universal. Then we can say there can be unity in diversity. It is then a tremendous task that the farmer has to undertake for the sake of the earth

and mankind as he strives to unfold the individuality of the farm. The human form and activity can be individualized.

Agriculture Course – Lecture 4

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Maybe we could once more recapitulate the first three lectures. We have done this previously. In a recapitulation, each time, there is an effort to recast a lecture. Each time it is possible to take the lecture from another point of view. Rudolf Steiner calls this a thinking through. He means that we can not be satisfied by repeating one word or two which have been spoken or written. If a single statement becomes the method of working, we create a fixed idea. The outcome is the cliché. If content is recast again and again from different sides, then a certain thoughtfulness begins to appear. This, Rudolf Steiner says, is very important in order that single individuals can find their own living thoughts in relation to the content. Therefore there is a certain validity in recasting the single lectures as we go on.

Let us look to the first lecture again. We can note that it is very much connected with the problem of light and warmth. The warming process here is very crucial. The relationship of the earth to the cosmos as expressed in silica and calcium also finds a cosmic relationship in silica-light and calcium-warmth. Light, but also warmth, is essential to the life of our earth. Rudolf Steiner points again and again to a kind of delicate inner life of warmth and enlivened light that exists under the surface of the earth. Humus is also under the surface of the earth. It is related to water and to darkness. Chemism is its life element in darkness. With silica and calcium we can then look to the life of light and warmth of our earth. The earth has life. It is thereby a living organism in the cosmos. The entering of warmth and light into the earth establishes essential life processes for our earth. We have mentioned nutritional and reproductive activities, also life processes, which are a part of earth life which has to be given over to plants and then to man. Nutrition and reproduction – as well as warming and enlightening (breathing) are life processes connected with our earth. The farmer needs to tend earth life. We are being introduced to some of the essential life processes. Warming is a life process. Propagation and reproduction is a life process. We have to consider life processes and how substance works to serve these processes. Nutrition is also a life process – an essential one. The earth has to be worked so that the nutritional life process becomes part of vegetative life. Warming, reproducing and nutritioning are three essential

processes that have to be considered – to be cultivated as we work the earth. Breathing is also.

When we went on to Lecture Two and Three, we took up the process of breathing. We carried breathing over into respiration. The breathing we related to the motherly elements, that of clay, chlorophyll and hemoglobin. We picked out certain substances, inherent in these mother-substances which further the process of bringing forth other activities in the life of an organism. We spoke of aluminum, magnesium and iron. In a way these belong to mother substance, but we can also see them as a kind of male principle at work in matter – substance – to dampen life so that higher life (soul life) can unfold. With this we took a further step into respiration. We have spoken of the birth of the five siblings and considered a sixth. As we considered the siblings we contemplated albumen as mother substance, a mother substance of the atmosphere, distinct from the other mother substances of earth, plant and man. Thus in this second lecture we made a step from breathing to respiration. We spoke of four mother substances, three mutual fathering activities and six siblings. Breathing is a very essential aspect of the life of an organism – a life process which relates an organism to the environment. Breathing leads to respiration which has inherent in it the possibility for soul life and the transformation of substance-metabolism.

In this present lecture, Lecture Four, we have to take up the life process of nutrition more fully. In addition we have to consider the life process of excretion.

In order to take up the discussion of nutrition Rudolf Steiner guides us with a kind of an imaginative picture. He first tells us how important protein is for life, how important nutrition is. He then points to the fact that nutrition is a two-fold process, one is a nutrition via the senses and the other is the nutrition via the digestive process. The first is earthly. The second is cosmic. From there he takes us to consider the form and configuration of a living plant organism. He uses the earth hillock and plant-herb to create the image. If we make use of this image of the earth—hillock—trunk and the plant-hollowed—herb, we come to a very interesting aspect in spiritual life, developed by Rudolf Steiner. He not only gives us written words but he often gives an image – a picture with which to associate our ideas. This is very much the case here with the earth-hillock-tree and the hollowed-herbaceous plant.

Now let us spend some moments to consider the image he gives us; the earth—tree herb. Then we might further consider how this image can be used to approach the nutritional question. He describes the tree in a way that is not always or is not at first easy to comprehend. When I first met this image, the image of the hillock with a hollow in the hillock or the mound with the hollow into which the living plant descends, I had to confront my tendency to follow the tree form from the base of the plant up to the crown. Here the image is one of a polarity. After recasting this image of the tree again and again only slowly was I able to consider that the tree is a product of a two-fold process. Slowly I could have a sense that the outer form, the trunk and bark, was one aspect. The foliage and branching process unfolds not from the earth up but from the cosmos down.

In one area of the world this two-folding can be experienced particularly well. In spring, when there is a rather rapid greening process, and the barren trees stand in stark nakedness, we can at times almost see the color in the atmosphere descend onto the tree. In a way the color appears and descends on to the tree. The polarity between the dark heavy trunk (limb system) and the mobile atmospheric color that slowly descends stands out. The green color incarnates into the horizontal leaves. This can be sensed with considerable intensity. This can be followed with ongoing observation as the tree becomes, bedecked with green leaves. Such is the possibility in our circumstances .

After some years of working with this idea and trying to look at the tree with this idea in mind, I then noticed while traveling in Europe that this idea was extremely well expressed in some of the trees there. There with the birch, the silver birch, it is possible to observe this process. I was able to observe some stumps, in the area of Dornach and Arlesheim. There one could see how the earth is thrown up into the trunk and then a totally new process can be seen sinking as leaf and finer ramifications of branches into the trunk. The stump thereby becomes transformed into a kind of a bush-like structure. There the contrast between the foliage process and the earth trunk process can be seen. Further observations using this image I could make in southern France.

There the sycamore trees are so trimmed that the earth seemed to rise into the trunk and then into the branching system. The leaf process then can be viewed as a very distinct entity, as it were, dipping into the trunk branch configuration out of the cosmos.

By an ongoing effort it seems to me that one can sense a marked polarity in the life of an organism, that is of the tree. One can thus sense the earth being pushed up. The living of the earth is held firm in the trunk. At the same time it is possible to sense the light greeny leafyness descending out of the

atmosphere and out of the surrounding environment. Quite new experiences can be gained from these observations. One can sense the earth rising in the trunk. One can sense a descent into the trunk. On the one hand the heavy consolidated is raised. On the other hand, all that wants to radiate out into light and warmth, into vast space is drawn back into the upper reaches of the plant in the form of its foliage. This is what Rudolf Steiner calls the herbaceous aspect of the tree. This is an activity, a pole of life. When herbs are observed this “suctional” pole of life, this vegetation can be seen as consolidated into a warmed light-filled herb-plant. The radiant portion of the tree can be seen also as being consolidated into a concrete herb on the flat earth. The radiational process in the crown of the tree can be consolidated to become a plant in itself – an herb. The radiational activity of the crown can as well be brought into the earthly trunk to form ramified—radiating roots underground.

We can use this polarity and its potential for transformation to construct the archetype of the plant, the living plant. The tree approaches the archetype more than most other plants. We have already considered basic formative tendencies with silica and calcium but here we are led to the basic archetype of all plant life. This archetype can be imaged and transformed. It has to be grasped in order to take up how the plant is to be nourished. Animal and human nourishment can follow.

If we look at the tree it is not difficult to contemplate that the plant is nourished from the domain of the earth. This actually can be followed in the histological makeup of a tree or plant that has a vascular system. The xylem tracheoid respiratory system of the tree brings substances and fluids from the earth upward into the tree. Rudolf Steiner calls this the earth sap. He corresponds this with the arterial system of the human being. He corresponds the earth sap with that aspect in the human being where there is respiratory process, where there is a taking in of the outer world in the breathing and taking this over into the chemism connected with respiration—circulation. In the earth sap the tree is nourished by solids and liquids, and particularly by minerals. Potassium is important.

In the region of the leaf there is also a breathing—respiratory nourishing. We know that there is also a tracheoid circulatory system in the leaf. This system carries phloem. Through the phloem the sugary substances produced in the leaf by breathing—respiratory metabolism can circulate through the plant. This sugary substance combines with the mineral of the plant. Cellulose is produced as well as chromogens – from this sugar substance.

Finally we have another activity in the plant which Rudolf Steiner calls the cambium process. This process occurs between the bark and the trunk of the tree. This is called the cambial layer of the tree. Another nutritional activity takes place in the fluids of the cambium. A substance is produced which can become amber. This process gives rise to other sticky substances. Rudolf Steiner corresponds this system of the tree with the lymph system of man. It should be noted that the leaf-sap, living sap, system of the plant or the tree he corresponds to the venous system in man.

Thus we have three breathing respiratory-circulatory metabolic systems within the plant. We have the earth sap which moves in the xylem system where minerals are important. There is a life sap-leaf system which can be found circulating in the phloem system carrying sugar carbohydrates. The third system is the cambial system which moves within the cambial layer, carrying sugar substances but phloem and fat-like substances as well. Thus the three systems correspond with the arterial, venous and lymph systems in man. They are connected with nutrition.

Now we can go further. We have to ask how does the tree or the plant correspond with man when man is turned upside down. The roots have a correspondence with man in the respiratory nerve-sense system. The inflorescence, the flower and fruit, have a correspondence with the excretory-reproductive system in man. The leaf system and activity in the plant correspond with man's breathing-respiratory activity, in breathing and digesting. The three circulatory systems of the plant lead over to a threefolding of the human being in sense breathing, breathing—digesting circulation and excretional-reproductive activity.

Now let us go to the nutrition of man. Let us first consider the nutritional process that occurs in man in relationship to his senses and his breathing. This nutrition is indicated in this lecture. This is an earthly nutritional process. Here Rudolf Steiner says that we take in earthly substance, we take in substance directly without fundamental change, except for warming. Rudolf Steiner speaks of another nutritional system. This is connected with our digestion. In digestion we destroy substances that are taken in. We then recreate substance from the inner cosmic makeup of our organism, the coelum, (heaven in us) and our inner organs. This nutritional process is the basis for our activity of will-movement and work. This view of the human being who takes in substances directly in the senses and respiration and who creates cosmic substance out of digestion (while eliminating much and taking in only small amounts of substance directly). This is a very new contemplation for our times.

By and large our line of thought is that if we analyze our tissues and our fluid systems we can come up with certain substances. We think we need to furnish these substances and we can replenish these substances by giving specific substances, if substances are wanting or lost. The gist of our nutritional concepts today is that we take in substance, it is deposited in the body and what we do not need, we excrete. When we lose or use the deposited substances then we have to be replace them. Rudolf Steiner says that this is in part true. He indicates that what we eat and take in and keep within our organism slowly brings about our death. The deposition of foreign substance within our organism is what in fact brings about a fading of our organism, so that finally at the end of life we have to give off our body which has become more like a piece of nature.

Rudolf Steiner's View of nutrition is highly complex. He points to an earthly nutritional stream which involves the senses as well as the breathing. We, of course, know of the senses where there is light and cognitional processes involved. Here is where the "etheric" (light) is taken in. This light is transformed into "warmth-ether". (The light here is not visible.) But in the senses and breathing physical substance is also taken in in homeopathic doses. Such is the View from spiritual scientific research. If we take in the substances via the senses, this means that we take in the substances on a light-ether stream. In this lecture, Rudolf Steiner does not say that the light ether—stream has to be transformed into warmth-ether in being taken in, but this can be found in the Pastoral Medical Course. Within man the warmth-ether is retransformed into light-ether, chemical-ether and life-ether. The transformations of the etheric through the senses and within man give rise to the potential for soul life. While this is occurring in the senses there is also an imbibing of the physical substances that surround us and are present in homeopathic concentration.

We now know that human beings do take in substances via the skin and hair. What is in the air and the environment is absorbed in small amounts in the skin, the eyes, the ears, etc. All take in substance. What is taken in through the hair we are not yet certain of, but there is some suggestion that this also occurs and can produce adverse affects – even cancer. Where we have hair, wash it and then apply substances to the hair it is well known that some of this is taken into the organism. This is particularly the case where dyes and tints are used in the hair. It is known and seen that this absorption can give rise to very severe reactions, particularly allergic reactions. In the case of the eyes, we know well with problems of hayfever that substances are digested on the surface as they are taken in. An allergic reaction in a way is an incomplete digestive activity.

As we look to our respiratory system, we know well that there are nearly all the components of the environment in the air in homeopathic doses. Almost every plant, every mineral, every animal contributes to what is in the atmosphere. We are beginning to realize that not only do we have those kingdoms contributing substances in the atmosphere, but our fellow human being does as well. When we consider that there are nearly four hundred substances that accompany the expiration of each human breath we can contemplate an incredibly complex physical nutritional system from the air. This we have yet to consider. Rudolf Steiner has pointed to this. So far it appears that what we exhale is actually proteinaceous not only carbon dioxide. Many of the four hundred compounds, found in the analysis of the human breath, seem to be protein in nature. Therefore, we have to consider not only the mineral, plant and animal substances in the air, but also human protein substance as well. We breathe in our fellow human being. This nourishes us. Our fellow man can become a part of our makeup. This we might consider from today's knowledge. The skin, the nerves and the bones (the sense) are made up from the nutrition via the senses. So Rudolf Steiner indicates from his researches.

Rudolf Steiner also tells how in the digestive process, we destroy substance. He indicates that we recreate it. He indicates that matter is not conserved in digestion, in man. He indicates that conservation is the process with other living organisms, that is animals. In animals outer nature substances are carried directly into the organism. Within man however, there is a destruction and recreative process continually being enacted. This is very much in opposition to what is the scientific thought of our day. The creation of totally new substance in the world by the human being means that man carries the beginning of creation within him. This means that the way in which to solve the problems and knowledges of substance and substance creation is not to destroy it as being done today in our atomistic researches. We have to look within the human being himself to see how man as a spiritual, ego—being, as a physical being, destroys what he eats and then recreates it de novo. This is exceedingly difficult to think and requires a repeated effort in order to recast what is such firm encrusted calcified dogma of our day, that is, that matter is always conserved.

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In order to hold these contemplations about man in a firm way the image of the plant outside man is given. The thoughtful human being is very much drawn into himself in trying to contemplate such matters as the two forms of

nutrition. In this contemplation we are easily lost. Needed is an outer object that permits one to view an image while contemplating the two paths of nutrition. If we therefore, look at the root of the tree, we have our mirror for the nerve—sense system. If we look at the leaf, we can find a mirror for the rhythmic respiratory circulatory system. As we contemplate the budding and fruiting of the plant we can consider the metabolic reproductive system. The configuration of the plant helps that we continually try to contemplate this highly complex nutritional process of man as set forth out of the researches of Rudolf Steiner.

We can ask what are we doing here in a psycho—spiritual fashion? What do we do when we observe a living organism in nature, when we observe a growing plant? We can just let this pass us by or we can make an image of the changing plant. We can image the plant growing between the earth and the cosmos. Where we are imaging an ever changing form, we can image the changing form in concrete fashion. Next we can image man upside down in the mental field where the plant was imaged. If this is done repeatedly it will be found that at times the mobile configuration or the image of the tree will disappear, and the configuration – the image of man can appear in its stead. With this one objectifies ones own inner changes without sinking ones own organism. This is extremely important. The old form of taking up such matters was the path of the mystic. The human being in the past descended into these processes, the processes of his own organism. In the past this gave experience, but not knowledge. The way in which Rudolf Steiner is instructing us, makes it possible for us to go out into the world to discover our own inner workings. We can image into the world while trying to grasp the metabolic processes within the human organism. We can say that we try to image human metabolism “on the back” of the tree. We place man into the nature of the tree. When we turn man upside down, we can find life process in man – tree-process, herb-process, bush-process etc. The tree-plant, as an objective manifestation of the etheric, can be used to consider man’s etheric life-physical life. When the seer enters the ether world mans ether working is seen reversed in relation to his physical makeup.

From spiritual scientific research we learn about an etheric organization. This etheric organization has to be able to take up earth substantiality. If this does not occur no physical organization can arise. In addition this physical-etheric organization needs to be able to carry the soul-spiritual. For all of this to occur a proper nutritional process has to come about. This nutrition has to lay a foundation for a relation with the physical world as well as the soul-spiritual world. This is the demand of proper nutrition.

Let us turn to a living organism. We can consider it very simply. A pile of manure or refuse, anything that is excreted from a biological system of our day can be a beginning. Refuse can be placed in a pile so that it can be made into a living organism. This is what we try to do with a compost pile. This pile needs nourishing and proper inner direction of life processes. An animal is a living organism. This living organism has to be tended to in so far as it needs nutrient. An animal has a living etheric system. The plant has to be tended and nourished. Its life has to be supported. In a way the earth is a bit like a refuse pile; it needs life processes and nourishment. If we start with the refuse from living systems, we have to learn how to bring about a living organism in making compost. In the case of plant, animal and human, there are existent systems. Life is already in existence, but nourishment has to be tended. With the earth a whole new activity is needed. New life systems have to be created. This has to come about through the way in which we handle refuse. The earth in becoming refuse needs new life. Compost making is a way to bring new life.

If we start with refuse we can see how substance falls out of the living. If we turn to living organisms we can note that excretion-refuse production is necessary to maintain its own form and life. We can consider the trunk and bark of a tree as a kind of living excrement which is structured and exists in relation to the earth. The excreted trunk-earth makes the life of the tree sustainable. The other regions of the tree are less permanent and point to life processes. Thus in the case of the tree on the one side, there is an excretory process that creates the form. On the other there is an inner life process that has to be perpetually renewed giving rise to the outer form and to transient physical structures (eg. bud, blossom, leaf and fruit). The excretional gives rise to form, a skin as it were, and the life processes with secretion permit an ever changing activity. These two aspects are needed for an organism, for a living organism. The refuse from all living organisms has to be brought into these organic processes. The earth as well has to be tended to remain a living organism in the universe. It is nutrition that sustains these two processes – form and life processes.

By considering the plant with its etherealness, with the structural and the transformative, we arrive at a view of a living organism. We have to ask for a nutrition that sustains an organism, but more we have to ask for a nutrition which permits an organ evolution which will permit a soul and spirit to live in relation to the organism. We then will have to consider the form of an organism and life

activity. We will have to look at what is involved in a living organism, seek its structure and function in order to pursue its nourishment. From there we can seek how the form and life can serve soul and spiritual activity. In this way we can take up the living and ascend to the soul.

The foregoing line of reasoning can make use of the tree as an image to follow with our reasonings. Next we have to consider an ensouled being; the animal, in order to make another step.

Let us turn to the two animals that are introduced in this lecture. The two animals are the deer and the cow. These two have to be used as far as I can tell to help us further our consideration of nutrition; of organ life.

Let us first look at the deer. The deer belongs to the group of animals called the ruminants. The deer as well as the cow is an herbaceous eating animal. They are both ungulates. The female deer, the doe, does not produce antlers, she produces off-spring. The male deer, the stag, has appendages that grow out of the head. The deer is a fur-bearing mammal. Up to this point the same can be said about the cow. We can note that stag antlers grow out of the head as ramifying structures. They grow on a yearly basis. When the antlers grow there is no reproduction in the female deer. When they are cast off, then the male becomes able to fertilize the doe, mate with the female. Gestation takes place while the antlers are absent on the stag. It is interesting that we have the polarity in this family of animals. This swings between the growth of antlers and growth of a fetus. Where there is growth of antlers, there is no growth of a fetus. When there is reproduction and fetal growth there is no antler growth. The male and female seem to exchange roles in a single world of life.

The antlers we can think of as a rush of circulatory system into the skin. This rush pushes ahead and outbreathes. The skin is drawn up and carried into a tree-like configuration. It is full of blood. The solid of the antler precipitates out of this forward rushing blood. Hair is always present. There is a slight bone process taking place as the antlers grow. The skin that covers the antlers falls off as the antlers become solid. When the skin has fallen off — the antlers solidified — then in the fall of the year they drop off. Then the doe conceives and carries the conceptus and fetus until spring. With the birth of the fawn, the stag antlers begin to grow.

If one looks at the deer, it appears as if the antlers are raying out of the head. The animal gives an impression of radiationalness. We can say that as an animal-astral being the stag presents a physical expression of radiation. This is one aspect that is very important to consider in order to comprehend the discussion and concern with nutrition. Astrality is expressed in the stag as ramified—radiational activity in the antlers.

Thus as we look at this animal we can come to a sense of radiation. The form is radiating and the animal substance participates in this. We can call this astral-radiational substance. In a way we can think of star-like, astral substance. We can think of the dark earth substance becoming radiant through this animal.

It is interesting to ask about radiating substance. Radium is a naturally occurring radiant substance. With the stag we can consider an animal which expresses the radiant so well. As you know these days there is great discussion about building an immense accelerator to bombard the nucleus of an atom. Accelerated substance bombards another stationary substance. The collision between stationary and moving substances gives rise to radiations, decompositional rays. By the use of a huge accelerator (circumference of 58 miles), some physicists think we will be able to learn more about substance and the nature of our universe. It is thought we will be better informed about substance. As noted previously, I think this is highly fallacious. If we want to understand the origin of substance we have to turn to man. What accelerators do tell us is the possible radiational consequences of motion. Extreme acceleration and bombardment of a given substance leads to radiation. The motion-acceleration process is a part of a living animal. Animals move. They can accelerate. Substance is carried in this process. The bombardment process in the animal is the inert substances being brought into motion – an accelerating or decelerating motion.

Thus the deer as animal tends to perform what physicists create. In addition the deer expresses the radiational particularly well. It would seem to me that the deer with its antlers is a wonderful expression, a physical image, of this radiational activity in addition to what accompanies movement, acceleration and material transformation within the deer. In the deer substances are not obviously bombarded, but through movement substances are carried into a condition of radiance, of astrality and the outer form expresses this.

In summary, the deer, (the stag with antlers) can be viewed as an outer image, an expression of radiational activity. With the stag there is radiation from within outwards. There is a great sensitivity, there is movement, there is a possibility of a change in movement, (that is acceleration or deceleration). In the stag there is a potential of substance transformation for movement and acceleration. It is astonishing that we can use an animal in order to make such a contemplation. The great secret of substance is being pursued by our physicists. This can be supplemented by the non-physicist, particularly here, the farmer, who can make such very basic contemplations merely by observing and somewhat attuning oneself to the makeup of this animal.

Next let us look at the cow. This is also a ruminant and an ungulate. If we look at the ungulate process, just as with the deer, we observe an animal who is standing on his toes. None of us would be able to walk on our toes the way that this animal or the deer does. If we walked around in this fashion we certainly would be swimming in cloud seven. In fact, we have to say that this is actually the case with the ungulates. Not only is this animal, the cow, composed of a lot of fluid but the whole process is raised away from the earth and into the horizontal. The animal lives in a swimming, living ether world and moves horizontal with the earth, tip-toeing on its surface. This process is the same with the deer as well. In addition the deer is raised very much into the astral radiational process. The cow on the other hand, although living in an etheric cloud sinks to the earth after eating. If we can watch a cow, after the cow has eaten a good meal, we will notice that she sinks into the earth. We can find the cow lying on the earth ruminating, sunken into herself as she lies preparing for milk production. When erect and walking, the cow lifts her abdomen into levitation fields. Thus her abdomen is lifted away from the earth and becomes a part of the force-field systems of the atmosphere. But when lying down the cow sinks into the earth. The cow is very inward in this process. What seems to radiate outward with the antlers of the stag is turned inward, and the cow horns express this process. The horns express this turning inwards.

If we consider the ruminant activity of this animal we note that the animal is herbivorous. She consumes substances, takes them into the stomach—reticulum. The contents are regurgitated, chewed, chewed over again and passed into the rumin, then into the omasum and then the abomasum. The food goes through a four-fold four chambered process. We can think of the four ventricles of the heart, in a way being transformed into the four steps and processes of the digestion in the ruminant. It is as if the heart in its four—fold ventricular system has descended into the actual digestion so that the digestion is in a way a heart process, a heart-felt process. The result is that there is already a tendency for the activities of the circulation to be working very strongly into the digestive—metabolic activities. The outcome is that already within the venous system it is possible for lacteal activity to give rise to a milky product that then can be given over to man. The milk passes over to the udder. In a way we can say that the cow eats and heartens the food. She chews, the product passes over as a sweet honey into the udder. Man merely has to sit under the cow and collect this milky substance from the digestive tract which is a digestive tract and a heart all in one. In passing we can note that with the human being, this milk-formation process is raised from the hind quarters up into the region of the heart. There the

substance that one human can give to another human being, that means from mother to the child, comes directly from the heart. In the case of the cow, the immediate relationship to the heart is not seen. However, if we contemplate the processes, we can image the heart of the cow falling into the digestive tract and there arises the milk. In this way, we can think of milk as a nourishment from the heart. This lives in the digestion and circulation of the cow.

What Rudolf Steiner tells us is that the inwardization of the cow is the result of the hoof and the horn formation. From the hoof formation there results a turning inward of all animal radiations. The same can be said about the hoof of the deer but not the antler. The horn and the antler are polarities. The antlers ray out. The horn, Rudolf Steiner indicates, reflects whatever comes into the head, back into the organism, particularly into the bowel. The horn is a growth of the bone outward. The covering of the horn is a transformation of the hair and skin into a very compact hard keratin—protein substance. This horn cover is a bit like human nail substance. The horny substance shuts the animal head away from the cosmos via the head. Radiational forces of the cow are thrown back into the abdomen and there mingle with the inner cosmos within the abdomen, the coelomic (heavenly) cavity. The result is that the materials eaten, and ruminated, pass into a field of radiational and inner cosmic forces. This permits life to remain in the substances which make up manure. The manure of the cow is quite alive. Manure is made up of a good deal of the bowel lining. The cast off lining, a proteinaceous material is penetrated by reflected radiational forces (radiations, astral radiations). The hoof and horns turn animal-astral radiations back into the bowel. At the same time plant substances, enlivened by the cows digestion, are quite living. The result is a very unique form of manure. The excrement is a product of the head and the heart of the cow. The bowel product – intestinal lining and plant substance – can be used as a basis for manuring the earth. Here we have a living product that is a result of forces that are not used in the cow's head and not used in the cow's heart. Head and heart forces are, in a way, given over to the manure. This can be given back to the earth. The result is a most unusual excrement to which almost anyone can attest.

Now let us go on to the two preparations discussed here, that of 500 and 501. 500 is made by placing the cow manure in cow horns. They are buried in the earth in winter. 501 is made by putting ground silica into cow's horns and burying the horns in summer. By this means the manure is penetrated by cosmic forces of winter. Silica is penetrated by the warmth-earthly forces of summer. In this way these two substances become the bearer of earthly and

cosmic forces. By this means the plant is brought into relationship to the earth and in relationship to the cosmos. Cosmic and earthly nutritional streams are supported.

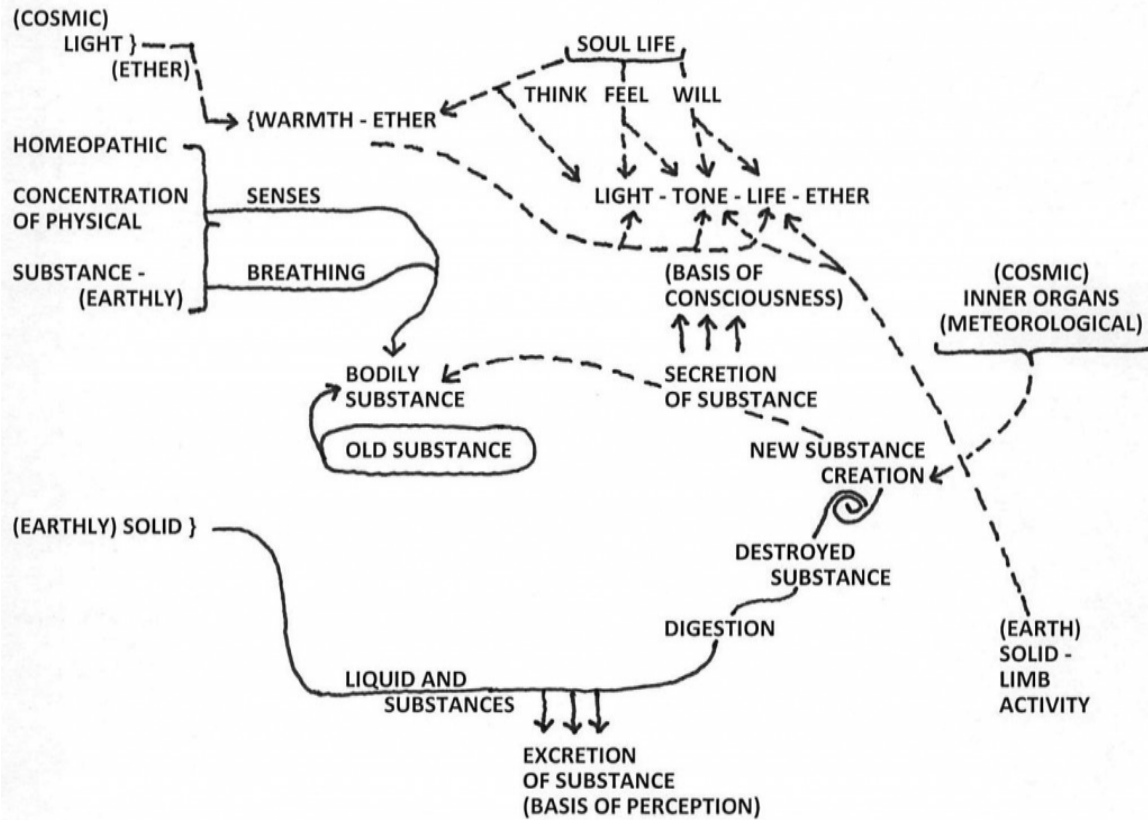
Let us look at 500 as a substance where the plant is brought into relationship to the earth. By this means the earth is brought to the plant in a nutritional relationship. The earth is raised into the living and to the state in which it can nourish the plant. The cosmic nature of the cow, and yet its earthliness, serves well to prepare the physical earth in relation to the etheric-plant. The manure is radiated by forces that raise earth substance for the nourishment of the plant, via the root. What is further needed is that this earthliness can be taken up into the plant, into the region of the reproductory pole so that reproductory life is stimulated when the product of the plant—reproductory system is eaten. This means that a healthy seed is produced. The earth—enclosed horn and manure, this organism, is created to stimulate a kind of living earth, earth sap process. This works into the reproductory pole of the plant. 500 works to bring an earthly nutritional stream to the plant. By using 500 we make the earth into a vessel so that the plant can be nourished through the earthly stream.

If we look at 501 we have a preparation which works more on the plant, brings the plant to maturity and permits the plant to be involved more in the cosmic nutritional stream. The silica is in a way the sense organ of the earth. In man the sense organ carries an earthly nutritional stream but an ethereal cosmic process plays into this. Etheric elements enter the senses, this is a cosmic principle. The plant needs to mature through the siliceous process which brings a maturing astral-etheric to the plant in seed and fruit. The plant needs an active light process for maturation. When this seed and fruit is eaten by man the cosmic nutritional process is awakened within the organism so that nourishing, cosmic forces are taken in via the senses. The inner cosmic process has to be stimulated by proper plant food consumption. The cosmic pole of nutrition in man needs stimulating so that the cosmic aspect of sense life can take place in man. The soul lives in the active etheric-cosmic process.

- Paul W. Scharff, M.D. August 1992



TREE



Agriculture Lecture 5 – Yarrow

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Yarrow – Preparation 502

With Lecture 4, we reviewed the plant, the ABC of the plant and began with the two preparations 500 and 501. Lecture 5 is a continuation of the preparations. These preparations Rudolf Steiner has given while pointing out that man is continually exploiting the earth, the land. Through the use of preparations, we return something to the land, to the earth to keep it alive, to keep it fruitful so that it can sustain plants. He points out that the import of the preparations is to bring about an essential change in the working of the soil. The idea is not to inoculate the soil with animal life, which has been

tried. External inoculation does not sustain itself. What is needed is an essential change in working with the soil-earth. The life of the soil we have only begun to speak of. The life of the soil – the earth – can be spoken of in terms of the four elements: the solid, the watery, the airy, the warmth. The soil-earth can also be spoken of in terms of life processes. These seven life processes we will take up as we go along. To enumerate them: warming, breathing, nutrition, secretion/excretion, maintaining, growing and reproducing.

Rudolf Steiner points to the impact of bacteria in the soil. He suggests that the way to bring about changes in the soil, so that bacteria can work properly, is by bringing manure to the soil, bringing dung to the soil. In order to have dung, animal life is needed on the farm. A balance between soil-earth and animal life is a need. The farm must contain the animal. It is the animal that in turn produces the dung that has to be treated, which in turn then is given over to the earth to influence the life of the earth.

If we look at the earth, its makeup, we can consider these types of soil – the sandy, the loamy, and the clay soil. Into this we must bring an important life element. This life element I would summarize by speaking to humus. Humus is actually very much of the makeup of the loamy soil. It is a living metabolic substance that is so important for our soil. Humus has a lively metabolic life that makes it difficult to analyze. Humic acid is one identifying marker in humus. However, humus is largely a chemically active living soil process. Many compounds would have to be identified including nitrogen substances. Humus is a carrier of the liquid and controls the relation between plant and earth. It constitutes approximately 4%-5% of many soils. It forms the culture media – stimulant for bacteria as well as the insect and nematode life of the earth. Thus we care for the earth in order to care for the animal life. The animals in turn produce manure substances that are crucial for the plant. As noted, humus is also known as a substance that helps to regulate the relationship between the mineral element of the earth and the plant. Thus the humus acts as what is known as a chelating agent.

Rudolf Steiner indicates that this work with manure, with the evolution of humus, the adding of humus to the soil, is something that is the responsibility of the farmer. By this means, the farmer has to deal with the essentials spoken of in science. The essentials have often been referred to as NPK, nitrogen, phosphorus, and potassium. The heavens, Rudolf Steiner indicates, take care of the other elements, trace elements. He notes these to be lead, arsenic, mercury, and even small amounts of sodium. Thus our weather takes care of certain mineral elements. The mineral elements that have to be attended to with our work with the soil are those that are spoken

to in the usual “Justus von Liebig” science. These, however, are not handled as pure mineral substances, but by regulating the activities of nitrogen, potassium, and phosphorus through the cultivating of the soil via manuring, via the use of preparations.

Rudolf Steiner’s point is that if we do not tend the soil, then it will be impossible for the earth to sustain its fertility. We will be unable to sustain healthy plant life and thereby the nutrition of animals and man will become an increasing problem. As noted, he points in particular to the inability of plants to handle and take up mineral elements from the earth and soil unless there is an adequate soil management, adequate soil practice. Rudolf Steiner points out that the plants suck up mercury, arsenic and silicic acid.

If we now turn to the yarrow preparation, let us begin by recapitulating something about the stag. Then we can go on to consider the yarrow plant, itself. Yarrow we place in a stag bladder and therefore are concerned with the stag. The stuffed bladder we hang in the summer’s warmth in the air and then bury in the warmth of the earth in winter. The whole process is one of a rather grand laboratory process, a laboratory process involving animal, plant, earth and cosmos. It is a grand alchemic undertaking.

We have already indicated that the stag is of the deer family. The deer family is typified by an animal that walks on his toes. The stag that we are considering here produces antlers. When a stag produces antlers, the female deer does not produce a fetus. Between the male and female, there is an alteration of life processes which either brings forth the antlers or the offspring. The process is very much governed by the seasons. In a way, we can say that the antlered deer family is very much related to the wild, the season, to the changes in the earthly cosmic circumstance of our earth. This sensitivity we have indicated can be seen in the makeup of the deer’s antlers. We have noted that these antlers are extensions of the skin. The skin is drawn out into the periphery. The rush of the blood follows this. There follows a precipitation of cartilaginous and bone substance. Bone is laid down to give the supportive structure for the antlers. The antlers develop between spring and fall. They are first covered with skin. Gradually the skin is lost and only the antlered bone excrement remains. The antlers are then excreted from the head. The doe that is fecundated in the fall gives birth to the offspring in the spring. The excretion of the antler in the fall by the deer, by the stag, is followed by the excretion of a living fawn in the spring. Thus we see that these animals not only are cosmically earthly sensitive, but they follow the course of the sun. They have such a lively excretion, the antler excretion and then fetal or fawn excretion is possible.

We have indicated in our considerations that the sensitivity of the deer family is connected with the antler formation. The antlers in turn are associated with the kidney radiational process, an etheric-astral process that meets what comes to the deer via the sensitive life that lives in the antlers and is expressed in the gaze of the animal.

Further we noted that the stag is a ruminant. This means that the stomach has four ventricles. Something of the four ventricular process of the rhythmic system, the heart drops, into the digestion to penetrate the digestion with the pulse of the animal. This brings a very intense activity to the inner life of the animal. This intense inner life enters the metabolic processes that are connected with the transformation of earth substance into the flesh of the animal. Here again it is the kidney radiational process that is very important. Here the radiations, the astral radiations are stimulated because of the substances consumed. The dung produced by the deer is not as lively as that of the cow because of the intense sensitivity of the animal. Life forces are taken from the dung for this sensitivity. This contrasts with the cow where the cow is turned inward and the inner radiations can be used to further the life of the intestine, the life that grows in the manure, the micro-life that is. For us it is the bladder with the radiant activity – sentient radiations – that is of import.

As already indicated, the deer stands in contrast to the cow. The deer is a beast of the wild. The deer is a beast of the steep, the mountain. The deer is not so much an animal of the plain. The cow on the other hand is a beast more of the pasture, somewhat of the plain. The cow belongs to the culture of man. The cow is a mammal, that is, it has mammary glands and furnishes nourishment for the human. It is a domesticated animal. The deer for the most part is not a domesticated animal, though slowly now man begins to domesticate the deer for the production of meat. Deer do not produce the flow of milk for man, as does the cow. The contrast of the deer can be appreciated if one sees that the sensitivity, the environmental cosmic sensitivity, the earth sensitivity of the deer takes life forces so that not only are the female forces needed for offspring production, but the male as well. The voluminous production of milk is not there for mankind because the life forces are used in the sensitivity of the deer. It is this sensitivity, this sentientness or sentient body-ness that is important and needs to be brought to the preparation and thereby to the earth.

If we now turn to the bladder of the deer, we can recollect that this is a vesicled organ, a hollowed organ. It carries a negative pressure, which means it has a suction activity within it. There is an etheric suction process within the bladder. This etheric suction process in the bladder is what then

meets the cosmic light ether stream that comes towards the animal. This suction process also stands within the sphere of the earth forces. The bladder and the kidneys of this animal, as with man, stand outside the coelomic cavity, outside the heavenly space. The kidney and bladder are both, therefore, influenced by the gravitational force. In the case of the human being, the bladder and kidney are more influenced by gravitation than this animal because this animal exists somewhat raised above the earth. The relationship of the bladder to gravity, as well as levitation, the etheric negative process in the bladder is extremely important because we not only want a cosmic sensitivity, but an earthly one as well. We want this process brought to the preparation so that cosmic sensitivity, earth sensitivity can be brought to the earth for the incarnation of the plant.

This two-fold sensitivity of the deer, particularly the earthly sensitivity of the stag, is important to consider in the process of cosmic and earthly nutritional processes that are the basis for human nutrition.

The discussion of the stag would not be complete without returning to the digestion – to rumination. This beast lives on plant substances. The ruminant quality of the deer family is not as marked as a cow. Notable is that when the cow has had a good meal it lies with its abdomen approximating the earth. The deer, however, is much more inclined to remain on its feet and digest as it were, away from the earth. As we have noted in our previous discussion, the four ventricled stomach of the ruminant suggests that something of the heart process has dipped into the digestive process so that the circulatory process is very closely connected with the metabolic processes of an animal. Thus we have to consider that this animal belongs into the animal grouping where the metabolism predominates and radiates throughout the entire animal. Thus the bladder of this animal is exposed to these metabolic predominance's. It seems to me, that the metabolic has to be taken very seriously as we want to influence metabolism, the preparations, the earth and the plant. When we look at these metabolic processes, we have to consider how the earth flows into the plant, the plant into man and animal and brings about a continual streaming and transformation of substance process within the organism. This streaming, transformation, we describe as metabolism. I would thereby point to the life processes of maintenance. Metabolism is closely related to maintenance. Thus it is important to link our deer, the stag, with the ruminant and with the predominance of metabolism, which is so closely connected with the bladder.

Going on to the yarrow now, Rudolf Steiner has then said that we should pick yarrow blossoms. We make use of the composite umbiliform inflorescence and stuff it into the bladder. Note can be made that fresh

yarrow does not have to be used. Dried yarrow can be wetted with the juices of fresh yarrow or even a good rainwater.

Notable is that yarrow can be found in the wild. It does not have to be cultivated. We can, of course, cultivate it, but we can find uncultivated specimens in pastures, fields, and along forest edges. It usually accompanies cultivated lands, the lands that are transformed by man. It starts out as a rosette in spring, forms a very tough, straight stalk with a visible darkish green fiber. The leaves are somewhat refined. Substance is retained in the leaf in contrast to chamomile. In the chamomile leaf, a great deal of substance is excreted. This is not so with yarrow, but we can observe structure in the leaf.

The leaves are formed but soft and slightly watery. The plant grows quite rapidly often to a height of two-three feet. It begins to bloom at the middle of July or the beginning of August. The blossoms are whitish with a compact center and delicate little white leaflets. A greenish or pinkish tint can be noted in the blossom. It is a plant that in its blossom coloring tends to approach from green to the color of the human skin with a hint of faint pink. This is a perennial. There is a tendency for duration to live in this herb. Many herbs are annuals. Not this one. The durational, the non-evanescent is something that lives in this plant in relationship to time.

It is noted by Rudolf Steiner that it contains sulphur. Others, namely the Kolisko's, have noted that the sulphur is contained in the roots of this plant. The roots are well developed, reticulate, reminding us of an earth-formed structure. When one pulls up the plant by the root, a clump of earth is attached. The root form points to earth relatedness and as well gives a sense of duration – permanence. The plant rises, shoots up 2-3 feet in a short period of time to culminate in an inflorescence that is like the heavens that have descended onto the rising stem. This inflorescence looks like a sulphury dispersion. The sulphur process culminates in the formation of a number of oils. Alcohols are also formed so that a fermentation-like process is a normal working in this plant.

When Rudolf Steiner speaks of the plant, he speaks about its radiant nature. He points to the fact that the plant is a good example for radiantness (radiance – editor). This theme I have taken up in relationship to the deer, which also lives in the radiations of the world, and radiates, as well. (The astral is expressed here.) This plant rises from the earth, is anchored in the earth, is well structured and at the same time brings radiance into its inflorescence.

For me, a very notable remark is made by Rudolf Steiner in relation to yarrow. It is a single comment, but I think highly interesting. He points out

that not only the sulphury element is important in this plant, but also potash is extremely important. This is one of the few instances where he mentions this substance – potash. I would very much like to think this is a key to the plant, as well as the entire preparation.

If we look at potash, potassium, we find that it is concentrated in the animals of the waters, that is fresh water or salt water. These animals, of course, are fish. All animals contain potassium, not only fish. Oceans contain salt. We can say that in the animal kingdom, fish or various animals that find their living habitat in the oceans are in a way permitted to define themselves as animals because of potassium. The oceans permit them to live in the ether hydrosphere of the earth. The salt brings them somewhat to earth, but the potassium nature of the animals is the mineral constituent that permits the birthing of the kingdom, I would like to say. Potassium permits animal and human kingdom birth.

If we turn to the earth and to plants, we can note that potassium is also important to the plant. Some plants concentrate potassium more than others. Without potassium, plants do not grow. I would like to suggest again that it is the potassium element of the earth, either carried into the plant or radiated into the plant, which permits the kingdom of the plant to incarnate on the earth. The lithosphere of the earth, made up very much of silica and calcium, becomes the base for plant and human life. Animal life on earth is also permitted by the lithospheric makeup. I would suggest that we consider potash as the element that permits the birth of the kingdom to the earth mother and from the cosmos father. It is because of this potassium element that I like to consider the preparation as the son element, as a son principle activity in the makeup of the preparations – it permits earthly incarnation. Potassium within the human being is also crucial. It is the essential intracellular mineral makeup. As we know, the extracellular makeup is salt. The extracellular fluids resemble the oceans with salt – sodium. The intracellular fluids resemble the makeup of the fish in the oceans or other water bodies. Potassium is essential for kingdom incarnation into a given body or organism. In the case of man, potassium is very highly concentrated in pancreatic secretions and is most concentrated in the endolymph of the semi-circular canals in the human ear. My thesis would be that without potassium, the kingdoms would not be able to incarnate into either the hydrosphere or the lithosphere. For this reason I like to consider that we describe potassium as the great incarnator. By this view, potassium belongs very much to the baptismal process permitting the incarnation of the individual quality that makes up either man or the kingdoms of nature. By

this means we can also consider how important potash and potassium is for plant life.

From this foregoing, then, we can contemplate how extremely important the dynamic of this preparation is for the earth in which one is trying to birth something of an individual quality. This has to be carried into the plant and then make this dynamic possible in the human being. Something of the unique kingdom element is permitted to be active and incarnate where potash is active.

If we discuss a sibling nature of potash, we can say this is an earth son. We have already suggested that antimony is kind of a cosmic son principle, permitting cosmic individuation to express itself in the configuration of man in the processes of metabolism. By this line of reasoning, potash becomes the vehicle for earth son nature in the cosmos and antimony the cosmic son nature in the universe.

To complete our view of this preparation, we have to add that the stuffed bladder is hung outdoors in the summer and placed in the earth in winter. The elementals of summer, the earth radiations rising into the cosmos, in a way, are drawn into this preparation. The earth crystalline force systems are drawn into the substances as they are planted into the earth in winter. The element inherent in the deer, that is its relationship to the environment and cosmic rhythms, the yarrow's perennial nature permits these summer-winter rhythms of the earth and atmosphere to penetrate the bladder and yarrow. The preparation has to become sensitive and pass this onto the plant. We need these summer-winter rhythms in us as we carry them as a biorhythm of sleep and wake. As often is said, the summer rhythm is our sleep, the winter rhythm is our wake. Another perspective is to say that in our thinking, the crystalline winter becomes evident. The summer sulphur-ness becomes evident in our will, and our feeling life swings between the summer and winter in the fall and Easter seasons of the year. All seasons are needed in man. The makeup of the deer, the makeup of the yarrow, the preparation being subjected to winter and summer, all this brings about an earthly cosmic relatedness which is carried through the course of time, through the rhythm of the seasons, through the summer and winter of the year. Man carries these seasons in his daily round.

Thus in considering yarrow, we are looking to the time element, but we are also looking to a marked metabolic process in a plant that is carried over to soulness-sleep-wake (thinking-feeling-willing). Through the rhythm of breathing, the soul enters the physical-potassium and makes the incarnation possible.

Agriculture Course – Lecture 6

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As we look to go on, I would again suggest that we consider some aspects of the previous lecture. I would like to do this in the form of looking at the integuments, the sheathes and the content of the sheathes in the preparations. I have often asked what is the human counterpart. We can say that form and content is an idea expression of integument and content or sheathes and plant substance. In looking for a human counterpart, I have often looked at the human skin. The skin can be looked at as a synthesis of the whole human being; the whole human being as an organism. The skin itself therefore, has to have the qualitatively, the makeup that speaks to the intugement or sheaths and a kind of inner organ content as well. I believe that this can be found in the human skin. We can speak to seven layers of the human layers of the skin, we can also speak to seven organs or seven contentual aspects of the skin. How each one of the layers of the skin and each organ of the skin is related to a particular sheath and content of a preparation. I would not like to surmise at this point, I want to make a general correspondence. I would like to keep the correspondence of the skin and the preparations in a fluid relationship at this point.

We can see the skin made out of the two general tendencies. We can see that it is layered and we can also see that it has its organs. If we start with the surface and the layers, we can enumerate seven layers. The layers also can be threefold, but here I will use a seven-folded division. The outer layer is called the disjunctum. Next, comes the layer of the corneum, then the lucidem layer. There follows the granulosom and the germinatum layers. These outer five layers sit on top of what is called the dermis and finally there is the hypodermis which is often largely fat.

So we now can also enumerate seven essential organ structures that belong to the skin. The first one is the hair, which as it were, projects into the skin. In hair something of the outer world is projected in. We see that (1) hair grows into the skin like the herbaceous plant which grows into the trunk of a tree or into the earth. Next, we have (2) nails which are a surfacing on the skin, a flattening and thickening of the upper layer of the skin. The third organ, is (3) muscle. Muscle is found in the layers of the skin. Next comes the (4) vascular tissue as organ. (5) Sebaceous glands play a significant role in the skin, as do (6) nerves. And finally, we have the (7) sweat glands.

We have enumerated seven skin organs. Something of the essential makeup of man is synthesized, is summarized in the skin with its seven layers and its seven organs. (In a way man in his skin organs has a reflection of his inner

organs). Thus we can think of seven skin layers as seven sheaths for preparations, and seven organs as seven contents. There are seven skin organs and seven contents for preparations. As we have already seen, every organ has a layer of skin or a sheath and an inner content. Every organ has a form and a function. In the case of the entire human organism there is the outer skin and inner organs. Therefore the two—fold makeup of such a structure as the preparation tends to point to the domain of an organism, where a specific life process takes place.

Man in his soul life through his upper senses, moves out into the cosmos. Likewise, the skin layers can be imaginatively expanded into the seven ether spheres of the cosmos. Within these ether spheres exist seven activities, seven functions, seven planetary bodies. Again, I do not think that the exact correspondence is significant, but the fact that one has a sphere and a planetary body points to a possible variant of sheath and content or organ. The more compacted form of this skin can be drawn outward into seven spheres. The layers can be enlarged into the cosmos into seven spheres. The compacted physical skin is layered – can be spread into the spherical etheric. The physical is transformed into the etheric. This is what we are trying to do in making the preparations, to further raise the etheric into the astral. We are adding substances to the soil so that the soil can serve as a birthplace for the plant. The earth needs etheric workings so it can be raised into the etheric and astral tending of the plant. It is the physical-etheric (astral—tending) plant that is consumed by man and animal to maintain physical life as well as soul life. In the case of the animal the soul life is lived out in impulses and reactions. In the case of man of course, the soul life can reach to much loftier realms. This reaching of man into loftier realms requires proper nutrition as we have already indicated. It is for this reason that we tend the earth, which in turn tends the plant, which in turn tends the animal and man. Man thereby gains the possibility for new directions for the future.

With this summary overview, we can say that we have considered the transformation of earth substances so that we have a kind of medicament, a substance-medicament — the preparation. We apply this substance-medicament to the earth, or plant or the compost pile so that a proper nutrition can unfold in animal and man, a proper reproductory process, a proper soul life. Though one can not quite say that the earth, the plant and the animal are ill like man, none the less, one can speak of a kind of a healing medicament that is needed by the earth, because the earth suffers the illness of the “fall”. It is this redemption of earth substance that we have to undertake in conjunction with the spiritual world. If we use the term medicament or therapy in this general sense then we can speak of the farmer

who carries the staff of Mercury who works as a therapist. We have also hinted that the farmer can work as a therapist into the sphere of economics – to bring healing.

With this said, we are then prepared to look not to the activity of the farmer as healer, as the carrier of the Staff of Mercury, but as one who can also carry on priestly-like activities. The priestly-like activities is not tending to the healing and the furthering of life, but is looking and working with the fire of the sacrament. It is in the fire-sacramental process that the priest finds a very essential activity. Here the priest is not just working with the earthly to raise it into the living, but he is trying to bring that which is spiritual in the cosmos in relation to life. To bring the cosmic spiritual to life does not require the process of reproduction, the furthering the activities of life, but requires the process of fire and ash formation so that the spirit can indwell and take hold of the physical. The priest is not manipulating the physical for production, for growth or for physical nourishment. The priest prepares that which he has to enact in the fire, in the flame of the sacrament, so that that which is living and life-reproducing is transformed, given over to the spiritual so that the spiritual can indwell and take hold of it. This I would say is a needed concern to approach what is to be given in this lecture, the sixth lecture.

By this reasoning we can look at the preparations as a kind of a healing agent, as a medicament. As we move on to discuss the problem of weed and pest, the making of pepper, we have to come into another realm of activity, I would call it the realm of the priestly. This requires that the farmer as a human being, serve the earth as a vocation. He, as therapist and as priest, the farmer, comes to his vocation.

The approach to the peppers is by no means easy. I have never heard a thorough discussion of the peppers. I suspect the peppers have been discussed but this discussion has never arrived at my door step. The approach I take here may seem strange to some, however, I will venture on this journey with some trepidation.

I would take up the consideration of the peppers by beginning to take up three areas of existence, which are not often spoken to. Again, in my experience, in Anthroposophical circles, I have never heard a discussion of these three entities, except in passing. What I am about to discuss can, in fact, be found in Rudolf Steiner's discussions of the gospels. In the gospel cycles you will find what I wish to take up here – the phantom, the specter, and the demon. These are three existences, three being-existences, which Rudolf Steiner has presented, has discussed. They are easy to overlook or miss. Their import would seem not to be very great. However, it seems to

me that we have to consider these three existences to comprehend a cultic process. What is enacted in the use of peppers, I see as a cultic ceremony. The fire of sacramentalism is underlayed by consideration of these three existences.

Let me begin with the realm of the demon, the demonic. Rudolf Steiner tells that the demon or demonic was perceived in the third cultural epoch. It was something that human beings came to through their natural clairvoyance. He tells that the demon actually came into existence in the Lemurian period and became a form in which the supersensible world was perceived in evolution. The demon nature of the spiritual world, the demonic nature of the spiritual world was carried over from the time of Lemuria, through the post-Atlantean periods and into the time of the third cultural epoch. Therefore the demon was a very common type of existence and was perceived. At first, higher spiritual beings manifested themselves in the demonic existence. As time went on, the higher spiritual beings left this sphere of existence. Lower and lower forms of spirit beingness entered into the demonic forms. The eastern paths, the eastern clairvoyant tendencies, took account of these demonic forms and pointed man to them. In the first post-Atlantean period these forms were Luciferically inclined in the East. As culture flowed westward, the forms have become Ahrimanic. In the West, demonic distortions and deformedness have become greater and greater. This is an aspect of spiritual life, this is an aspect of cultic life that was well-comprehended and taken into consideration by the mysteries in the ancient times by those who had some perception and knowledge through clairvoyant consciousness. Beings investing these forms in the earliest of evolution were the Thrones, Kyriotetes and Dynameis. With the Fall, with substance life and soulness becoming subject to lower forces, Ahrimanic forces, the demonic form took on less and less Luciferic configuration of higher beings. As evolution progressed the higher spiritual beings deserted these astral forms. There unfolded the forms that are the expression of the elemental existence. Sub-earthly forces worked into these forms. These forms today, if I understand correctly, are particularly important in the plant existence where salamandric and sylphic elemental beings are active. In this domain there exist even healthy demon forms, but demonic forms, none-the-less. With the occurrence of the Mystery of Golgotha, these forms have been redeemed.

However, before taking up the Mystery of Golgotha I would like to take up the fact that the demonic gives rise to the daimon. The higher form of the human soul in the time of the Greek was spoken of as the Daimon. Rudolf Steiner indicates that it was the Daimon who spoke to Socrates in his

dialogues. The Socratic dialogue (dialectic), gave rise to the potential to raise the demon to the daimon. That is a higher spiritual being could speak through the human being, could incorporate into the human being. (I suspect it was an Archangel). It is possible at this time in history for the Elohim to begin to express themselves in the astral configuration of man.

Rudolf Steiner tells that the demon is an astral form. It is the astral which gives the basis for the incarnation of spiritual beingness. In the case of the demon, lower and lower spiritual beings invest themselves in this form. With the daimon, I gather, there begins a re—ascend of the demon form to lay the basis for Elohim incarnation. At times it became possible for the archangel-demon or daimon to enter man. It is at this time we find the Mystery of Golgotha taking place. Rudolf Steiner has not said this directly but much points in this direction. It now is possible for elohim beings to enter man's soul.

In relationship to the demon that can be evolved to a higher form in the daimon, we find the basis laid for what occurred in the Mystery of Golgotha. As the dialectic soul-spiritual activity of Socrates, can permit the demonic to become daimon, this lays a basis for the Christ to take hold of this form in order to evolve it for further cultural evolution, for a higher form of man. In the Christology lectures by Rudolf Steiner, he not infrequently refers to the demonic which is dispelled by the Christ. We are told that it is a law of the spiritual world, that when a demon being is recognized, the demon has to leave the human soul. This permits the evolution of the human soul to higher realms. My impression is that these demon beings begin redemption with recognition. Recognition lays the basis for their redemption. The human soul in a way, is purified with the recognition of demonic beingness. This can lead to the daimon and then the enchristening of the soul. The demonic is released from the soul, the soul is then ' purified, we can say, healed. This is the healing of the soul who is possessed.

The means by which such a healing is spoken to on a much larger scale, can be pointed to when events are described occultly as happening on a mountain. On the mountain is where we have the Transfiguration of Jesus the Christ. Here the astral-physical of the being of Jesus is transformed into a light form. This was seen clairvoyantly and described. We can also consider that it is what occurs in seizure states. With this Transfiguration the astral becomes so pure that the physical becomes a light formed organization. Events that occur on the mountain refer to such a transformation. The purifying process is a healing process, and when a human being is ready the physical is astralized – a new form of existence in the astral world can arise. If man is not ready for the transfiguration, a

seizure will occur. The fire of transformation — the sacramental fire can bring about such a form in the astral world. Something of the physical world accompanies this. Thus we have described the transformation on the mountain top. This is an event that occurred before the Mystery of Golgotha. I would like to suggest that the Transfiguration redeems the marked distortion of the demonic form that had come to invest man. However, there is still another form that has to be created in order that a future form, a similar future form can be given to man. I would suggest that this future form of the demon is the revelation of the spirit fire form in the events of Pentecost. It seems to me that the tongues of fire are actually a post Mystery of Golgotha event that has to be seen in the light of the transfiguration. In the transfiguration the demonic form became daimon. In the Pentecostal event, the daimon becomes creative in the word of fire, the flaming word of fire that transforms all creation into a new form of existence, existence in the spirit.

Now let us move on to the specter. The specter-ghost form came into existence in the time of Atlantis. It points to an etheric-form. It expresses an etheric makeup. Here it is not so much the animal astral that is involved but more the plant-ether – its form and some substance. Rudolf Steiner tells that this specter-form of spiritual beingness, in the etheric is a semi-luciferic condition that was early on perceived in the mysteries. Again, this form became distorted, transformed through the evolution of man, through cultural evolution to be more and more taken hold of by ahrimanic beings. The luciferic then is given over to the ahrimanic and the distortion of form is ahrimanic. An example of this process, I believe, we can consider in the plant world. The spur formation on the rye grain, the formation of fungal mycelium is an example. This disfiguration, this transformation of the grain of rye began about the time of the first millennia before Christ. The spurred rye gave rise to St. Anthony's Fire, ergotism, about a century after the Mystery of Golgotha.

This disfigured ether form had to be healed. The deformed ether had to be brought back into a healthy form again. The specter-ghost form in existence is where lower spiritual beings can come to dwell and have to be healed. The distorted ether form, ghost form, is healed and is described by events in the Gospels which occur at the seaside. Here, that which is in the etheric, is then taken hold of by Jesus. The walking on water is a perception of the Christ in the region of the waters. There a specter-ghost form becomes changed so that it takes on a truly human form. Rudolf Steiner speaks to these events, to the transformation of the etheric by the Christ, particularly in the cycle on St. Mark.

Again, as in the case with the demonic, here the ghost-form has to be evolved through the Mystery of Golgotha. The ghost form is altered before the Mystery of Golgotha – but becomes the ascension form after. The complete incarnation of the Christ into the ether body of Jesus is needed first to heal the older ghost form — but (“and” editor) to give rise to a new ether form in the ether world. This form in the ether is chronicled in the events of Ascension. The Ascension-etheric form is essentially a form which was closed to the Apostles. They did not see this ascendant form. My view is that it is this form that we need to cognize now in our time. However, there is a state in which he was perceived as such and that was when he was described in the events of Emmaus. There at the meal, I suspect He was then perceived in the ascendant etheric form. The consuming of substance was necessary for the ether form, the healed ether-form to be perceived and cognized by the apostles. It is this ascendant ether-form that has today to be found on a conscious path. This is an ether-form, a Christian ether-form, it is the etheric form, one can say of the Christ in the ether world. This now has to be and should be apprehended in order to find the way into the future. It is not the specter ghost form that is crucial, this will lead only to lower and lower forms of materialism. Rudolf Steiner speaks about this and particularly in relationship to science. He tells that the sciences are actually increasingly creating ghost forms in their intellectual—materialistic ideas. The holding of oneself in pure spiritual activity, in the world of the living, to perceive in the living world, is to begin to cognize in the world where the true form of man exists, not as ghost specter, but as a truly Christian configuration. This is the goal towards which we have to march. This is a goal which we have to take into consideration when we have to try to work with the earth for the sake of the earth and the kingdoms including the human.

In review then we can consider that the demon-astral form came into existence in Lemuria. The ghost-specter-like form came into being in earlier Atlantis. Both forms became increasingly decadent. Needed is the transformation of these forms. To find a new form, a healing has to occur. But also, there has to be a transformation of the physical form into a higher form. This we have described here as the task of the Christ as the being whose lowest vehicle is of the Spirits of Form.

Now, let us go on to this third configuration. It is a physical configuration, or a misconfiguration, known as the phantom. As best as I can tell the first expression of this form as physical came about in the time of Polaria. However, this is actually densified and brought more into a material form by the Fall. The phantom comes much more into existence at the end of Atlantis and more so in the post-Atlantean period. The phantom form is a form that

can carry the highest, but also the very lowest. The disfiguration of this physical configuration is a result of the taking hold of an original configuration by the deeds of Ahrimanic beings. Gnome, undinic-like beings, and other elemental beings that have fallen out of evolution, serve Ahriman and work into this configuration. Fallen spirits of will, wisdom and motion are active. Fallen offspring, the spirits of the rotation of time, of elemental beings all are at work in this phantom configuration.

If we look into the Christian evolution we can consider events that occur within the “house” as it were, within the physical, are events that are enacted before the Mystery of Golgotha, in order to bring about a transformation of the phantom form of man. Here, we have to consider the events that occur within the house particularly the Last Supper. The Passover process can be considered. This I would suggest is the enactment, by the Being of the Christ, to take hold of the human form so that it is in a way, healed, so that a true phantom can exist within the human being.

This takes us to the Mystery of Golgotha. Through the Mystery of Golgotha human phantom is completely penetrated, and thereafter the earth. This transformation of the human configuration and the earth so that the phantom appears in another form, I would see as described when Jesus is described as a Gardener. Here the phantom form of man is taken into nature. Nature beingness of man, the Gardener, is perceived as the resurrected form of the phantom. We can consider the scene at the tomb when Martha turns to address the resurrected phantom being of the Christ as Raboni, as the Rabbi. He is indistinguishable from the Rabbi-teacher, and the gardener. He can not yet be touched because he is not risen. None-the-less, I would like to suggest that this points to the direction of the phantom-form, which is necessary for man to assume as he incarnates, dies and enters into the cosmos. The Last Supper points to the transformation of the phantom form so that in fact, man can live in his physical body. As the resurrected form is brought into life, man can within his body, also develop the higher states of consciousness which are given by the deeds of the Christ through the Mystery of Golgotha and the Resurrection.

What I have shared here, is that at first, higher spiritual beings gave rise to form within the astral, etheric and the physical. These are well described by Rudolf Steiner. Gradually these forms were taken up by lower human beings, by lower spiritual beings. Man, as he becomes an ego, has to then transform these configurations, has to in a way, exclude the lower spiritual beings and has to invest these forms by his own ego-ness by his own evolving as ego to higher states of existence.

We can in a way, consider that the transformation of the demonic, specter, and phantom configurations is actually a healing process. We can perhaps connect our preparations with these three processes. However, the creation of the higher forms of the phantom, the ghost, specter and the demon so that they become Christianized, become higher egoized. Here we require not healing, but the fire of sacrament.

This leads us over now to consider the fire or sacramental fire. I would say, sacramental fire is needed to bring about the transformation that is spoken to in this lecture. With the preparations of the pepper, the use of the fire, we approach the domains of existence which we have been just discussing.

To make the peppers, Rudolf Steiner tells us that we have to have fire (burn), the animal and the plant substances. He tells how this firing is an opposite process to that of watering. The latter supports the reproductive process, the life processes. Water is that which brings forth life. Without water there would be no life. The solid-physical is in a way, the substrata of life, the water brings life, growth and reproduction in its course. The fire process is just the opposite. It takes life, it raises life to a higher plane, it brings substance into such a configuration where substance is lightened and fired – is brought back to the spirit. We can say that our preparations belong to the domain of water. The furthering and the regulating of the water process. The making of the peppers is a fire priestly-cultic sacramental burning process. This brings about the transformation of life – life ceases. We can easily think of the early religions. There we also encounter the sacramental process, the sacrament of burnt offerings, to the gods. I would like to suggest that we can see these preparations of the ash, as well as the sprays as part and parcel of the sacramental fire process, the fire of the sacraments. This can now be used in a new agriculture.

If we turn to the entities involved in making peppers, we can start with the grub. This is an earthly being related to the root. This is an invertebrate that lives and moves within the solid earth. This is an animal that when it begins to get out of hand, creates a condition where the plant can no longer be sustained by the earth. I would suggest that the proliferation of the grub and the grub itself points to a phantom-like element that belongs to the physical earth, affecting the plant.

If we now look to the specter-ghost form, we can consider the weeds. This is an etheric entity that comes to dwell in a sphere where it does not belong.

The weed is a living entity that does not belong on earth. It disturbs the agricultural individuality. As such it is an expression of specter-like activity in the midst of the farm—individual. The weed is that which grows, and in growing is not penetrated by the will of man. The weed is a plant being that

comes into existence. It is not planned and does not have a rightful existence within the agricultural entity, agricultural individuality of the farm. The same thing can be said about the grub. The grub also does not belong to the agricultural individuality. We have to however, consider that the grub and the weed, the grub that infests the earth and the weed that troubles the crop, both should have a rightful place of existence – but not within the existent individuality of the farm.

Let us go on to the demonic form, to demon activity. This enters our agricultural individuality when the mice or other animals take over. The mouse is a nerve-sense vertebrate mammal. When rodents or kindred animals take over, the farm individuality, again has foreign living forms within it. I would liken these animals to the demonic forms that took over the human being in earlier times.

If we turn to the world of the insect, we can notice that the insect can belong to all three forms – phantom, ghost and demon. The egg and caterpillar stage of the insect is related to the grub. The chrysalis stage of the insect is related to the plant-spectre. The image stage of the insect – the butterfly stage corresponds to the demonic. The three displaced forms in grub, weed and rodent – can occur in the insect in egg, caterpillar, chrysalis or image. While the grub, weed and rodent point more to distorted forms of the past — insect distortions point more to the future.

Thus, we can say that the grub, the weed and the mouse bring deformities that can exist within the agricultural individuality. They come out of the past. In the case of the insect problems, we can gain a view of future forms of phantom, spectre and demon.

If we want to prepare a pepper, what is our effort? I would like to suggest that our effort is to create a domain in which the beings that should not be incarnated into the farm individuality can in fact, incarnate. We are then dealing with a sacrificial fire priestly activity that creates a domain that hovers above the sphere of the earth. This airy — moist — dust (pepper) permits the beings, that should not incarnate on the farm, to incarnate and have existence in a proper domain. They need to be permitted to find their rightful domain, not out of the past, but into the future. The fire of sacrament, in preparing the peppers and spreading them over the fields, creates a realm of existence that looks back to Hyperborea, Polaria, Lemuria, Atlantis, but also anticipates the forms that need to be transformed for the future. Future states and forms need to come into existence. Beings that have been dragged into the Fall need to find their proper place of incarnation, either as past forms or as anticipated future ones. The domain of existence for this to unfold is the etheric-astral – the astral plane of existence.

A last preparation has to be considered. This is the equisetum spray. I would like to think that our line of contemplation about the peppers applies to this spray. Here, a tea, is made, and is cast into the air. With equisetum we are not dealing with animals, insect – higher plant, but more to the mineral. Equisetum is largely silica. We are, with the equisetum spray, trying to work with very low realms of life. Bacteria, fungi, and I would also think, the viruses are to be taken care of. These forms are very old forms that point back to Polaria and Hyperborea. The preparation of the tea provides the proper incarnation circumstance for these beings of such a long history – fungi, bacteria and viruses. They are displaced when they incarnate into the farm-individuality, producing bacteria, fungal or viral” infestations. The teas and sprinkling them into the atmosphere over the farm individuality permits these very early lofty, but later low forms of existence – phantom forms – to find their proper domain.

With these considerations we have a *raison d’être* for preparing peppers and teas. We are dealing with a realm of existence which is generally not considered or tended to. We are actually creating other domains of existence so that spiritual beings of other realms can find their proper place of incarnation, can find their redemption. The use of peppers is a priestly activity just as with the preparations we can consider that the farmer carries out an activity as a healer.

Agriculture Course – Lecture 7

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If we briefly cast our glance back to Lecture 6, we can notice that we have begun to take up the animal kingdom. We have begun to speak about the insects, the predators, and the parasites related to the growing of nourishing plants. We began the entire course by considering the earth, the earth as a cosmic body. We then addressed the care of the earth to support the plant. We have discussed the plant in relationship to the earth and preparations. Here we take up the animals. The animal kingdom only comes to focus in this lecture.

We noted in Lecture 6 that there are various realms of existence. Earthly existence, as we know it through our senses, is only one form of existence. We pointed to other domains of existence – the domain of the phantom, the domain of the specter, the domain of the demon. We then through these entities began to move into other realms where spiritual beings live. We noted that spiritual beings can appear in phantom form. In ancient times

more lofty beings appeared in this fashion. As time has gone on more lowly beings have incarnated to create degenerate phantom forms. The same can be said of ghost or specter forms as well as demon forms. The role of the Mystery of Golgotha has been to again give healthy forms, archetypal forms, healing forms. This was made possible through the Mystery of Golgotha. We then considered that through this deed by a Spiritual Being, the Christ, what had become decadent through evolution was once more transformed to permit an ascending existence within these different realms.

With our peppers we are introduced directly to consider these realms. As noted, the peppering has never been spoken to extensively. I surmise this is due to the difficulty in working with these provinces, these domains, that require so much for us to try to grasp. The preparations, in a way, create considerations that lead to our having to take up the peppers. My thesis here is that the peppers ask that we consider the astral world. It is in this world that we find the various distorted configurations, configurations of the plant, animal and human that work so that unhealth is brought into areas where this working is not appropriate. That is to say, in the astral world we find distorted forms from plants, animal and man. These distorted forms work and are active in the astral world. This working when transplanted into the physical world or into a loftier spiritual world, is a displacement.

Displacement into the physical world can lead to weeds, infestations, and in man – illnesses. By this line of consideration, we have access to beingness, to the realm of beingness where the disturbances of equilibrium, the disturbance in balance can be found. This has to be worked with. It is just this balance in the astral world that I believe is being taken up when we enter into the discussion of this seventh lecture. Lecture seven leads us to see the astral animal realm in the light of man.

In this lecture, we begin to take up the animal as the animal relates to the tree. The animal kingdom can relate itself to the tree of life or the kingdom of the plant. My general view of this lecture is how it points out how we can regulate plant and animal life on the farm so that what exists in the astral world is tended properly. This in turn permits the physical, the higher astral, and the Devachanic world to exist in appropriate relationships. This relationship, this balance in the cosmos is brought about by working the balance of plant and animal nature on our farm. This permits the incarnation of the individuality when the farm plant and animal balance is reflected in the cosmos. Then lofty spiritual being birth can occur as the individuality of a farm. This is possibly an elohim being.

This is a tremendous task and undertaking for the farmer. The farmer tries to enculturate the earth for the sake of mankind and the spiritual world.

What we are taking up here is the unfolding of a totally new taxonomy. The classification process that Rudolf Steiner brings forth in this lecture in regard to plants, it seems to me, is quite new. This is the same for the animal. My sense is that the classifications we have from science reflect something that is old and has unfolded with science. This is true of plant classification, as well as animal classification. Here Rudolf Steiner is bringing a new form of classification so that man begins to work with the plant and animal world in a very new way. This new relatedness, this new classification is important in order that a next step in agriculture can be taken.

With this said, I think it would be helpful to let the plant be placed before our souls. We have discussed the plant in its outer form, its configuration in form – slender or filled out. We have considered it in its root structure, earthly and cosmic. We have discussed it in its color and its fruition. The plant is related to the planetary world. The tree is related to the human being as has been spoken to. The threefold nature of the tree with its xylem, phloem and cambium we have taken up with correspondence in man. The tree approximates and approaches a form where we can consider a birth of something that is highly individual. Through the tree we can approach the plant and the plant world to find an individual being with individualized life processes. This is important for our consideration here.

In this lecture Rudolf Steiner tries to introduce us to the plant world in relationship to the animal by considering the plant and its relationship to the astral, to astrality. As we know, the astral is embodied in the world of the animal, the etheric in the world of the plant. The ether plant is influenced by the earth. This is what we have thus far been considering. Now we make the transition to consider how the etheric, the ether plant, stands in relationship to the astral world, to the animal world. We then can look at the plant tree as the balancing element that swings between the physical and the astral. The etheric of the tree helps balance that which is of the nature of our physical and that which is of the nature of the astral, astrum or the star.

In order to develop this balancing process inherent in the ether-tree, I believe that it might be well to consider the etheric in more detail to facilitate the coming discussion.

The ether element was born on the sun. Characteristic of the ether is its expansile and contractile potential. As sympathy and antipathy are the dynamic of the astral, expansion and contraction are the dynamic quality inherent in the etheric. This expansion-contraction element is best exemplified by light. Rudolf Steiner tells us that light expands, but it also returns to contract. We have expansile ethers which we know as warmth ether and light ether. We have contractile ethers, chemical and life ethers.

The light ether and the chemical ether processes bring about the expansile and contractile processes in the physical world. The existence of the ethers in a four-fold way is brought about by evolution – cosmic evolution. The etheric was given by spiritual beings on the old Sun – as light ether (close to warmth). It was evolved in the Pralaya period into chemical-ether. In the next Pralaya period, between Moon and Earth, it was evolved even further into life-ether. Thus we have light, chemical, and life-ethers. These are the result of Pralaya workings. This is often not recognized although it is quite clearly discussed by Rudolf Steiner.

If we look at this genesis and evolution in ether, we have to look at one more step, the coming forth of warmth-ether. The ether of old Sun is, in a way, light-ether, with the possibility of warmth- ether, but warmth-ether only comes about in the latter part of Lemuria when light-ether is condensed to warmth-ether. This I have tried to detail again and again so we do not just see an evolution in a linear fashion. There is an evolution of the ethers in Pralaya and there is a devolution of the ether during earth evolution. This condensation, concentration process in the etheric permits the incarnation of the human ego. Without this condensation process there could be no ego that would live on earth. It is in the warmth ether that the human ego truly has its footing. It permits the human ego to exist in the physical while having its true home in the star world beyond the zodiac. Only slowly can the human ego master the other reaches of existence, the physical. This mastery is possible by the continued deepening of the human ego in relationship to the physical world.

This, of course, is the great secret about existence on the earth, and we can look at the evolution of the human ego in this way. We then have to see that man actually is not truly at home on earth. He is truly at home in the star world, extending over the far reaches of the cosmos to embed himself in the warmth-ether element. Man comes to endure repeated incarnations to master that which is of the earth. He thereby becomes a participant in cosmic evolution bringing to the spiritual world what the spiritual world needs from earth evolution. The spiritual world is heavily dependent on man to take up his true responsibility which is needed in the spiritual world.

With this much said, let us again turn to the etheric, considering the four-fold nature makeup of the ether. We have to consider that three other ether states are yet possible and have to be unfolded. This is what we have to consider at this moment.

We have often shared, we have often spoken of a warmth state of matter. Warmth ether melts into the warmth state of matter. One often refers to warmth, but warmth is actually a dual entity. It was the Rosicrucians that

tried to work with this duality in a knowing way. The airy we note is penetrated by light ether. Light ether sustains the airy condition of materiality. The watery is sustained and conditioned by chemical-ether and the solid by life-ether.

What is now very important is to consider that the ether that brings about states of matter can, in a way, be considered to be bound ether. This is the etheric which works in such a way that the ether is not perceived as such, but the states of matter are evident. There are also three other states of the ether at work, but they work more independent of materiality. Here the ether comes more into its own. Here is where the human soul is sustained or can be driven by the etheric. We can speak of ether that supports the soul in thinking, an ether that supports the soul in feeling and an ether that supports the soul in willing.

I have found it most helpful to consider the seven-folded ether makeup by repeatedly looking to what Rudolf Steiner has developed in Theosophy, particularly in relationship to the astral world and Kamaloca. Here he tells that the soul after death moves through an astral ether world, a world where at first the physical has been predominant. He speaks of an astral world where the solid, the watery, the airy and the warmth elements have their origin. Here we have a world, an astral world where the physical, at first, predominates over the ether, but the soul lives into this condition of ether working. Rudolf Steiner tells that the soul experiences burning desires, mobile sensitivity, wish, like and dislike in the four lower regions of kamaloca – the astral world. He then enumerates three other soul workings after death. These workings are soul-light, soul-force and soul-life. Here we can consider the astral world supported by the etheric where the soul journeys and becomes independent of the physical. The soul moves towards the pure ether world of the sun where the soul as astral being can come more into its own. In these higher realms of kamaloca, we have a working of the ethers that are refined and free of the physical. The ether as light-ether works more independently for the soul. The ether as force works more independently for the soul, and the same can be said for the life that works independently for the soul after death. Slowly the soul journeys on to the sphere of the sun.

By this means, one can contemplate seven ether conditions. Essentially I am suggesting that cosmic evolutions have given the four ethers. The human soul works through earth life to evolve and refine the ethers in relationship to the soul in the upper regions of Kamaloca or the astral world. By man, three more ethers come about.

As this is not yet complicated enough, I would like to suggest that further evolutions in relation to the ether world are needed. These are loftier ether worlds brought about by the separation of the sun from the earth. These higher ether worlds (Cadman ether) create a basis for the kingdoms. Here we can delineate a continental domain, an oceanic, atmospheric and a human creative domain. Here we speak of lower Devachan. Devachan is supported by ether. Here the astral predominates, but is configured by ego to become kingdom. In the highest Devachanic world we have a further refinement of ethers. Here the astral dominates the etheric. To some this might seem strange as at times it is considered that the etheric is totally dropped away in lower and upper Devachan. I gather, however, that this is not the case. Ether elements have to be evolved and taken into Devachan, that is Rupa, as well as Arupa Devachan. Here the evolutions serve that which is the nature and the principle of mothering. Here we find the eternal feminine, as well as the ether that is connected with the son born of the mother in Arupa Devachan. Man as a higher being is born of the mother (lower Devachan) to become a son in upper Devachan (a Sophia being). From beyond Devachan, man is born of the father.

Here I have tried to intimate that the etheric is worked at in an ever refined way. There is an ether that has been worked at in relationship to earthly evolution. This we have grasped as the four ethers to be evolved to seven. But there is also an etheric process that lies at the basis of “heaven” – Devachan – Cadmanic ether. We can say this is an ether world that belongs to Adam Cadman and the province of the Sophias. I tried to begin to address this Sophia world when I spoke to the four Marys in the first lecture.

I believe that it is extremely important to take up these matters here since consideration with the animals asks that we move into the world where the astral predominates over the etheric, to lay a basis for the birth of ego, or true individuality. The course of our consideration here has been to pick up the earthly-physical, the living, the animal, and finally egoity. The theme of egoity and individuality runs throughout this course.

With this background, I think it is well now to progress to the world of the plant and more directly to what is given here in this course.

It will be noted that Rudolf Steiner speaks about the tree to begin with. He speaks about the intense astral around the crown of the tree and the poverty of the ether at the root of the tree. At the crown of the tree is the bird. At the root of the tree is the worm. The bird swims and works within the realm of the astral that surrounds the bowel. The heavenly bowel is a fairly lofty realm of ether-astral existence. This is an intense astral existence. The astral supports, we can say, the kingdom of the bird. The root on the other hand

brings about a very mineralized condition of the earth. It is required that the worm which is a “bowel” animal, mediates the ether between earth and plant in the region of the root. The worm is a being who lives as astral in the ether closer to the physical. The bird we see is a polarity which weaves in the astral, that rises more towards the zodiacal-star. Thus we can look at the tree as a being which on the one hand is connected in its root with the worm, and on the other with the bird in its bough. The tree between the root, mineral, earth and worm and the bough, heaven and bird, exists within a polarity. This is a beginning of a classification of the animals in the light of the tree – the tree of life.

The tree of life is embedded in the earth where there is an ether element. The tree of life is embedded in the heavens where there is a predominance of the astral. In terms of the ether cosmos, we have to consider the worm in its relationship with lower Kamaloka and the bird-butterfly with their relationship to the lofty domain of Arupa Devachan. With this tree and its animal life, we can traverse the entire etheric cosmos.

Now if we progress through the lecture, I believe we can develop our tree of life and the animals connected with the tree of Life. This is not so difficult to pick out from the lecture, as Rudolf Steiner connects the root of the tree with the worm and the bough of the tree with the bird. He then tells that the mammals are related to the bush. Next the insect is related to the herb and the parasitic life is very much connected with the mushroom. With the mushroom and parasitic life, we make the transition from the lowest form of plant life that gradually approaches the mineral. The worm is related to the root. The transition from plant to mineral might be considered to be the mushroom, to bacteria, to virus (plant crystal) and then to the mineral. We are descending to a condition of living mineralness. In descent, we have the living condition of the plant world.

Let us now move to animal life. I think it is worthwhile to turn to a taxonomy that relates the zodiacal circle to the class of the animals as they are known to science today. I will take the relationships of Zodiac to class of animal as given by Dr. Koenig in his lectures to farmers, taken from the book, Earth and Man. One can find other variants and relationships.

However, for our considerations here, let us use Dr. Koenig as a reference as he in these lectures makes a gesture as a physician to the farmer.

Let us begin with Aries. It is said that this constellation is connected with the Tunicata, a kind of tubed-digestive tubed animal. The Ecodermata, the star fish, as example, are related to Taurus. The Coelenterates, the animals with a coelom, are related to the twins, Gemini. The Protozoa are related to Cancer. Moving over to the mammals, we have been considering, the cow and the

deer, these are related to Leo. The bird family, the class of the birds, Aves, are connected with Virgo. The reptiles, the snake, the frog, etc. are related to Libra. The water-earth animals, the Amphibia, are related to Scorpio. The fish class is connected with Saggitarius. The Arthropoda, or the animals with segmented limbs, are connected with Capricorn. Here we find the butterfly. Moving on in the circle of the Zodiac, we come to Waterman, which is connected with the worms, or the Annilida. The Mollusks are connected with Pisces, the region of the fish in the cosmos.

If we enumerate these relationships, we can consider how the star world around us so works to fashion and bring about animal life. It is the animal life which is given by the star world. These animals have come out of evolution. We have to say however, it is our task now as a farmer to bring about different relationships in this animal world, and we can do so by our farming. We can do so by bringing the animal-zodiacal world in relationship to the planetary world and in relationship to the earth. We then can enumerate our animals not in a circle, but in a vertical linear form in relationship to the earth. If we try to do this, we can come up with quite a different picture of the animal kingdom as we work with it in relationship to the plant, to the earth and to the cosmos.

Let us then precede to our tree of life and enumerate animals in relationship to this tree. In the process, we have to incorporate the mushroom, the herb and the bush into the tree and thereby include the animals into this tree of life. It is this tree of life that we can cultivate as a farmer.

Let us start with the root of our tree. We have noted that the worm exists and lives regulating the ether realm in relationship to the root of the tree. It is in relationship to the root that the mushroom exists, as well, so that we can speak of the protozoa as a parasite, the fungus, bacteria, and viruses that live in relationship to the root. As we know from Rudolf Steiner's lectures on the plant in relationship to the animals in his cycle on Man as a Symphony of the Creative Word, we are told how the frog, the toad, the lizard, the reptile, the amphibia live in relationship to the root nature of the plant. These animals are related to the solid where the gnome is at work. Therefore in the domain of the root of the tree, where we have to include our mushroom and the herb as well, we can place the fungi, the bacteria, the protozoa, the viruses. We can consider the reptiles and some of the lower amphibia.

As we continue our contemplations and move from the solid to the watery, in relationship to the stem and the leaf of the plant (tree), we are told that the fish belong here. It is here that the undines have their life. In the case of the

reptiles and lower forms of animal life, the gnomes have their existence. This is well spoken of by Rudolf Steiner in his lectures in Man as a Symphony of the Creative Word.

As we ascend from the solid and to the watery, to the airy, we come to the amphibia. Here we are in the domain where the sylphs are at work. Some amphibia belong to the lower regions, to the watery realm of substance – as for example the tadpole conditions of animality. We then have the amphibia connected with the undines (tadpole). As the mushroom world is connected to the watery, to the dark, we can rise with the herbaceous into the airy. We can rise from the watery more into the airy-warmth world. Here we find the herb with greater astrality. There next follows the bush. The mammals are related to the bush. The bush which is often cultivated by man as the related animals are husbanded as well.

From the bush, we can again rise into the bough of the tree where the bird holds sway. Rudolf Steiner tells us that the bird is a being of warmth. The bird is a being that exists in the heights of the ether world where astrality is predominant.

We still have another step to make with our tree of life. We have to consider this is connected with the flowering tree (or plant) and I suspect also the fragrant herb. Now we come to the domain of the butterfly, the arthropodic butterfly. This is a being of light. This is a being who goes through four metamorphoses. These four metamorphoses reflect the evolution of the earth. The imago points to Saturn evolution, the chrysalis to Sun evolution, the caterpillar to Moon evolution and the egg to Earth evolution, the sun-earth. The butterfly lives in the cosmic memory of our earth, in the ethers that serve cosmic memory. They are a reflection of this domain. They waft about the trees with blossoms and very likely the herbaceous plant.

Thus we have a tree of life. The roots are connected with the mushroom.

Then we can rise to the herb that rises out of the root to become a plant. The bush is a further progression in the evolution of a tree, a tree of life that can support the whole man. In the bush we find the mammal, in the tree bough, the bird and in the blossom – the flowering bough, we find the butterfly.

This encompasses the tree of life in which man as an ego being can find a reflection.

Now let us turn to the ether world, and I will try to make a correlation with the various ether worlds which I have been trying to develop. These are actually ether worlds in which cosmic memory is developed. It is in the ether worlds where the true egoity of man will be found, not his personalized ego,

but his cosmic ego. This is a highly complex story of the ether-Akashic world. Some may be a bit taken back by this effort to sketch the complexity of the Akashic World.

Let us start with the herb. The herb is very much a reflection of the states of matter. It grows in relationship to the solid, the watery, the airy and the warmth. The earth states, in a way, point to the domains of the lower astral world. There we find the soul after death going through an evolution, slowly laying off the experiences of earth life. The herb is closely related to the earth. The herb has working in it the ether which is connected to the solid, the watery, the airy, the warmth. The human soul at death weaves into the working of the herb where slowly the cosmic memory process is worked into the realm of the solid, the watery, the airy and the warmth. We have been told how human culture began by weaving its memory into the life-ether (solid), at the time of the Persian Epoch. In the time of the Egyptian Epoch, human culture worked its way into the water ether of the astral world. In the Greek Period, the human cultural striving wove into the ether working of the airy. Finally with the time of the consciousness-soul, this cultural epoch, man weaves his deeds of culture into the Akasha of the warmth ether. I like to consider that it is the herb which is a reflection for the cosmic memory of man's cultural evolution.

The next step can be taken by considering the tree. The tree is a being that bears cosmic memory. I tried to point out how, in fact, the oak tree with its acorn, gall and leaf, point back to the realms of earth-cosmic memory. As the herb relates itself to human cultural cosmic memories, so the oak tree with its constructs in the bough belong to the realm of earth evolutionary memory. There we carry the earth back to its beginning. We can go backward in cosmic memory from Atlantis to Lemuria to Hyperborea and to Polaria. It is in this region that the insect and the bird have their existence. The bird and the insect are busy in the bough of the tree.

With the herb and the tree we have the workings of cosmic memory processes, of human cultural evolution and then earth-cosmic evolution. We have further states of evolution to take. We have yet to go into the cosmic evolution of our planetary existences, that is earth, back to Moon, back to Sun evolution and back to Saturn. Now we can look at the insect. We are told how the egg of the butterfly is laid on the leaf in the sun. It points to the beginning of earth. The insect-butterfly egg on the plant leaf can draw us back into the past. It is the realm of our current sun. It is the realm in which the memory of earth beginning is kept. The etheric sphere is that of Mars. Earth memory is raised to the sphere of the sun. There in the leaf with the egg of the butterfly, with our present sun, we have the cosmic memory of the

beginning of our earth, the etheric physical condition of very early Polaria. We can then progress into cosmic memory reflected in the insect as we move to the caterpillar. There we find the memory of the old Moon evolution. The caterpillar of the second stage of butterfly unfolding is a reflection of the memory working of the Akasha from old Moon. We can still progress back to the old Sun evolution. This is sun in the chrysalis forming activity. The shell of the chrysalis, Rudolf Steiner tells us, is the woven light of old Sun. The cosmic memory from old Sun weaves and works to bring about the light woven ensheathment of the chrysalis. As a final step we come to the imago, the butterfly itself – a light weaving astral being which points back in cosmic memory to the old Saturn stage. Here we have an astral being, the butterfly which reflects the most ancient of memory. It is a living astral being. It contains the etheric, the life of the heights of cosmic memory. At the same time this animal transforms physical substance into its finest state. The dust of the wings is a condition of physical substance – of the finest nature. This is a light warmth physical dust substance which is wafted into the far reaches of existence. We can say that there we find the physical that is also transformed into almost its primal condition. It is not the primal condition of substance which is carried within man but this dust points to the fact that this light weaving of the butterfly, which is so astral, active, also transforms physical substance which helps support the cosmic memory which lies in the nature around us. What we have just delineated here may be complex for some. I hope not too much. We have tried to speak about the tree of life. In the latter section I have tried to pick out how this tree of life relates itself to the cosmos and can become the basis for cosmic memory process for the Akasha. We have the Akasha of cultural evolution. We have the Akasha of earth evolution. We have the Akasha of cosmic-earth evolution that goes back to Saturn. We have in our physical presence mineral, plant, and animal workings that permits us a view into this memory. This is a memory that has to be cognized when we come to seek true ego perception, to perceive the ego as a cosmic star being. We have to come to this memory in order to ask how we can go forward. It is by working with the animal nature that we can do this and in order to speak of the future, we have to speak of the animals that are closest to man and which take us into even loftier realms of ether existence where we speak now not of cosmic memory, but of cosmic intention, cosmic purpose, cosmic seed potential. We have looked to the plant around us, to the tree. We have looked to the animal kingdom. Now we have particularly to look to the mammals that are close to us. It is they we have to cultivate, that we have to bring into the

sphere of our own existence. The insect lies quite distant from us. Most of the animals do, but not the mammals, particularly the cow, the horse, and the pig – not so much the birds. Birds take us forward. If we look at the animals that are closest to us, we then come to a conclusion that these are beings who are capable of bearing something of the impulse, something of the influence of an ego. They are close to us because they carry something of that in their own nature that tends towards ego. We have to consider that they can be taken with us into the realms of the loftiest ether domains, but more so into the predominantly astral world of Arupa Devahan. It is there where the future can be molded. We are not dealing there with memory process. We are dealing with action, will, love process. We are there concerned with these beings whom we often can speak of with love, heartfelt, deep felt, warmth love. We can speak of how they lead us to realms of existence where new initiative can take place. Where we work with these animals and the tree of life, we then come to the realm where the future dawns. I take it we can be fired by the spirit – Salamandric fire.

As we consider our tree of life and the animals, we come to the domesticated animals. They belong to us. It is they who point the way to a realm of existence that is to come and not so much to the realm of existence that has been. The animals that stand around us take us into these regions. This domain has already been well discussed by our apocalyptic writer, John the Evangelist. The animals that we work with in order to come to very lofty regions of existence, which also point to the future, are the realm of the eagle, the lion and the bull. As we work with these three, we then come to the realm of man, the realm of individual and ego potential – true ego – cosmic ego.

As just noted, we can relate our tree of life to much of the animal kingdom. As we deal with the mammals that become more domesticated, we have to consider how these animals are in a way humanized. They also come from a sphere of activity of existence that is connected with man. This, as I understand it, is addressed by speaking directly to those three beasts which were in a way there in the beginning, formed themselves in the beginning out of man. In a way they become the cornerstones of all evolution and existence.

Man, with the lion, the bull and the eagle, we can say was outspread in the astral-ether cosmos of the beginning. They remain there as potential for man. As man takes hold of this potential, he lays the basis for the future. By relating these animals to our tree of life, we can relate those who are on the way to egohood, to our future. We then can work the earth and the plant in such a fashion that they will become more and more related to the ego

principle. This permits the incarnation of the ego principle into our farm. It also permits the ego principle of man to find an exact correspondence in the world around him. What will be noted is that all that is present in our tree of life is also present in man. When we have the earth with the tree of life and the animals, as well as domesticated animals just spoken to, we then have a macrocosmic reflection of the individual microcosm within man. This is all necessary for the bringing forth of the individuality of the farm.

Now if this isn't complex enough, let us try another step in complexity and turn to this microcosm of man. Let me try to suggest how we can try to find the kingdoms and these animal beings in relationship to the human being, the human physical makeup. What I share here, I believe you can find very much in Rudolf Steiner's cycle on Man as a Symphony of the Creative Word, though what I share draws heavily on a good many year's search.

In order to make this next step, this step into man, let us begin with man's gastro-intestinal tract. Let us start by laying man down and think of a tube that runs from one end to another. This tube can be envisioned as the gastrointestinal tract. This tract is related to the root of our tree of life, where we can speak of the protozoa, the reptiles and the lower forms of the amphibia. The snake family Rudolf Steiner again and again relates to the ureters as they rise off of the gastro-intestinal tract. Thus, the gastro-intestinal tract becomes the region within man where the tree of life is anchored. The lower form of animals spoken to in the Agriculture Course, related to the tree root – all of this is connected with these lower kingdoms, of the lower forms of animality in the animal world.

Now just as the mushroom, the herb, the bush and the tree grow out of the earth, we can think of our organs that grow out of the gastro-intestinal tract. In fact, this is actually the case. The liver with pancreas grows out of the gastro-intestinal tract embryologically. The lung and a good segment of the trachea and larynx grow out of the gastro-intestinal tract, as well as the thymus gland. Inherent and embedded in this growth is also the basis for the unfolding of our endocrine glands. Thus our inner tree of life is embedded in our intestinal tract. It ascends and rises into our organs, structured a bit like bowels (flowers) or crowns (trees). Our organs become the region of astral concentration as in the flower or tree.

Now we have to make a bit of a jump and ask where the water born animals exist within man. Here we have to think of the mollusks, the tunicata, the echinoderms. These animal beings have a correspondence within the skull of man. These animals, like our brain, swim within a watery world, encased within our skull. That which occurs within the shells of the mollusks is reminiscent of the brain within the skull.

If we turn to the fishes, we might consider all of our organs. They are all ensheathed within watery spheres, such as the intestinal tract. All our organs are encased within linings, which have potential watery spaces. This is all the realm of the life of the fish.

Therefore, we can see our tree of life anchored in the gastro-intestinal tract, rising into the bough of our organs. If we contemplate the endocrine glands, they remain closer to the bowel – to the earthly nature of the bowel. The endocrine organs are more like the herb, if we contemplate the tree of life. The organs which grow out of the bowel are raised into the waters of the skull. There we find the animal life of the mollusks, tunicada and echinodermata. All organs swim like fish in a sea, in a sea of life, in a watery domain. This is particularly evident with the brain, but it is somewhat the case with all organs.

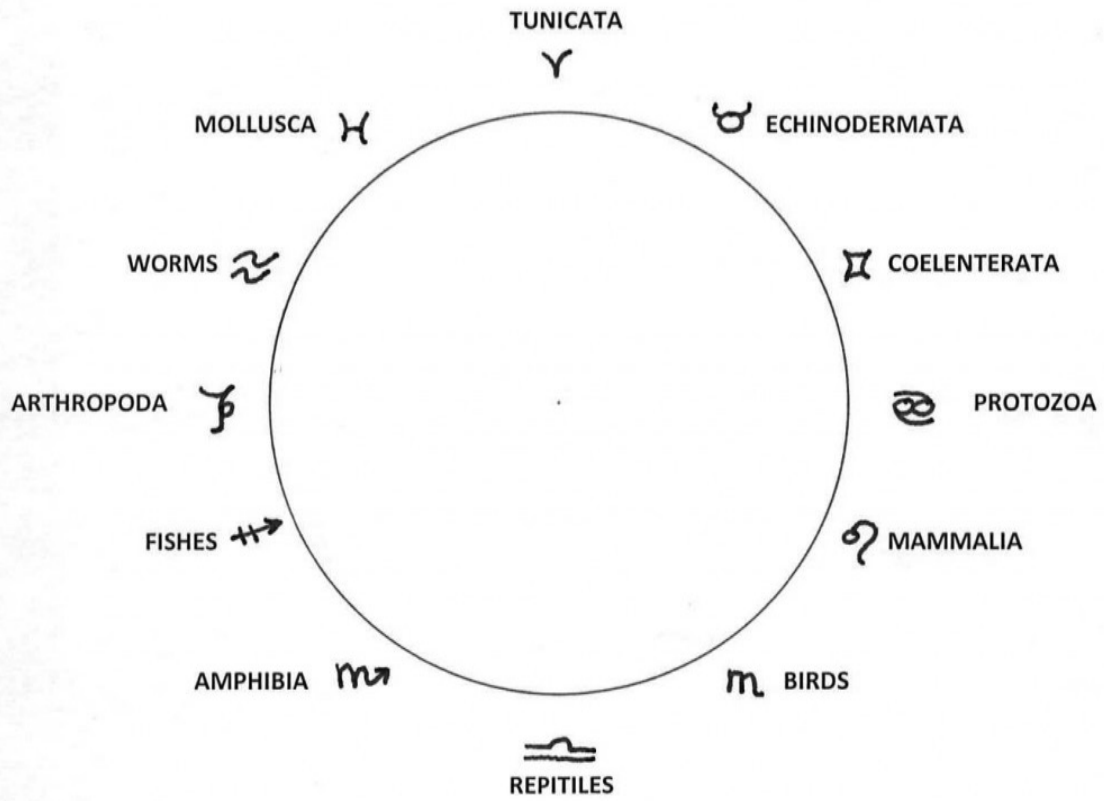
From here, we can pass on to the human senses. The human senses are in a way the projection of the world into man. There we can consider the evolution and the development of the Arthropods, particularly the butterfly. In a way, we can say that the human eye can be used as a prototype, as an archetype of all senses. The germ egg of the eye (perception) (stimulus) is laid in the sun (any object). There is a growth (sensation) within the living world. A light chrysalis process (impression) occurs in the visual field of the eye. The imago rises as an image in the human soul. On the other hand, the eye grows as herb out of the brain. The eye is only the root-physical structure of the herb. The main portion of the eye is etheric. (note – see page 121 – Man as a Symphony of the Creative Word for this description.) The human cognitive faculty grows out of the sun like the unfolding of the butterfly. This faculty comes to rest on the retina and the vasculature of the eye which has grown into the light like an herb. Butterfly and plant meet in the visual-image activity of the eye.

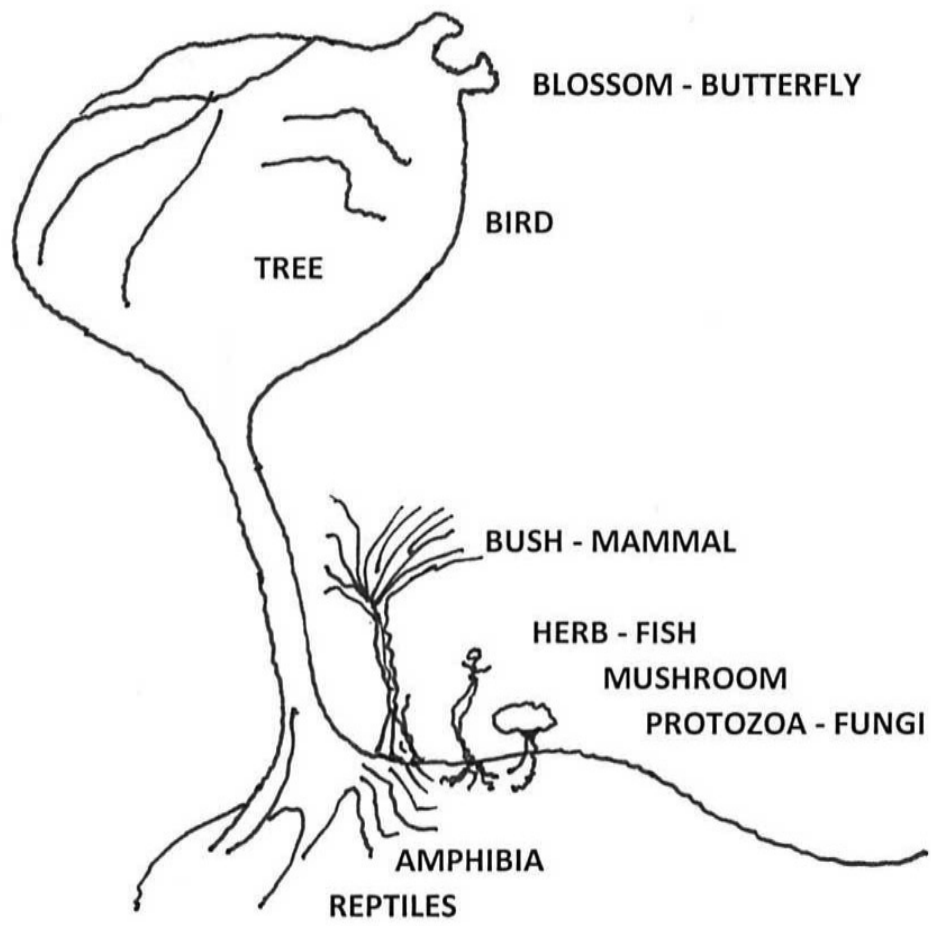
Our last step has to consider the evolution of our inner organs. They belong very much to us. They are close to us. These inner organs can be seen as the apocalyptic animals. Rudolf Steiner has discussed this very extensively in his lecture cycle on the occult unfolding of the human being. The Effect of Occult Development on the Human‘ Sheaths is a lecture cycle where this is discussed. In this cycle, he tells how the lung transforms itself in clairvoyant perception into the imagination of the eagle. The heart transforms the form of a lion and the liver transforms itself into the image of a bull. These are organs that have a potential for evolution to egohood. They are organs which are carried over from the beginning, but also live so that they can furnish a

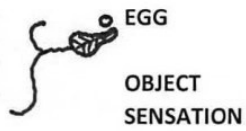
basis for the future. They are the basis for what man uses to speak, to give birth to the word which is an expression of man's activity into the future. By this trend in thought, we can look into the realms of nature to discover the world about us. We can also look into the human being, into his purely organic structuring to see there a microcosmic correspondence. Man can work with this microcosm, looking to the future. Man can also work with the macrocosm, his immediate environment to bring about a condition for the future.

It is futuristic activity, as I understand it, that Rudolf Steiner is trying to encourage.

This is the basis for this Agriculture Course and for a new animal taxonomy.
Paul W. Scharff, M.D.





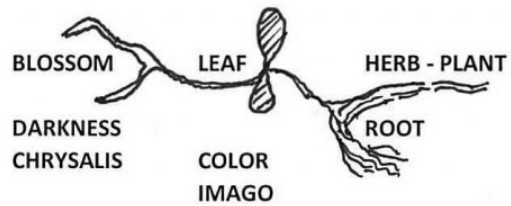


THE ETHERIC OF VISION

BUTTERFLY

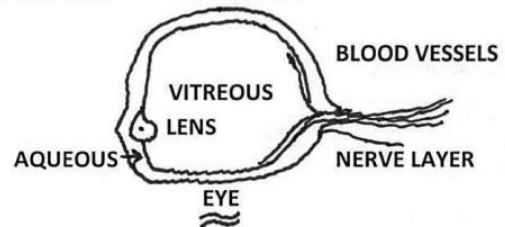
CATAPILLAR

IMPRESSION



PERCEPTION

CONCEPTION



Agriculture Course – Lecture 8

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As we take up this last lecture, I believe it is a good idea to develop another perspective. We can do this by going back to the beginning and make our way to this last lecture. By this means, I think we can get a better appreciation of where this last lecture stands in the course.

To begin with, as I have noted previously, it is well to consider this course, this cycle, as one given out of the etheric world. The signature of this is the continual reversing that can be found in the cycle. The diaphragm of the earth with the human lung below and the abdomen above is a reversal for the human being. The human being is presented as a reversal of the plant. Both of these examples point to the fact that we are leaving the physical and entering into the etheric world where much that has to be cognized is perceived in reverse. This is very much the case as we open the course in Lecture 1.

A first approach in this course, while standing in the ether world, is to take up the physical-mineral. Almost immediately breathing is taken up. There is a breathing of the earth. The earth is structured so that a breathing can occur. Thus we begin with the earth surface as a diaphragm. We continually hear about breathing of the earth through the seasons. There is a breathing of the soul of the earth. Here we are speaking more of an actual physical breathing process where there is an exchange, a movement of air and warmth. The earth aspect that we are concerned with is that of agriculture, so we have to identify the earth, the land that is tilled.

This earth, land, and soil can be spoken of in a three-folded way. There are calcium-loam-like soils. The opposite of this is sandy soil. In between lies clay dominant soil. Sandy soil we can relate to air, warmth and light. Calcium-loam soils can be related to water, cold and darkness. Clay soil mediates between the two as a colloidal, watery entity. Thus our soil-earth can be spoken of in a three-fold manner. The silica-sand with air-light and warmth related, clay with water and solid, and loam with solid, water and coolness – all three make up our soils. This identifies the physical, the physical-earth, mineral earth in this lecture cycle from an etheric perspective.

The next step is to speak to the etheric of our agricultural individuality, the etheric of our farm individual. Note can be taken again that the entire cycle, though etherically oriented, starts out with the physical. Next we need to concern ourselves with the etheric. In order to take up the etheric, we have to

consider the activities, the chemism of the earth, the chemism of the plant, the chemism of the animal. Here we have to begin to be concerned with the biological activity of the earth and very much with the biology of the plant. We noted that our mineral-breathing soil is concerned with silica, calcium and aluminum. Next we concerned ourselves with the plant. We took up carbon, oxygen, nitrogen, hydrogen and sulphur. (As noted, I added antimony.) Next, plant preparations (and animal sheaths) were discussed. These preparations when added to manure to make compost, help to individualize the life processes of the earth. These processes, dynamic processes, we want to carry into the plant. In this way, we can steer the biology of the plant. The biology is in part reflected in the chemical transformations of the substances just noted – carbon, hydrogen, oxygen, nitrogen, sulfur and phosphorus.

These substances we have described as beings. We have described them as the daughters of the mother substances of the earth and father substances of the cosmos. The chemism of our modern day can be made anthropomorphic and living. The chemical elements are given a beingness which the chemistry of our day avoids – in part legitimately. Our task is now to return to beingness. This way of designating chemical substances is now important. This permits a further step in considering substance transformations in plants. There are transformations that are not only bio-chemical. The transformations of carbon, oxygen, nitrogen, hydrogen and sulphur and the like, we can speak of as metabolic-chemical transformations. We have to take another step in considering the chemical substances. When we evolve the beingness of substance, we lay the basis for taking up the transformation of the beingness itself – not only the relation of the substance-beings to one another as in the biochemical changes in respiratory metabolism.

This means that we are not only dealing with fixed substance, fixed beingness. Chemical elements-substances, as beings, can be transformed so that substances such as calcium can be metamorphosed and transformed into nitrogen substance being. This is part and parcel of the life of the plant – influenced dynamically by the earth and cosmos. When substance becomes being and is consumed by man, then being meets being. The human being meets the being of substance. By this route, we come to alchemy or a new alchemy. This alchemy speaks to the being of individual substance transformed by the being of man.

The main biological transformation that we have discussed in the plant we have addressed as respiratory metabolism. In respiration, we have the impulse for chemical transformations that touch the domain of the soul. In breathing, there is an exchange with the world that touches the chemism of

the plant. This is also the case with man and animal. With respiration, with the chemism connected with respiration, something of soulness enters the transformations. Only in man does soulness become individual. We, however, have to attend to the earth, the plant and even the animal so that they lay the potential for individuation which is the inherent make up of the human being.

Thus we have considered our earth from an etheric-physical point of view. We spoke of the physical when we spoke of the soil. We next spoke of the etheric when we took up the biochemical transformations of the plant. We have looked at the breathing soil and the respiratory metabolism of the plant. We have moved from the physical to the etheric.

We made yet a further step. This is, we moved from the physical to the etheric to the astral. The astral in this course is taken up by considering the animal. In the ether world at hand where we culture our earth, we took up the physical, the etheric and then the astral. By taking hold of the animal world, we are introduced to the astral. In the animal, we have the astral revealed. The animal is part of earth culture and is part of the farm individual. With the physical earth, we spoke of breathing. We added the plant to the earth and spoke of respiration. With the animal, we began to address the processes of reproduction. It is the animal element that brings the process of reproduction to the fore. If we would remain with the etheric, we would have nothing but a continuity, a repetition, more or less of the same. With reproduction, we have a process of copying. What has been created is copied, imitated. With reproduction, we do not mean necessarily there has to be a sexual aspect – animal yes – sexual no. In reproduction we merely speak of the evolution of the life processes to permit copying – reproduction. That which carries within it the process of imitation, copying, is the astral. It is the astral that wants to make a mirror of that which has been brought forth. It is the astral that wants to separate off what is copied. We can think of sympathetic copying (imitating) and antipathetic separating (copying). The astral permits the daughter to appear like the mother or as we say the son like the father. It is the working of the animal-astral that begins with imitation and follows with separation. We can think of the mother-element as sympathy and father as antipathy – anthropomorphically. This lays a basis for the next step which is that of individuation – birthing of a child. It is the process of individuation that we have to consider here in this course. The activity of the animal is important in this line of this unfolding.

As we have discussed, Rudolf Steiner gives us a new taxonomy of the plant and the animal. He does this so we can evolve the farm and the individuation of the farm. We spoke of the tree of life. This tree of life is made up of the

mushroom, the herb, the bush, the tree and the tree with the flower, blossom and fruit. These four to five forms of living plant belong to the tree of life. This tree of life is a reflection of the human. It is the human being who has to develop his being, his individual-human. The unfolding of the tree of life is necessary. The tree is the most complete expression of the plant mirroring man. Here the tree is five folded – mushroom, herb, bush, tree and flower. We have discussed the tree from the point of view of the three systems – the trachied vessel system with the zylem and phloem. We have looked at cambium. We have also previously noted the tree as a two-fold entity. The upper reaches come out of the cosmos and are herb like. The herb expresses itself in a fluid root system that becomes the cambium of the tree. The trunk and part of the leaf system we have noted is constituted by the zylem and the phloem. Here we find the earth and life saps in process.

This four to five folding of the tree is another aspect – another view. It is the tree in the image of man. It is the tree of life for man. Let us start with the mushroom. The mushroom is very much related to water and the solid. This speaks to the root of our tree of life. The herb rises more out of the watery into the airy nature and speaks more to the leafing, airy, constitution of the plant (tree). As we move onto the bush, we come to the actual structuring of the plant which manifests itself in a full unfolding of leaf moving onto the flower and the berry. Finally we rise into the bough of the tree where the crown of the tree reflects the descent of the heavens into the world of the living – the plant. In the crown we find the flower, fruit and seed. These three, as heaven descent, lay a foundation for the future in nourishment and seed. As we have risen with plant structures, we have moved from the solid, to the watery, to the airy and into the warmth. As we have come into the crown of the tree, we have come into the working of the airy, light and finally into the warmth-ether domain. The light ripens our fruit and the warmth gives birth to the seed of the future.

We can embed this tree into the human life system, man's organism. Man carries the states of matter. He carries on the workings of the tree in substance, as a basis for soul life. The ethers of warmth-light-tone and life support the soul and as well fashion the organism. In the outer tree, the animal lives in connection to the tree of life as our soul lives in connection to the free ethers. Each of us has a tree of life embedded in the physical – continually giving life, but as well giving rise to freed ether forces for higher animal life – our soul.

As we look to the tree of life, and we consider our soul, we have to consider our evolution from animal soul to spirit soul. It is this soul animal nature and its further evolution that permits the unfolding of the individuality. In this

course, we make the next step from the tree of life related to animals to man's tree of life associated with this tree. We have noted that the amphibian, the reptile and lizard are associated with man's tree of life. Man can redeem the animal working. The mushroom-tree is associated with protozoa, fungi and I add bacteria and viruses. As we ascend the tree to the herb, we come to the domain of the fish. Our next step is to take up the bush and there the mammals find their life. As we rise further in the tree of life, we finally come to the crown where the bird lives. To complete the tree of life, we have to take up the flower, the fruit and the seed. The insect – the butterfly lives in relation to these forms of life. Man redeems all these animal forms and activities by transforming his soul.

As we look into man and see that he encompasses the sphere of the tree of life, we see that he has a soul – carries on a rich soul life. Man has cast out the animal to retain the life for his soul. Man uses the freed life for soul faculties, activities and future potentials, making animal activity into higher human functions – eg. thinking, judging, feeling, etc. In our previous discussions, we saw that the lower animals, the uni-cellular organisms, the ensketed creatures, as well as the reptiles and amphibia, all speak to the past. As we come to the present, we approach the mammals, and as we look to the future, we have to take up the insects, especially the butterfly. We can see man's soul life transformed in the light of these animals. In previous years, we have taken up numerous animals in relation to man. We undertook fairly extensive contemplations in our Path Through Nature. We discussed this path in many meetings of ANTHA.

We began this course, and we considered the element of mothering and fathering. We associated this with breathing. We then moved to the domain of sons and daughters in respiration. Here in our present contemplations of the animals, we move to the world of male and female. If we take a moment to think over what we currently consider mother, father, son, daughter, male and female, we might consider that these designations could reflect significant processes inherent in man's make up and function. These social designations carry deep biological functions as a foundation. These designations reflect mighty cosmic processes involved with the unfolding of the human being as an individual. These designations are very much connected with agriculture, with the etheric of agriculture, with the differentiating of the etheric from living to soul and to spirit. These designations belong to our agriculture, a true agriculture that leads to the human spirit, to the individuality.

By this means, we arrive at our last lecture. We first contemplated breathing, then respiration and reproduction. We now take up nutrition. In terms of

social man, we can say brother and sister. I have developed this line of thought so that we see nutrition directly connected with the individuality, with the human spirit and with social life.

By and large, nutrition is seen as the making of man from a materialistic point of view. What we have here in this course is to cultivate the earth, the plant and animal so that the human spirit can bring forth new substance, bring about new creations in existence. Nutrition then has to be followed through the entire course as we have tried. We have to follow nutrition in relation to breathing, respiration and reproduction. We culminate with nutrition when we consider that the human spirit has to unfold. Nutrition has to support the human spirit, but the human spirit in turn can actually mold and transform that which we have as the nutritional aspects of human existence. By this means, nutrition becomes a very central issue in the process of individuation when unfolding the human spirit.

It is unfortunate that nutrition becomes such a fanatical issue, though our line of consideration makes it understandable. This fanaticism is spoken to in this lecture. Rudolf Steiner speaks of the food fanatic, the raw food crank. Nutrition tends to give birth to fanaticism. Fanaticism is a typical expression. This has to be so if nutrition touches our core as we are considering here.

My thesis has been that there are as many diets as there are individuals.

Also, nutrition is often seen in terms of what is eaten. There are prophets and dogmatists for almost any aspect of nutrition. The nutrition that is spoken of here is perhaps the most singular of all. This is a nutrition that permits the evolution of the human spirit and an agriculture that supports this spiritual goal.

Most interestingly with nutrition we find that groups come to associate on the basis of eating. We have a long history of human beings related through blood line, through language, through nation, through a given time. All of this still is somewhat known. Easily overlooked is that there emerges now a relatedness of the human beings through the process of eating together, consuming food together. We can say that we are coming into the time of the common meal. For some there is the individual-non-common meal that is taking over. Meal time lays a basis for a meeting and uniting which is not based on age, birth place, nation, language, people, blood and the like. Meal time makes it possible or should make possible the meeting of human beings based in soul and spirit. If we take the example of the Passover meal or the Last Supper, we might consider that these are two sacred hallowed events which lay the foundation for a totally new encounter of one human being with another. These two archetypes lay a basis to meet over meal time where

we consume food and are nourished. There are studies indicating that if man eats alone he is not nourished.

From this point of view of the human being and his sustenance, we have to realize that the human being is related to the atmosphere, to the earth, to a peoples, to a local circumstance, as well as a blood line. All of these circumstances carry a potential for illness for a given human being. An individual can grow ill because of his incarnation circumstance.

Nourishment has to bring healing as well as sustenance. Further sustenance is not just a local matter even if the local is very important and determinable. The local circumstance we are concerned with – to nourish and heal – is the individuality of the farm. The earth-local has to be worked with. But given the local circumstance, the individuality of the farm has to remain within the context of the earth and the world. This is true for the human being as well. The farm as a segment of physical reality has to remain in touch with the whole. The human being has to as well. That which is local often breeds illness for the farm and for the individual. Needed is to unite the farm and the individual with the whole. While we individualize a segment of the earth, where we create an individual farm, we are actually creating a segment, a local circumstance, which is well embedded in the whole. This permits the human being to have the experience of living locally and in the whole simultaneously. This does not mean that an individual only eats what is produced on his farm. What, however is needed, is that the farm becomes, in a way, a self-sustaining unit. This permits the evolving of a true individual beingness within the local circumstance. Products will arise there. These products are local and universal simultaneously. This permits the individual a local experience and also the possibility of consuming foods that link him with the totality. Foods shipped from the individuality of a farm into the world carry a local impulse, but also a universal one. Farm products carry two qualities that are needed in order that the individual can be a personal ego being, but also a universal ego being. These products are essential for the local-personal ego to overcome his illness, in being nourished. This we try to foster in the individualization of our farm, in the creation of nutritious substance to be shipped out into the world which carries a stimulant for spirit unfolding.

It can be noted that in creating the individuality of the farm, we are not just to produce products that go into the world. We are caring for a segment of the earth that influences the whole earth. We are working into the watery element which goes into the world. We are working with the atmosphere which is likewise world related. The regulation of our animals has an impact on the whole. Thus the individualization of the farm is not just a local issue,

it is not just a matter of producing for a few people in a given circumstance. We are trying to work into the world, while working into a small segment of existence. This small segment of existence permits the unfolding of the person, the singular on a personal level while making it possible for the person to give way to the universal human. This is a matter of nourishment and also of healing.

In order to attend to this evolving of the personal individual and the universal individual, our work with the earth, our work with the plant, animals – all is a necessity. This necessity here appears as an issue of nutrition. (Illness concerns, we have been taking up at ANTHA.) We are not only fed by the substances that are products of nature. We are also sustained by the light, the atmosphere and the world circumstances about us. That is the gist and theme of our last contemplation here. Nutrition is not only earthly, but cosmic as well. We have addressed this previously. Here I would like to recapitulate the whole consideration of cosmic-earthly nutrition and try to suggest that it is far more complicated than what has already been discussed. The theme of nutrition, which is the culmination of this course, supports the unfolding of the individual as an earthly being and as a cosmic being – a cosmic ego as well. This is no easy task to contemplate.

Early on we cogitated the earthly and cosmic nutritional streams. I tried to diagram this in the contemplations on the fourth lecture. Here I would like to take up the same theme from a little different aspect. It will then be seen by anybody who looks carefully that what is given in the fourth contemplation is not exactly the same as what is presented here. This is necessarily so because we have advanced during the course of this cycle.

We can begin where Rudolf Steiner tells that man and animal both have a nourishing system. The animal has a two-folded system and man has a three-folded system. Therefore we have to think that the animal nutritional process is not the same as the human being. In the animal, the two-foldedness is woven together, but in another way. They also can be held separately. I will try to take up the human nutritional process before contemplating the animal nutritional process. The human and animal nutritional processes are woven together here. I would like to try to separate them out and distinguish them. Let us look to the human nutritional system to begin with. Let us begin by speaking of light and warmth. This introduces the nutritional process from a cosmic aspect, that is, from the side of the etheric. Rudolf Steiner has elsewhere pointed out that the etheric begins where the stratosphere commences, where the earth warmth in the atmosphere drops off rapidly, there the etheric begins. It is just there that we have the transition from warmth to warmth ether and light ether. In the case of man, we have to begin

with light-ether. As I have already pointed out, the light ether has evolved in an upward direction. Light ether also devolved, or became condensed in Lemuria at the point where the ego entered into existence. Here light-ether became warmth-ether. One can say this is exactly what occurs with the human being in sense perception where there is an awakening individual. The individual at the door of the senses takes hold and lives into the light-ether element with his astral body. Through his ego, he transforms light-ether into warmth-ether. Thereby the cosmic ether-stream entering man via the senses (which requires thinking), transforms light to warmth-ether. The warmth-ether becomes man's own substance which has a potential for evolving for soul life. This cosmic light ether stream, taken in through the sense by thinking-cognizing man, becomes a totipotential ether substance, warmth-ether substance. This ether in going through its evolution can become the basis for the soul life of the human being. That is to say, the ether can be transformed so that it can become the basis for differentiation for our soul-astral life. Ether differentiations become the basis for thinking, feeling and willing.

In order for the etheric within the human organization to go through its evolution, it is necessary that the human being be anchored on the earth. As warmth-light ether is very much influenced by the cosmos, life and chemical ether are influenced by the earth and sub-earthly forces. Man, as a being, anchored on earth, but also raised out of the earth in standing and walking, can differentiate the etheric within him so that the etheric is transformed from warmth-ether to light-ether to chemical-ether and to life-ether. This inner transformation serves the soul. This requires that man is interdigitated into the cosmos with light-warmth ether above and with gravity, electricity and magnetism under foot, below. This evolution of warmth-ether to light-ether, to chemical-ether to life-ether is an ascending evolution. This occurs within the human being as he is membered into the cosmos and stands on earth. The same hierarchical beingness works within the ethers that are evolving in man, as we previously considered when we followed the etheric evolution during the pralayas that go back to Saturn. The ether evolutions that occur within man, make it possible for the human astral to participate in the etheric evolution. The astral activity we call thinking, feeling and willing.

Particularly in the Pastoral Course, we will find the transformations of the etheric that underlie the human soul. In this course, Rudolf Steiner tells how warmth ether is transformed within man into light ether. This lays the basis for thinking. Light ether is transformed to tone ether. This lays the basis for feeling and tone ether transformed to life ether, this lays the basis for

willing. Again, these transformations require the entire world to be within the process, but the world working is so adapted that the human being can develop thinking, feeling and willing. In order for these transformations to occur, man obviously has to be a thinking human being. He has obviously to be a willing being who walks the earth, stands erect, speaks and feels. Man's astral nature, his animal body, is thereby transformed and becomes soul working. The animals of the tree of life have to become soul faculties. The life (tree) of man serves not the animals, but the soul which births the spirit or the spirit which births the soul. Thus we are pointing to astral evolution, towards personalization, and then to individual enspiritment.

To make the situation more complex, it can be noted that these transformations of the etheric, warmth to light, light to tone, tone to life, can work into the physiology and the physical workings of the human organism. When soul activities are reflected in the body, we speak of sulfur, mercury and salt processes. Rudolf Steiner has enlightened us that for every act of the soul in thinking, in feeling, or in willing, there is a physical counterpart. The counterpart is that of sulfur, mercury or salt activity. These three processes are distinct from the biochemical transformations that underlie the life process within the human organization. The life processes are also distinct from the alchemical substance transformation within the life of the human organization. Etheric processes are met in the senses and here cosmic nutrition takes place by the activity of the personal-individual ego and through soul life the physical body is affected.

This now makes us turn and consider the warmth ether element of the cosmos. Here we come to an extremely complex and difficult situation in our contemplations. What I share here I do not hold fast in a dogmatic fashion at all, but would like to present as a consideration that is vital to what is needed in relationship to the animal. What I wish to note here is the possibility that the warmth ether element of the cosmic substance, not cosmic force, but cosmic substance, warmth ether substance, is not taken in by the human being. Warmth ether for man remains cosmic. As individual, as person, man transforms light to warmth-ether. However, a part of his being can remain as cosmic being in the domain of cosmic ether-warmth substantiality. Man thereby retains a large segment of his true being, his true spiritual being in the cosmos. Man as cosmic ego indwells and lives in the cosmic warmth-ether domain. At the same time, a part of his being works to differentiate the light-ether to form a warmth ether organization that accompanies his physical existence. This permits a universal cosmic relationship while at the same time a personal organic evolution can occur. Here I think it is helpful to consider that this does not occur with the animal.

The animal does not bring about a differentiation between cosmic warmth-ether substance and light-ether forces systems. The animal permits the light-ether force system to enter into his being, unchanged. Warmth-ether wafts through the animal as well. Because of this non-transformation of the light-ether forces into inner warmth ether, the animal does not develop a full individualized, personal ego nature. When an animal gains something of egoity, he gains it from man, by imitating man. This is particularly the case with our domesticated animals – with the beasts of the field that we husband and our pets which we house. Again, I am suggesting that cosmic warmth-ether is not taken in by man. Only the light-ether element is taken in by man and thereby he develops a personal ego. The warmth ether element of the cosmos, wafts through the animal. The animal thereby does not develop true individuality. The animal has only a cosmic ego existence.

Now we have another activity to consider. We move from sensing to breathing. We have noted that man takes in the physical as it exists in breathing. Some of the physical substance of earth is breathed in our senses. Warmth, physical substance, air substances are taken in. Warmth, physical substances are taken in through the senses as well as with breathing. In breathing the airy element is taken in. These are earthly nutritional streams. The earthly forces we have also addressed. They work into the limb system. They work out of the earth. Here the electro-magnetic, gravitational forces work to bring about higher ether functions because man has to work against the earthly forces. These same earthly forces work to bring about the physicalization of man. Without the earthly force systems, we would all be invisible human beings.

The final nutritional process is that where we take in fluid and solid in digestion. We take in mineral, plant and animal substance. We also take in human substance. We take in human substance via the senses. We also take in human substance in our breathing. Going onto digestion, here we take in mineral, plant and animal substances. Notable is that the human being in taking in substance in digestion, destroys substance. Not all consumed substance is destroyed, but much. It is the individual ego, the personal ego, who destroys that which is eaten. Following destruction, there has to be a recreation of substance. This recreated substance lays the basis for what is the substance of our inner organs. As it is our earthly personal ego that destroys what is taken in, our cosmic ego being works to recreate that substance within man. Thus within man, there is also a cosmic substantiality, but this is brought about de novo as far as I can see. Again, the human personal ego destroys what is taken in. This activates his being. This permits the higher ego, the cosmic ego being to work through the lower ego being to

bring about and reconstitute the substance within the human organization. This is a totally radical view from anything that is articulated in science. As far as I can see many involved in Anthroposophical Spiritual Science are fearful to think this thought as well. This means that earth and cosmic evolution is continually added to by what man creates as new substance. Here in man, substance is not only being transformed, new substance is born.

This destruction and recreation of substance is another distinguishing point of man with the animal. The animal does not destroy substances. The animal takes what is of the earth, the mineral, the plant and the animal into himself. He becomes a part of nature's existence. He lives along with it. He does not recreate the substance consumed, because he does not have the personalized ego. It is the personalized ego that destroys and lays the basis for the cosmic ego of each human being to recreate substance within the organism. This recreated substance is the contribution of each individual to the furtherance of world evolution.

I would like to make another comment along the same direction. This is that man takes in substances of the mineral, plant and animal world. Rudolf Steiner tells that because man takes in mineral substance, he is a warmth being. Because man takes in plant substance, he is a watery being. Because he takes in animal substance, he is an airy being. It is actually man's encounter with man through breathing, through sensing and perceiving, that man becomes a physical solid human being. I wanted to add this dimension, which Rudolf Steiner develops particularly in *Man as Symphony of the Creative Word*. This is important because man creates substances de novo and, as well, he brings about states of matter in encounters with the kingdoms of existence. Man brings about the states of warmth, airy, liquid and solid. This is in addition to nutrition through the senses, breathing, digestion and walking the earth.

As we have progressed in this contemplation, we can see that man is a very singular being. He is a being with a cosmic and personal earthly ego. Man brings about an evolution in the ether world and, as well, he brings about an evolution in the physical world. These two activities are not something that the personal ego does out of itself. It requires the participation of many other spiritual beings as man's ego being. Man as the person and as a cosmic ego being, becomes the stage and the arena in which the whole world of spiritual beings live. They work with, in and through man bringing about the differentiations and evolutions that we have just been discussing.

All this is the story of nutrition. This is the story of transforming the ether into higher states of existence. This is the story of recreating substance for the evolution of the world. This story of nutrition is uncomfortable to contemplate because we are such materialists in our day. I do not wish to be held as a dogmatist to every thought placed here or force this on anyone else. However, I believe that these thoughts in their general tendency are commensurate with what Rudolf Steiner has been trying to give in relationship to the nutritional process. Anyone who contemplates this will see how immensely complex it is. I would consider what is shared here as a first sharing on a pre-kindergarten stage of evolving knowledge's that are concerned with nutrition. The story of nutrition, the story of the human individual ego, the story of the human cosmic ego, these are all very much in consideration here.

The subject, however, should not be left without mentioning that in the center of all of this is the Christ Mystery. Just a word said to this would be to indicate that if this Mystery had not occurred, this recreation of substance, this differentiation of the etheric would not occur. True nutrition for further development in evolution of man, of the world, of the cosmos, is incumbent on that which occurred nearly two thousand years ago. What occurred two thousand years ago was already in the beginning.

I would not like to complete this cycle without mentioning a possible archetype for nutrition, for diet. This is presented with the fodder problem for the animal. This fodder problem has to be worked through very carefully in order to see that it could be an amazing introduction into the problem of nutrition – diet for man. Let me briefly share here to make a beginning and hopefully I will have a chance later to develop this further.

Rudolf Steiner begins by discussing the calf that has to grow. He tells that it is important, for proper growth, that the brain of the animal be nourished. This is done by feeding cosmic root substance, such as carrots. It is further needed to add plant substance that comes from the raying blade process – something from the grass family like hay. This gives proper growth. Cosmic substance for the head – radiating substance for the remainder of the organism. This probably is not only true for the calf, but for the human being. The human being in the period of rapid growth would need something. Man needs head substance and radiant substance – perhaps root and grain.

Next Rudolf Steiner speaks about the unfolding of the milk process in the animal. To support this he points to the leaf and particularly the leaf from the legume plant. The plant that concentrates nitrogen, a plant breathed into the

earth, this supports milk production. My question is if the pea family is similar for man – other plants as well?

Rudolf Steiner then goes on to speak of the need for a sturdy limb. There he tells that cooked substances are needed. He speaks of the cooked substance as blossom substance – perhaps fruits to a certain extent. I take it that all human cooking, all cooking and use of blossom substances support the active limb. Cooked food – blossom substance unfolds a strong healthy limb system in the animal, perhaps in the human being as well. Perhaps we might contemplate using blossoms from various plants as a nourishment for those who are weak in the limb, those who tire and are fatigued on their feet. Such plants are ripening plants. Animals need to be drawn to these plants and need to exercise their senses in the process. I gather that animals are losing their instinct for the consuming of proper substances. Sense stimulation and exercise is needed. Animals should not be shut up in a barn. They will not forage properly and eat blossoming flowers. It is interesting to watch cows graze around wild carrots and thistles, but eat daisies.

At times I gather it is also possible to give cooked foods to animals, particularly pigs, and this will work in a beneficent way for their limb system. However, pigs do not need strong limb systems, but cooked foods round out their fattening.

In terms of raw foods, there is every indication that raw foods are needed in order to stimulate life activities in the animal and keep an animal healthy. In the case of man, he should not be so healthy that he becomes passive and a raw food mystic. However, raw foods are needed in the proper form in order to bring about a stimulation of life so that hardening processes do not set in. Raw materials then have to be fed and given so that illness, sclerosing illnesses do not set in in animal or man. In this regard, the cow often goes through a natural rhythm. The cow is often fed on hay ripened or cooked food (clover or alfalfa) in the field by drying. This cooked food is fed in winter. In summer the cow goes out into pasture where there is raw food. It is interesting to note when a herd is let out to pasture in spring. This has to be done carefully so that the cows do not become ill, develop bloat or develop mastitis. Thus one can quickly see that not only man, but also in the case of animals, great care has to be taken in giving raw foods to the organism.

To fatten animals, in order that animals can become food for man, Rudolf Steiner tells that fruit substances should be given. Many are well aware of the fattening of beef by using corn. This can be augmented by the use of antibiotics – and unfortunately this is done today on feed lots. However, Rudolf Steiner tells that a proper fattening can be undertaken by using a fruit

product that has become bulbous or root like. This is the case with the beet. In the case of man, we do not want to fatten him. What we want is to permit him to take up stimulating activities and thoughts. Therefore, the root fruits are probably very important in the unfolding of his soul life. We often speak about a fat head. This we do not want, as a fat head is unproductive in his thoughts. This fat head can be produced by the excess consumption of potato. I gather the true root fruit is more the onion, turnip and the beet. Very interestingly, Rudolf Steiner also indicates that a remedy may be needed if we fatten an animal, if one is giving these root products to fatten an animal. He prescribes the use of plant oil products. The oil of linseed is given as an example here. Oil cakes can be given as a remedy for fattening. On the one hand, we can use a bulbous root to fatten and on the other hand, we can use plant oil as a remedy. In the case of man, excess fats in the blood can be treated by oil products – this is known today.

Finally it is necessary to take care of the senses. For this, salt is given to the cow, but also salt is given to man. If man does not have salt or mineral in his foods, he will not be able to take hold of the physical world by his senses. Here we have some very interesting and wonderful guidelines. Here are seven different indications for the use of fodder, possibly for the feeding of the human being as well. Certainly I have tried to suggest that the feeding of the animal might be carried over to man. The differences in man and animal, we have considered. Here we might consider a carry over from one to another. If we do this, we can get some interesting indications for the feeding, the nutrition of the human being. As far as I know, these indications have not been addressed in our circles. Here we have seven aspects of food and nutrition placed before us for contemplation. Maybe we can take this up at a later time.

This last lecture addresses the pathology of individualization. This is the pathology of our time. We have pathology in our nutrition. The excess use of potato and tomato for food are examples of how individualization can be lead to an extreme. From Rudolf Steiner's spiritual scientific research we all are informed that the potato works in the human being so as to bring forth a natural intellectualization process. Potato diet creates a non-perceiving, intellectually grounded individual. Such an individual goes about the world dreaming, intellectualizing. Such an individual cannot take a hold of the world, see, perceive, work with what is given. The potato as an instrument of individualization leads man to not take hold of the world, but to become an intellectual dreamer.

The tomato fruit is a wonderful image of individualization that has gone to the extreme. The tomato wants its own manure, it wants to sit in the same

area in the garden. If we look into the tomato fruit, we find a plethora of seeds – seeds and seeds. The tomato does not cast its seeds out into the cosmos like many of the herbs. The seeds are kept within with the fruit. This is true of a number of the nightshades, peppers and eggplant. When seeds are kept within, this is a very different process. The tomato becomes an image, a picture symbol of what is occurring in the human being where an opposite tendency to intellectualization occurs. In the intellect there is a falling asleep of the human being into the life processes, into the potato process. The opposite of this is for man to be overtaken in his senses and have this carried into the organism. The result is carcinoma. Cancer is the outcome of a tomato process within man. Tomatoes are touted highly, but what can unfold is not well known. The tomato process is reflected in the economic process of our time. Just as there is a proliferation of seeds within the tomato, there is a proliferation of products within the economic world. The outer economic process with its proliferation of products is a cancerous process. The inner proliferation of sense life and differentiation down to the minutest within man is evidence of the carcinomatous – process within the human organization.

Thus tomato and potato speak to the individualization process that has become organic. Here individualization process has fallen out of the spirit and into the organism. Two illnesses of our time are proliferation of products in the economic sphere and intellectualization. With intellectualization, the world is not taken a hold of. With over production and tomato consumption, man is stimulated to a carcinomatous transformation of the human organization.

Thus as we open the Agriculture Course to contemplate the earth, we immediately come upon the problem of economics. We can close the course by contemplating the cancer of the human organism and the cancer of the economic process – the unfolding of useless production – over production. On the one hand we have over production and cancer. Such is the northern evolving economic world. On the other hand, we will have a stagnation, a dreaming, an unfolding of dream-heads that can not unfold the earth in our third world and our undeveloped countries. The intellect of the west, the potato head, will try to go to the undeveloped countries to unfold new economic processes. The problem will be that there will be a tendency to use the same type of intellect and the same type of economic thinking that will lead to an over production and a wasting and draining of the earth in its resources that have not been developed. We see this already with the slaughtering of the rain forests, with the introduction of high tech agriculture in third world countries. Fortunately, a few are waking to the problem.

Hopefully in what is given in this course we can find a way for a proper unfolding in our third world countries.

Paul W. Scharff, M.D.

Agriculture Lecture 5 – Dandelion

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Dandelion – Preparation 506

Let's now go onto the preparation 506, that of dandelion which is placed in the mesentery. Again I would like to interdigitate various comments with some observations from exchanges I had with Ehrenfried Pfeiffer nearly forty years ago.

One of the striking aspects of the conversations I had with Ehrenfried Pfeiffer was about Rudolf Steiner as an outstanding teacher. I have noted elsewhere how Rudolf Steiner taught Ehrenfried Pfeiffer by sending him to classes. Ehrenfried Pfeiffer then had to give a report about the content of the classes as well as the activity and make up of the teacher. This was one aspect of Rudolf Steiner's method with teaching. However, there was another one, which was emphasized by Ehrenfried Pfeiffer. Rudolf Steiner had the capacity to demonstrate, to show in a structured way. Rudolf Steiner could speak, but he could also demonstrate what he wanted done. He demonstrated with painting, carving, and sculpturing. He could demonstrate in architectural design. He could demonstrate in geometric construction. He would demonstrate in the laboratory. In the case of the laboratory, what is significant is that he actually performed experiments that did not work. Very important is the revelation that the experiments did not work, not because there was not a method to the research, but that the spiritual world did not want the research to be undertaken at that time. In terms of laboratory and even spiritual scientific research, this has to be kept in mind. This Rudolf Steiner shared with Ehrenfried Pfeiffer. The spiritual world has to be willing to assist when we do research. This should be kept in mind as we consider this course, consider how we undertake agriculture, how we think about economics, how we consider nutrition. It may not just be us who demonstrate – experiment. We have to consider the spiritual world.

Another noteworthy aspect that Ehrenfried Pfeiffer liked to share was that if an individual cannot go through the trials and tribulations of materialistic science, cannot withstand the intellectual demand of the academic world, such an individual is not really worthy of Anthroposophy. This Rudolf

Steiner repeated to Ehrenfried Pfeiffer again and again. Rudolf Steiner, however, also supplemented this statement with material that he gave to those who had not gone through academic trainings. This is exemplified in the workman lectures where he did give intellectually significant and at times intellectually demanding content.

From this it should not be thought that Rudolf Steiner merely wanted intellectual activity. This was not the case. If we turn to the workman lectures, we will see there a tremendous intellectual activity, but also a tremendous amount of pictorial, descriptive content as well. Very typical of Rudolf Steiner's presentations to the non-intellectually trained individual was the presentation of intellectual-pictorial content. Rudolf Steiner called this "intellectual-pictorial" and delineated it as a valid construct in his epistemological works.

Rudolf Steiner also shared with Ehrenfried Pfeiffer, for whom he was a bit of a fatherly soul, that he was tremendously concerned about the intellectual trend in the Anthroposophical Society. He asked Ehrenfried Pfeiffer to struggle and fight against this intellectuality. It was one of the first requests that Ehrenfried Pfeiffer asked of me in my contact with him and the work of his laboratory. This again does not mean that one does not use the intellect. In fact one needs the intellect to have a conscious soul activity in our day. It is necessary to be able to go through the logistics of the thinking that is inherent in the intellect. A first step in intelligence is to experience the logical. From an intellectual abstract activity it should be possible to then move from logical abstract activity to logical pictorial activity. This is a will activity. It is also a thinking activity transformed from thinking to picture thinking. This means that one makes a step from the idea process, from ideation with its logical connections to pictorial activity that is more of an artistic will-creative activity. The activity of constructing with intellect (actually an organismic process) can be taken hold of to discover the hidden will in logic. This logic can be worked with to create configurations in the soul. Thus one can, in a way, scribe or mentally construct forms out of one's own inner activity. There is always an inclination to let this happen out of one's memory. There is a tendency to scribe or picture when one recalls from sense perception or even when one recalls from abstract recollection connected with ideation. The latter is related to intellectual picturing. When one is active in the process of intellectual-memory recall, one comes to fantasy. This type of fantasy process should not be minimized. For many this intellectualization fantasy – occurs spontaneously and leads to psychological instability. However, this activity can be undertaken by an individual who is logical (will activity), who seeks to transform the intellect to come to ever

more intense activity within the soul. This process of dipping into sense perceptual memory where idea process has been involved (e.g. the idea-picture of a tree) can come to a reconstruction of the memory content in a disciplined fashion. Automatic memory is held in check. When this happens a new recollection content begins to appear – a more exact fantasy. This derives from pre-birth activity. One has been busy before birth, the human organism, particularly our senses/nerves and bone system and possibly some of the muscle system (connective tissue) – are a result of pre-birth activity. Through disciplined fantasy, one can take hold of this as an activity that is another form of recollection. Then one comes up with a more exact form of fantasy. The most exact form of this fantasy is mathematical thinking. This demands a high degree of soul spiritual training, as was the case with Pythagoras. However, given where most of us stand, it is possible to deal with our recollections, structure them not only in terms of idea, but also picture. There can be a continual striving to make this activity ever more exact. For us to become active out of the limb-muscle system is possible and forms the basis for a new mentation described in Fundamentals of Therapy. For anybody who reads the content given here, the methodical effort is that of creating a picture image from recollection. What is being recollected has been taken from Anthroposophical literature, from agricultural literature, from geological literature, from botanical literature, etc. All of this has to be recollected in order to reconstruct what is being shared here. There are times when glimmers of quite new relationships appear in this recollection process and this is being shared as well. This is a fantasy image. It should not be accepted dogmatically. It should not be taken as definitive. The process of creating this kind of fantasy picture-image, which is at times being shared here, is well described in Rudolf Steiner's treatise entitled Stages of Higher Knowledge. He describes as an absolute requirement what I am struggling with here in this sharing. Thus for anybody who has read thus far and questions what is shared, it is fully justified. However, I thought it important to clarify a method of striving that lies behind what I have been sharing. Here then is an effort to deal with the intellectualism of our time. What is shared can be seen on the one hand as intellectual. It has to be seen as pictorial. It cannot be seen as conventional, purely abstract ideational intellectual content. The effort made here comes out of the conversations that I had with Ehrenfried Pfeiffer forty years ago.

I would also like to comment on what Ehrenfried Pfeiffer has written as an introduction to this lecture course. He shares how Rudolf Steiner again and again pointed to the fact that spiritual life is so dependent on nutrition. Ehrenfried Pfeiffer repeated this to me likewise, again and again. A proper

nutrition is and proper nutritional substances are, necessary for an active spiritual life. A second aspect needed for the unfolding of spiritual life in mankind is a proper education. Needed is an education that can help man to develop his faculties on the basis of a healthy organism – stimulated by a healthy nutrition. I am repeating this here because the evolution of human faculties will have to be our concern as we continue. We are beginning to step into the evolution of man's higher faculties. We are not dealing only with the usual soul faculties. For higher soul faculties, for the evolution of higher faculties, new life processes will be necessary.

I have tried to touch on higher soul faculties with the nettle preparation. There we spoke of female and male. On the one side male-femaleness is needed for the conceptive-reproductive processes on the level of the organism. Male and femaleness is active on a higher level. They are part and parcel of the union between the soul (female) and the spirit (male) in spiritual unfolding. The spiritual unfolding has to become a self-sustaining cosmic activity independent of the organism but reflected in the life processes of the organism – for the maintenance of consciousness. With the preparation of the skull and the oak bark, I tried to point to the need to have an earth care and a nourishing plant that can help to support the unfolding faculties of the human being, that is the possibility of developing cosmic memory. The cosmic memory arises as one cognizes given natural creations such as the oak tree with its acorn, gallnut and structured leaf. The cognition is directed outward and reflected inward. The coming preparation I would like to pursue in somewhat the same fashion, being concerned with the care of the earth, the growing of the plant, and the nourishing of the human being for quite new faculties.

The new faculties of man I would like to address by speaking to two historical individuals. I would like to use their beingness in a kind of an imaginative fashion.

I would first like to begin with John the Baptist. We hear of John the Baptist as a being who lived strongly in the folk soul element of the Jewish people. He spoke of the path to and the way for the future. He spoke of his own decrease and the increase of another Spiritual Being. We have the history that John was an individual who was beheaded. We can look at this historically. We can also use the beheading as symbol – as a symbol of leaving the past, stepping into the future. The forces that have built the head, that have structured the head, that give memory, even earthly-cosmic memory, they have to fall away. New faculties and abilities have to develop. The Knights Templar, St. John's Christian, as they have been called, used this symbol of the beheaded John again and again. They placed this image in

the midst of their striving. This symbol-image can be used to point to the future – future culture – future earth. This image can be used for initiating new impulses in the enculturing of the human being. We have spoken of this cultural evolution as the evolving of humor – distinct from humus. When we looked at the unfolding of the perceptions and conceptions of nature that can lead to cosmic memory, we discussed the oak bark and skull preparation. With the preparation, we nourish the earth, treat the earth, and remedy the earth, for the sake of the plant, which in turn can help develop new human faculties for culture. Man needs to be sustained in relationship to the cosmos, has to be able to come to memories of the cosmos as a basis for the future. We can look at what is needed in nourishment as having to meet this requirement of the future – an active will. That is, man has to be able to recollect cosmically, recollect his own being cosmically. Man has to gain an insight into his own reincarnations, as a basis for action in the future. Now having used John as an image for the evolving of culture, human culture, hum-or, let us turn towards the evolving of agriculture, of humus. Here we can look to the initiation of Manes. We have, because of the indications of Rudolf Steiner a play by Albert Steffen, “The Death of Manes”. This is a play about the initiate Manes. This initiate, in a way, anticipated the future by many, many centuries. He lived and died in the third century. It is his death that I would like to focus on. This death is most strange and can be rather shocking when contemplated. He was not beheaded. Manes was skinned. His skin was taken and into this skin all forms of plant substance were placed. To contemplate beheading is highly unsettling. To contemplate crucifixion – being stretched and hanged on a cross is painful. To contemplate a human being skinned in death is perhaps more ghastly. We know of the scalping’s performed by some Native American tribes. They scalped their enemies and the new settlers in this country. The pain and agony of the scalped human being perhaps points a direction to what we hear happened to Manes when we hear that he was skinned. If we take quite exactly that this skin was then reconstituted as a human form to be filled with plant and herbaceous substance, we suddenly can come to a staggering imagination. This is a kind of archetype for the sheath and the contents of the preparations. We can use the death of Manes as a glimpse into the depth of the ensheathing of plant material. Here with Manes the sheath was the skin of one of the greatest of Initiates – an initiate of the future. Manes is the initiate that anticipates our future. His life and death as told us in this Steffen play, it seems to me, anticipates something that has to come, that is the ensheathing of plant substance.

There is something very significant in a skin or membrane derived from man or animal. The skin or sheath carries a particular set of force systems. The skin sheath is a carrier of rather specific dynamics, specific life. The plant substance differentiates the life. The preparations in turn via earth, plant or air, affect the plant. The plant, in turn, is consumed by man.

I hope that this image is not too much of a shock for those who contemplate the sheath of the preparation. The beheading permits the past to fall away. The use of the skin – the sheath lays a basis for the future. Historical events can be used as a basis for practices needed in agriculture, not only human culture.

By contemplating in this fashion, we are lead to consider the makeup of the human skin. We can see if the human skin can be used as an archetype for understanding the sheaths of the preparations, as well as the plant substances.

First let us look at the skin. It is composed of layers and organs. If we start with the layers of the skin, we can move from the superficial outer layer to the deeper layers. We can threefold the major layers of the skin. We then refer to the epidermis, the dermis and the hypodermic. However, we can also find seven-layers in the skin. If we seven-fold the skin, we find the epidermis composed of five layers, corneum, lucidum, granulosum, spinosum and germinativum(basale). Here we have five layers of epidermis. We can consider these five layers as belonging to the nerve-sense system. The next major layer is the dermis very much composed of vasculature. The third layer – the hypodermis is very much fat. Thus we have nerve-sense system in the epidermis, rhythmic system in the dermis and metabolic system in the hypodermis.

Significant in this layering of the skin is that each layer forms a sphere around the human being, even if very irregular. If we stretched these layers into the cosmos we would have seven spheres. We could think of seven ether spheres. By this means we could come to the etheric cosmic spheres. It is in these etheric cosmic spheres that the planets are active. If we think thus, we can consider that in a way the seven spheres are reflected in the seven layers of our outer integument, our outer surface. The human senses are placed from outside into the skin – from the Zodiac into the planetary spheres. The formative activity of the senses (Saturn activity) works into the skin and then into the human ether body to give rise to the various organ forms of the body. The (sun-activity) respiratory circulatory processes – the rhythmic processes of the skin, have to enter the etheric spheres and the (moon-activity) metabolic processes as well. Here we have a view of the ego

working directly, formatively into the astral-etheric, but directly into the physical.

We can still make another step in regard to the skin. It is not only layered, it also has seven major organs. The organs we can distinguish from the layers. These organs we can say are like the organ activity that we create in the preparation by stuffing the sheathes with plant material. The difference between the skin organ and the plant of the preparation is that in the case of the organs, we are dealing very much with the astral, while the organ material of the preparation is plant, is etheric. The skin has seven organs – astral reflections – the preparations also have seven organs which are etheric-plant processes – differentiated life processes.

If we now turn to the skin and its organs, we can again start with the surface. We can consider hair as an organ that is constituted out of the cosmos. In a way, the hair is projected into the skin – like a plant that has a bulbous root. The hair enters the skin and forms a follicle. Nail material is also an organ on the surface of the body. Fingernails and toenails are organs on the surface of the body. Nails are not radial formations, but more planar structures. They form a flattish surface on the fingers and toes. Both hair and nails are surface organs working into the body either radially or in a planar fashion.

The radial hair process can work into the skin to form nerves. The inward stream forming the nerve is met by inner organ processes that culminate in the region of the brain. The human surface meets the inner organ via the nerve. The nerve is a mediator. The nerve streams inward to meet the organ activity which streams outward. The nail and the hair lie on the surface – the inner organs including the brain arise from within. The nerve mediates the within and the without.

Pacinian corpuscles, tactile corpuscles, are also organs – sense organs within the skin. Here an organ forming process is projected outward from within – like the brain carried outward. As the hair is radiated in, the corpuscles are pushed out towards the surface. The hair follicle can remind us of the optic cup in the embryological unfolding of the eye. The Pacinian corpuscle can give a faint hint of a lens like form within the skin. The hair with follicle and the Pacinian corpuscle can be put together like the eye in reverse. Here the cosmos looks into man and can see the inspirations that live in our inner organs. The sense organs (e.g. eye formation) can give rise to imagination – imaginative, consciousness. The hair and Pacinian corpuscle as sense can give rise to inspiration. Here we are traversing the ether cosmos from Saturn to Sun laying the basis for higher states of consciousness as the organs of the skin are constituted.

Our progression is from the surface of the human skin to progressively deeper layers. A progression in consciousness is needed to penetrate deeper and deeper with the organs of the skin. The organs of the skin lead inward, laying a basis for progressive states of consciousness.

Having considered hair, nail, nerve, and Pacinian corpuscle, we can progress to the sebaceous gland. Here is a secretional-excretional organ that gives off metabolic substances, eliminates metabolic substances. This is a surface secretional-excretional activity that corresponds to the eliminative activity of the bowel. This is an astral activity. Here substance is eliminated and forces freed for consciousness and perception. The secretional-excretional activity lays the basis for cognitional activity at an even deeper layer of consciousness – a consciousness related to intuition – organ intuition related to metabolism.

Hand in hand with this metabolically based consciousness goes the organ of circulation – the blood vessels where there is a rhythm to balance the metabolism of the sebaceous gland.

The sweat glands are also organs of the skin, where there is an excretion related to our will. When we will we sweat. In sweat we eliminate so that consciousness can be gained in relation to conscious will or volition. The sebaceous glands excrete in relation to metabolism – while sweat glands excrete in relation to activity directed by consciousness – volition. Again, another step in consciousness can be made where intuitions can be directed to the outer world – can be gained in the process of sense perception.

With the organs, we have descended from the periphery of ether of the cosmos and from the periphery of the human organism into the inner organs and out again in the limb. However, in consciousness, we ascend from sense bound consciousness to imagination, inspiration and intuition.

The final organ in our skin is muscle. Muscle is present in the hair follicle, the capillaries and the skin itself. We have no conscious control over our hair standing up. We also have no control over the capillary muscles. We do have control over the skin musculature of our face, but not over the rest of the body. As we know the horse can pick up his ears and also ripple his skin. Man cannot do this. His muscle control is confined to his face, his eyes, nose, cheeks, and occasionally the ears. The play of physiognomical expression is connected with face muscles – skin muscles. What is the intention here? I would like to consider that here man can meet himself as object and at the same time as a spiritual being. The hair, nails and nerves are more connected with the unfolding imaginative consciousness. But as structures leading inward the basis for inspiratory consciousness related to inner organs is laid. In musculature and the secretory glands, a movement

towards intuition is brought about. In skin musculature differing aspects of intuitive consciousness are possible.

Thus the skin organs are very much related to consciousness – higher states of consciousness that are dependent on our astral body. In the skin, our astral body can become freed. The skin with organs lives in the world. Much in the skin dies away or is secreted-excreted. Freed life forces and soul-astral activities come about through the death, excretion and secretion of our skin. At the same time, the skin in its layering is related to the ether spheres of the cosmos and the life processes connected with these spheres.

If we look at the preparations we can see skin layers as sheath and skin organ as plant substance within the sheath. Thus we can think of ether spheres and life processes from plants that can lay the basis for higher-altered processes in the earth – passed onto the plant and permitting man to acquire higher states of consciousness. This I see as a metamorphosis of the archetype, created by the death process of Manes. This suggests an anthropomorphic extension into the realm of the preparations, into the world of the plant and into the cosmos contemplating every higher states of consciousness for man.

I would like to continue with a slight detour,, but still moving towards our preparation with dandelion, preparation 506. I would like first to look at what Dr. Lievegoed has to say about the preparations in relation to the planets. I would then like to compare his planetary relations with one that I have considered.

Dr. Lievegoed gives the following preparation-planetary relationships:
Manure and silica placed in horns, as preparation 500 and 501, related to the Sun

Yarrow placed in the bladder as preparation 502, related to Venus

Chamomile placed into the intestine, as preparation 503, related to Mercury

Nettle ensheathed by the earth, as preparation 504, related to Mars

Oak bark placed in the skull in water as preparation 505 related to the Moon

Valerian dispersed in the cosmos, as preparation 507, related to Saturn

Dandelion ensheathed in mesentery, as preparation 506, related to Jupiter

I would like to suggest a little different relationship. I would begin with preparation 500, manure in the horn and relate this to the moon-earth. I would relate this preparation to the earth that has the moon brought to the earth (via rain) to make the earth fruitful. Preparation 501, silica in the horn, I would relate to the star cosmic world that is brought to the plant.

Preparation 502, yarrow, placed in the bladder, I would relate to potassium and very much to the bringing of the earth to the various kingdoms. This I see as a beautifying, Venus process. Preparation 503, with chamomile in the

intestine, is very much connected to calcium. This I would relate to the Sun. I see the sun radiating the intestine and the chamomile in the height of summer and then brought into the earth in winter. I see this as a sun preparation. Preparation 504 is the nettle preparation where iron activity is important. I would relate this to Mars. The various activities of iron bring man into relation with the earth and the cosmos. Preparation 505, the preparation of oak in the skull is connected with calcium, I see this very much connected with the transformation of substances in the watery, mercurial domain, Therefore I relate this to the plant Mercury process. Preparation 506 is the dandelion in the mesentery. This preparation I would connect with Jupiter. Preparation 507, valerian in the air, I would relate to Saturn, to the far distances of the cosmos.

The reason for listing the preparations in this way, is to distinguish between the plant-planet relation and the preparation = planet relation. In previous years, I have tried to speak to the planetary activities as they work into the plant, unfolding the plant as plant. There I discussed the processes of carbonization, distillation and dissolution. I shared thoughts about the processes of potentization. The last three planet-plant processes, I considered to be ashing, digestion and crystallization. These are seven planetary workings in the plant that permits plant potentization to take place. In the case of the preparations, we are working into plant substance via animal, astral, earthly astral or cosmic astral processes. We are working the earth and plant so that higher astral activities can be supported by man's physical functioning.

I think now we are ready to go onto our preparation. Let us start with the mesentery. We have to deal with the mesentery of the cow. We are therefore speaking of an ungulate, a being that is in a way raised off of the earth, walks on its toes. We are speaking of a horned animal, an animal whose inner radiations are reflected back inwardly. The astral kidney radiations are thrown back into the intestine. The cow is a ruminant, so that we can speak of the four-fold heart process in the rhythm of the intestine. The ruminant-rhythmic process means that the substance of the bowel, from the mouth to the anus, is thoroughly penetrated by the etheric. As a mammal, the cow produces milk. It not only produces milk to nourish offspring, but it is also used to nourish man. Goats, some sheep, donkeys and horses are also used to give milk for man. However, it is the cow that is the real friend of man when it comes to nourishment. The cow nourishes its offspring, but also nourishes a great chunk of mankind today. It is very important that the earth can sustain the plant, the plant that sustains the cow; the cow sustains man with milk. Also as a mammal with a vertebral column the cow can bring forth

living offspring. This animal is full of life, and full of that which helps in the processes of reproduction and nourishment. The cow also gives essential man to maintain earth fertility.

We have considered the intestinal tract and previously mentioned how the peritoneum lines the coelom. The coelom is a closed space, all unto itself. In a way we have four enclosed spaces in man, enclosed spaces that have relatively little relationship to the outer world. The first space is that in the skull, the space is created by the meninges, the lining of the brain and the skull bones. A second inner space is that of the visceral and thoracic cage lining. A thin film lines the lung and chest cavity. A third space, a space unto itself, surrounds the heart. This is a potential cavity. Finally we have the coelom, the heaven of the abdomen. There is an outer layer that lines the inside of the abdominal wall and a layer that covers the abdominal organs and intestines.

All four of these spaces are filled with fluid. The most obvious spaces with fluid are those that surround the brain and fill the brain ventricles. There is a small amount of fluid in the pericardial space. There is even less fluid in the pleural space. There is less than a hint of fluid in the mesentery-omentum space surrounding the organs and intestines. If we look at this potential space, we will find that there are blood vessels though there is no fluid. Interestingly and particularly in the case of the cow and the older human being, fat is produced in this sphere, in this potential space. Thus within the mesentery there are organs and intestines (metabolic-sense organs) – then the mesenteric sheath – followed by blood vessels and fat. The latter two structures exist within the potential space formed by two layers of very thin tissue that constitutes the coelomic cavity.

Thus if we start with the organ, we can speak of an inner organ of sense. The fine layer of tissue peritoneum is a sensitive structure (like nerve tissue) then comes circulation and then fat. We have sense organs, sensitive tissue, vascular tissue and finally fat metabolic tissue. We can say that we start out with a sense-nerve structure, then rhythm related structure and finally fatty metabolic structure – all within the coelomic cavity – the cavity of heaven. This is the abdominal configuration of all mammals including man. This heavenly space, which ordinarily we associate with the far reaches of existence, we have within the cow (and Man). When a cow lies down the heavenly space is subjected to the forces of the earth.

In the case of the preparation, the dandelion is wrapped in the tissues just described, the tissues of the heavenly space with man and animal. The heavenly space within the cow is filled with forces and activities that refine metabolism to a very great extent – permitting the cow process of

nourishment and reproduction to be subjected to earthly forces when the cow lies on the earth to assimilate. The loftiest is penetrated by the earthly.

Now let's go over to the dandelion. This plant we all know. We know it as a perennial. It grows very close to man. It adorns his most precious creation, which is his lawn. It is a remarkable plant that disappears about midsummer.

It appears in spring as a small rosette. It grows and has a very lush green dark leaf. It then sends up a stem on top of which sits a rather beautiful blossom. For man, the lawn keeper, it is a bane. For those of us who use the dandelion in the preparation it is a great blessing.

The leaf of the plant is dentate, tooth-like. It is interesting if we compare it with the white oak, the oak does not have such a dentate leaf appearance.

The other plants do not have such a dentate leaf. This plant is singular. In German it is called the tooth of a lion. This leads us to consider it as a plant that is related to an animalic process that is connected with the lion tooth or the canine activity of an animal. It belongs to the sense system where the animal is involved in metabolism. In the lion's mouth metabolism is penetrated by sense activity. The plant points to the timely process of the rosette and leaves, which almost jump, like sensation, into the blossom – the sun gold blossom. Looking at the rosette, the dentate leaves and the stalk that literally jump into inflorescence, can remind us of the step from life to the life of sensation.

The evolution of this plant is of course extremely striking. The little rosette of spring greens out to become a lush leaf and then sends up a watery stem. On top of this sits a greenish cup. Within the green may be a slight glimmer of white and then comes a sun-radiant-gold flower. While this is occurring there has already occurred the descent of a single tap earth into the depths of the earth. The root may be 2-3 feet deep. While there is an ascent into the cosmos, and a descent into the earth, there is an animal activity forming the leaf with tooth structures. At the same time there is a hollowing out of the stem so that the stem becomes quite hollow. As the animal astral process continues, the flower is gradually transformed into a whole cosmos of seeds with wings. The winged seed is almost like an insect that can be carried by the air. The winged seed is inclined to rise in the air. It is as if the astral that evidences itself in the leaf, in the tooth nature of the leaf that hollows out the stem transforms the flower into an insect-like winged seed. Here we can see a white- silver image rise out of the flower instead of a butterfly descending into a flower. Here is the transformation of a flower into a higher form of existence – that is an imago – which has its expression in man as a higher form of cognition – imagination. The winged seed, as the faculty of

imaginative cognition, reflects the outer reaches of our ether cosmos – the spheres of Jupiter and Saturn.

On the other hand, the root also reaches to the great distances within the earth itself. The root is truly cosmic. The root takes hold of the potash-potassium activity in the earth. Through the other pole of the plant, the inflorescence, the potassium is brought in relation to a working of light to create a phosphorus working. It is interesting that Rudolf Steiner tells that there is this transformation of substance within the plant. We can read this. He talks of how hydrogen, limestone and potash are transformed into nitrogenous materials, how nitrogenous materials are actually the sentient processes of the earth. This plant gives the earth its sentientness. It is not like the legume, which inbreathes while the non-legume out breathes. This is a plant that gives the earth itself a tremendous sensitiveness for the cosmos, not breathing, but a clear sensing.

The earth sensitivity that develops through the workings of the plant, as the result of alchemic transformation I think is significant. Here Rudolf Steiner gives direct indications of alchemic transformation. This is not a metabolic transformation. It is a direct substance transformation via the plant. I think this is a significant indication concerning alchemical-earthly substance metamorphosis. It will require a lot of rethinking to take up such a transformation with our current ideas about chemistry. The indication tells that a substance (non-living) can be transformed into another. Here the atomic view of substance has to give way to the potential for the transformations of substance. This plant carries on metabolic activity but also brings about substance changes. The phosphorus, I gather, is a refined cosmic process in the seed. A siliceous cosmic activity brings the far distance cosmos (phosphorus) into relationship with the earth.

The golden blossoms of this plant are placed in the cow mesentery. The blossom, which is etherically related earth and heaven, is placed in a sheath where the astral-animal forces are at work between heaven and earth (devachan-outer planetary-zodiacal and earth.) The plant processes are pure. The astral activities are very pure. The pure ether and astral activity reach up to the domain of the star world where human ego has its true home.

What are we then working for here? We are working with forces and substance actively that transcend the usual life of an organism. This can be said about all the preparations. We are looking for an extension of the usual memory to cosmic memory. We are trying to support cosmic conceptive activity. We are trying to develop sensitivity, a sensation process, which can look to the future. The future reveals itself in the star world while relating itself to the earth. We can speak of the father ground of existence becoming

revealed. Here we can speak of the nourishment at the hand of the divine. A kind of communion, sacramental nutritional process is envisaged here. What this means in terms of the earth, plant and man is a potential for man to be able to envision, to anticipate what is to come. One then not only deals with cosmic memory, conceptive processes out of the past, but envisioning, anticipating what is to come in the future. If man does not have the proper nutrition, the proper nutrients, then his organism will not permit him to envision and anticipate what is to come from the future. Man needs to find his own being in the star world to grasp the future.

For this reason, I see this as a preparation supporting the future. This anticipates work with the earth for the future. This anticipates the future in which the being of Manes is to appear. We are now not speaking of a hierarchical spiritual being. We are not looking to the older mysteries, as for example, the Druid Mystery. We are looking at the future born out of the Mystery of Golgotha. Here we have to seek a human being who will help us into this future. The human being who works for the future is Manes. Rudolf Steiner is trying to help-us find our way to him through the deeds connected with agriculture, economics, and commerce. This preparation gives rise to such contemplations for me.