

Understanding Rudolf Steiner's Agriculture Course

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Introduction - The Agriculture Course

In June of 1924, at a conference held on the estate of Count Carl von Keyserlingk in Koberwitz, in only eight lectures and four discussions, Rudolf Steiner laid the foundations for what would become the worldwide biodynamic agriculture movement. This cycle of lectures, usually referred to in English as the Agriculture Course, marked the beginning of a significant renewal of agriculture on the basis of Steiner's anthroposophy. It contains his original indications for understanding the farm as a whole organism, and his instructions for increasing soil fertility through the use of the biodynamic preparations. It is the use of the biodynamic preparations in particular which distinguishes biodynamic agriculture from the practices of organic agriculture.



Horned cow in lush green grass

Students of biodynamics studying the Agriculture Course today can find its language and imagery incredibly dense and brief. This should probably not surprise us, given that the Agriculture Course was not formulated as a textbook on biodynamics, which would have clearly and systemically built up the ideas of biodynamic agriculture from the simplest to the more complex, but rather is a record of lectures and impromptu discussions given to an audience already familiar with the concepts of Anthroposophy. In fact, attendance at the course presupposed this background knowledge, as participants were expected to

have prepared themselves by reading Steiner's fundamental works *Occult Science* and *Knowledge of Higher Worlds*.

Considering that the cycle of lectures which constitute the Agriculture Course occurred in the last year of Rudolf Steiner's life, after twenty years of writing and lecturing, in which he had gradually built up the concepts and pictures of Anthroposophy, it is the main thesis of this article that the Agriculture Course cannot be read or understood in isolation from the rest of Rudolf Steiner's considerable body of work. In fact, much is to be gained by looking to his other cycles of lectures.

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Rudolf Steiner's body of work, which includes almost thirty books and thousands of transcribed lectures, amounts to 354 volumes. Among the lectures are cycles given to quite diverse professions, such as doctors, educators and artists, in which he illuminated their discipline from the perspective of Anthroposophy, much as he did for farmers in the Agriculture Course. As he was always speaking from one grand conception of the world, we can often find ideas presented to one professional group which touch on and illuminate ideas given to another. For example, it is in the midst of the lectures to doctors, rather than the Agriculture Course, where we find a description of the importance of the activity of the earthworm for the life of the earth. Or, when in lecture two of the Agriculture Course, Steiner briefly mentions that "everything happening below ground has an effect on plant growth that is similar to the effect that our head has on our body – most notably during childhood", it is in the lectures to doctors and teachers that a fuller exploration of this idea is to be found.

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In particular, it is Rudolf Steiner's ninety or so medical lectures which provide a fruitful source of ideas for expanding our understanding of the Agriculture Course. This seems fully justified given a report by Count Adalbert von Keyserlingk, son of the hosts of the original conference, that according to Dr Ita Wegman Rudolf Steiner's original intention was for the agricultural impulse to sit within the Medical Section of the Anthroposophical Society's School of Spiritual Science, rather than the Science Section, as "it was the Medical Section which had to take care of the work to heal the earth".



Sunlight shining through the wheat

The picture of the plant in the medical lectures and the biodynamic horn preparations

An example will now be given of how Rudolf Steiner's wider lectures and writings can help us to understand the content of the Agriculture Course. We will begin with an idea presented in *Spiritual Science and Medicine*, Rudolf Steiner's first cycle of lectures to doctors, and then support this with ideas taken more broadly from his other works.

In lecture six of *Spiritual Science and Medicine*, Rudolf Steiner presents the picture of the plant as an organism which lives primarily in the tension between gravity and light, between the earthly, centric forces of weight, and the buoyant forces of light working from the cosmic periphery:

between gravity and light, between the earthly, centric forces of weight

"Now consider the fact that plants with a prevailing tendency towards root-formation leave much more ash when they are burnt than is left by plants that tend towards the formation of blossoms or even by mistletoe and tree-plants..... This dross and ash is subject to gravity, whereas the upward urge and growth of the plant is a continual conquest of gravity, and of other earth-bound forces,

so that we may properly speak of a polar opposition between gravity and light. Light is that which continually overcomes gravity. And the plant is, so to speak, set into the tension of this combat between light and weight, between what strives towards ashes and that which strives towards fire.”

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outward drawing light

We can observe this every time we plant a seed in the ground. As the seedling unfolds and the plant develops, the root orientates itself to grow down toward the centre of the earth, while the shoot springs up and grows out into the illuminated spaces, towards the all round, surrounding hemisphere of the sky. In botany, the root’s tendency to follow gravity and grow downwards is termed geotropism, while the botanical terms negative geotropism and phototropism describe the tendency of the upper pole of the plant to grow up away from the earth and out towards the light. If you have ever seen a plant which has been knocked or tipped over and left there for a while, you may have observed how, left to itself, the growing tip of the shoot soon turns upwards and reorients that pole of the plant to the vertical. The same is true for the growing tips of the roots which redirect themselves to grow vertically downwards. Though we ordinarily consider plants to be fairly static objects in the environment around us, we must really feel that the plant constantly lives, poised between the polar forces of downward drawing gravity and outward drawing light.

As Rudolf Steiner states in *Universal Spirituality and Human Physicality*, these gestures of upward and outward expansion into light and downward contraction into weight belong to the organisation of the whole world:

“These two cosmic forces, light and weight, inhere in the cosmos as two great opposites. They are indeed cosmic opposites. If you picture our planet, you find that weight draws down to its centre while light rises away from this centre, out into the universe. We imagine light as something merely resting but in fact it draws us out and away from the planet.”



Chamomile flowers
in bloom

According to Rudolf Steiner's cosmology, as expressed for example in his book *Occult Science*, the world around us, with all its various beings, like plants and animals, and forces, like gravity and light, is the outcome of a long ongoing process of cosmic evolution. The conditions of our current earth and the planetary system which belongs to it, did not always exist but gradually developed out of three preceding evolutionary stages, referred to by Steiner with the terms Old Saturn, Old Sun and Old Moon, and the importance of this, as Rudolf Steiner writes in chapter 6 of *Occult Science*, is

that *“it is impossible to understand the Earth evolution, in the sense of Spiritual Science, if one does not observe the facts of the preceding evolutionary cycles. For the facts of the Moon, Sun and*

Saturn evolutions are contained in a certain sense within the conditions that confront the human being at present within the sphere of the earth.”

Briefly, this evolutionary process began with a stage which consisted only of differentiations of living warmth, which he termed called Old Saturn. This was followed by a stage, termed Old Sun, in which the warmth condensed to air (gaseous condition) on the one hand, and in a counter movement, rarefied into light on the other. Then followed the stage of Old Moon, where the air further condensed to water (fluid condition) and from light the tone ether arose, and finally our current earth conditions, with the most condensed state of matter, earth (solid), and the most rarefied etheric force, the life ether. The important point for our considerations is that in this process of evolution, from an initial state of unified warmth, there is the descending, contracting, condensing stream of the elements in the direction of weight, through warmth, air, water and earth, and an ascending, rarefying, progressive development of the ethers, from warmth to light, to tone and life ether.

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Additionally, in Rudolf Steiner’s cosmology the spiritual forces which we now perceive as the heavenly bodies of the Sun, Moon and Earth, were originally united in a whole. They became differentiated through the ongoing process of planetary evolution, to allow the conditions for our current Earth to arise. At a certain point in the evolutionary process, to prevent the evolution of the Earth from preceding too quickly, the progressive, life enhancing forces of the Sun separated off from the Earth-Moon body to work from outside. At a later stage, the forces of the Moon separated from the Earth to work from outside, to prevent the forces of condensation, materialisation and formation from working too strongly, thus:

“Sun and moon gradually separated from the earth. With the sun went forth the beings who, had they remained united with it, would have brought a too precipitate life to earth; and with the moon all those forces withdrew which would have brought about a hardening and stiffening; everything which would have tended to make form permanent. The earth remained in the midst, as it were between the two.”



Quartz crystals growing in the earth

Indeed, Rudolf Steiner ascribes the forces of weight and gravity within the Earth to the remnants of the Old Moon condition which are still active within the Earth. The Sun is thus the bearer for the ascending, progressing forces of light, tone and life, while the Moon is the bearer for those forces that bring weight, condensation, formation and materialisation, while the Earth and all its beings live in the interplay and balance between them.

the plant lives between
the expansive, progressive
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of the Moon

This picture of the dynamic operating in the evolutionary process between the ascending, progressive forces of the Sun and the densifying, hardening forces of the Moon is key to understanding the image of the plant as an organism living between the forces of light and weight. As we could say that the plant lives between gravity and light, we can just as well describe this by saying that the plant lives between the expansive, progressive forces of the Sun and the contractive, hardening forces of the Moon. In a lecture given to teachers on the 4th April 1924, Rudolf Steiner described it thus:

“Spiritual forces stream down to the earth in the sun’s rays and that which determines the process of expansion in plant growth lives in this inner element of the sunlight. On the other hand all the processes of contraction, where the whole plant growth is drawn together into a point at the transition of the one leaf cluster to the other, and in the formation of the seed – all this is under the influence of the moon forces. And just as we see in the rhythmic interchange of sunshine and moonshine in the cosmos, so do we see the reflection of this in the budding plant which responds to the working of the sun in the expansion of the leaves. We see the moon forces in the phenomena of contraction in the plant. Expansion and contraction in the plant are the reflected image of that which pours down on the earth from cosmic etheric space in the interchange of the forces proceeding from the sun and moon.”



Biodynamic horn preparation

It is important to develop a living feeling for these pictures, and see in the forms of the plants around us, how the growing shoots strive up and out towards the light and the all round cosmos, while the roots work into the realm of weight and the centre point of the Earth. The organs at the outer periphery of the plant, like flowers and leaves, are the most ephemeral, while permanency and hardening belong to the lower pole of the plant - consider how the transition from an annual to a perennial plant relies on the increasing persistence of the root in the biennial plant, then the further lignification and hardening of the stem in

shrubs and trees. With these pictures of the cosmos and the plant within it we can begin to find our way toward an understanding of the biodynamic horn preparations 500 and 501, which Steiner first introduced in lecture 4 of the Agriculture Course.

fresh cow manure which is
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Preparation 500, horn manure, is made from fresh cow manure which is packed into cow horns and buried in the earth over winter. Imagine the sloppy, fresh, expansive smelling cow manure, remembering Rudolf Steiner's indication in the Agriculture Lectures that all this escaping smell represents life and fertility, placed into the cooling, condensing, crystallizing winter earth. Over the months in the winter earth the cow manure is transformed. What was expansive and volatile is now condensed and concentrated into a dark, earthy smelling and fertile

substance. The preparation is kept in a moist, dark protected environment. For use, the 500 is stirred into water, and then sprayed out onto the soil in autumn and spring, preferably in a descending moon, in the afternoon when the atmosphere is cooling and the moisture in the air is descending and condensing upon the earth. It works on the soil life and root pole of the plant and supports their vigour and fertility. By the way in which it is made and the time when it is used we see how it corresponds to and supports the descending gravity related pole of the plant. Preparation 501, horn silica, is made from crystals of quartz, crystallised matter which has basically reached an end point by dying into form. The quartz crystals are crushed and continuously ground down into a fine powder; one could say that through this process the quartz is being progressively “de-formed”. The quartz powder is packed into cow horns and buried in the inwardly active summer earth. Towards the end of summer it is removed and is stored in the light. The 501 is stirred into water, and in contrast to 500, is sprayed into the air, in the morning when the forces of warmth and light are ascending in the cycle of the day. It works on the sprouting, leafy, light and space seeking upper pole of the plant and supports the ripening, qualitative aspect of the plant.

the quartz powder is packed into cow horns and buried in the inwardly active summer earth

In this way we can see that the biodynamic preparations 500 and 501 work on the polar life of the plant as described in the medical lectures, which lives poised between the forces of weight and the earth, and the forces of light and the cosmos. 500 works at strengthening the earthly vigour-substance pole of the root, while 501 works at “sharpening” the qualitative image of the plant, its colour, form, smell and flavour at the light pole.

But we can go still further with these ideas, because in Lecture 18 of *Spiritual Science and Medicine*, Rudolf Steiner continues to develop the picture of the plant - it not only stands between the polarity of gravity and light, but also has a tendency toward animalisation at the flowering pole, and a tendency toward mineralising processes at the root pole. It is the middle realm of the leaf which is representative of all that is truly plant-like:

a tendency toward animalisation at the flowering pole, and a tendency toward mineralising processes at the root pole

“Consider the stratum of plant life that covers the earth’s soil, i.e., the entire content of vegetation. We must understand that this flora which grows outwards from the soil towards cosmic space, is not only sent out from the earth, but is also drawn outwards by forces that are in continuous operation, and as essential to the growth of plants as the forces working from the earth itself. There is a constant interaction between the forces passing into the plant from the earth, and those acting on the plant from the cosmos outside the earth. What is the essential factor in this interaction that permeates our whole environment? Should these cosmic forces attain their full expression and take full possession of the plant, and should the planets not ensure that these forces can withdraw again then the plant in its growth from the stalk to the blossom to the seed would have the perpetual tendency to become animal. There is a tendency towards animalisation. But this tendency, which expresses Cosmic forces passing into the plant, is counteracted and balanced by the opposite tendency towards suppression of the plant-nature in mineralisation.”

I would thus emphasis the essential nature of plants: it holds the balance between the tendency to salification, to the deposit of mineral constituents within the vegetable substance, i.e., to mineralisation; and on the other hand to self-ignition, to animalisation. This is what is perpetually at work in external nature.”

Steiner describes the tendency of a tree to release the etheric life-forces at the root pole

In lecture seven of the Agriculture Course, where Steiner describes the tendency of a tree to release the etheric life-forces at the root pole, that is, for the tree roots to become less living and more mineral, while condensing astrality at the flower pole, he is referring to the same phenomenon, but using slightly different terminology. Instead of “animalisation”, in the Agriculture Course he uses the word “astrality”, as the prime characteristic of an animal in Spiritual Science is that it not only has form and life, like plants, but also has consciousness due to the incorporation of an astral body. Thus the life of the plant not only stands between gravity and light, but also a tendency towards animalisation at the flowering pole and mineralisation at the root pole.

On the basis of this picture, the indication that 500 is to be made from cow manure, the product of an animal metabolic process, while 501 is to be made from quartz, a crystallised mineral, gains a new significance. However, the mystery is that when they are applied as healing preparations to the being of the plant, their position is reversed - the transformed animal substance is applied to the mineralised root pole, while the transformed mineral substance is applied to the animalised flowering pole of the plant.

The Three-fold Organism

Further links can be drawn from the medical lectures to help illuminate what was given in the Agriculture Course, particularly Steiner’s underlying picture in the medical lectures of the three-fold organism.

the three-fold organism is an idea which Steiner developed over the course of his spiritual research

The three-fold organism is an idea which Steiner developed over the course of his spiritual research. Very briefly, it characterises an organism as essentially consisting of three interrelated but qualitatively different systems: an upper nerve-sense system focused in the head, a lower metabolic-reproductive system, and a middle heart-lung system mediating between the two. These should not be seen as three static elements layered one on top of the other, but as two polar tendencies, the head and the belly, which stream into and through each other, mediated by the balancing middle realm. In the first few introductory lectures of *Spiritual Science and Medicine*, Rudolf Steiner was particularly focused on pointing out the functional polarity in the human organism between the upper head-nerve sense system and the lower belly-metabolic systems, for example, pointing out the polar nature of the intestines and the brain, and continually stressed the importance of this idea as a foundation for understanding health and illness in the human organism.

We find this idea introduced in lecture two of the Agriculture Course, where Steiner presents the picture of the farm as an inverted organism. Due to the inversion, the farm has its “head” below the soil, while its “belly” is above, and

in that lecture Steiner directly compares the layer of the soil to the diaphragm in the human organism, which separates the upper organs of the body from those below. Thus, the farm is a three-fold being, with its nerve-sense head system in the ground, its metabolic system working in all that is above ground, and the living soil, like the heart-lung system, mediating between the two.

In the medical lectures, Steiner also referred to the plant as an inverted human being, again directly relating the root to the forces which operate in the head, and the flower to the forces of the human metabolic system. It is this understanding of the relationship between the functional polarities in the plant and in the human being which provides the rationale in Anthroposophic medicine for prescribing plant remedies – remedies made from flowers will affect the metabolic system, remedies made from roots will be more efficacious on the nerve-sense system. The importance of Rudolf Steiner's idea of the three-fold organism for understanding the Agriculture Course cannot be overstated. It forms the rationale for the creation of the biodynamic compost preparations, which unite particular plant parts with the corresponding animal organs. For example, as described in lecture five of the Agriculture Course, it is the flowering parts of yarrow and chamomile plants which are united with the metabolic organs of the bladder and intestines respectively, while it is oak bark, where bark is seen as the continuation of the root's mineralising, hardening tendency in the plant, which is combined with an animal skull. Steiner's indications on animal fodder in lecture eight of the Agriculture Course are based on the same fundamental picture, for example, when he says "roots will be the form of nourishment that will most easily find their way to the head".

understanding of the relationship between the functional polarities in the plant and in the human being

Conclusion

In conclusion, based on examples above, we can clearly recognize that the eight lectures of the Agriculture Course cannot be considered as complete and comprehensible in themselves, but that an understanding of them relies on ideas expressed across the whole of Rudolf Steiner's body of work. In particular, the lectures to doctors provide a rich source of ideas which can expand and illuminate the concepts and pictures described so briefly in the Agriculture Course.

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goethean science

The work of the Field Centre is to undertake research into Ruskin Mill Trust's educational method and its underpinning influences. Within this, Goethean science offers an extended qualitative research method.

Regardless of what is being researched, the Goethean method is premised on the idea that knowledge of the world is inseparable from self-knowledge of the human being, both of which are in a process of co-becoming. As such the art of Goethean science invites empathic and participatory inquiry.