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Spirit and Climate

"Somehow a good thing with the spirit in agriculture", a colleague writes to me, alluding to the coming agricultural conference. "But did you know that the data that demonstrate climate change were already on the table in the 1960s and 1970s and then were made to disappear from public view by an oil industry campaign costing billions?" Indeed, are we just star gazers at the Goetheanum and in the biodynamic movement? Lots of spirit and little climate protection?

How do we then find the ways to the spirit in agriculture? Does this mean working less and meditating more? I have a different view of it myself. I try to keep my spiritual gaze open during and in the work. For, what does spirit mean? Spirit means the world, and even the world of things, in as far as this is an expression of a world of being. And how am I to develop this gaze to take in being? Through action. The gateway is the willed deed, working with engagement, the active fulfilling of a necessity. Not to fall asleep completely in the process, but to struggle to gain some clarity of consciousness, gradually whilst still active and immediately after acting – that is my way. "Focusing your view of the external world spiritually on Michael", as Rudolf Steiner puts it.

For, gaining knowledge, and even if it be spiritual knowledge, without it having potential consequences for my actions achieves nothing. That is just what Greta Thunberg says, "You know it and you do nothing!" Yes, because we have knowledge that does not lead to action. Dead knowledge. And soon we shall have a dead world. However, in order to have a living world, it requires living knowledge. This is what we mean by "Ways to the Spiritual in Agriculture". If we are able to save the earth, then only (among other things) because we learn how to know, love and treat it accordingly as a living being, as a spiritual being.

But no fear, the climate conference is coming; it is scheduled for 2021. With the working title "Climate Change – ecologically, socially, spiritually" we are engaged in formulating a theme of the year for 2020, out of which the 2021 conference can proceed. The Circle of Representatives agreed that we organise this conference in such a

way that it can also be a Goetheanum climate conference at the same time. This means we are working together with other Sections, especially with the Youth Section.

Ecological climate change means treating the earth's resources differently; for us it means not only understanding the farm organism from the inside, but also from the outside, from the viewpoint of the climate, of the earth as a living being. Thinking the old things anew and acting in a new way. Is the silica preparation not also a preparation for the climate?

Social climate change means that the social climate in many countries is also, and in particular, in the process of breaking down. How will it go on in Bolivia, in Chile, in Lebanon, in Hongkong and – hand on heart – in England, France... and actually everywhere? Left – right, elected – not elected, demonstrator – police-officer, ... the old patterns do not hold good any more. New forms of orientation are required in the social realm. I think it is a matter of creating a new concept of human dignity among other things. In this concept the axes of orientation for shaping a viable social order for the future will clash.

Spiritual climate change means experiencing the I in a new way. The I does not exist statically, it comes about. Actually it comes about in dialogue. In dialogue with the other I, with the world, with its own higher ego; the I comes about there. As a being among beings; not simply as ego. It requires this education and upbringing that is transformed and self-development. The path does not lead via appeals to moral conduct, but via a spiritual climate which enables the individual to grow beyond themselves in dialogue with the world.

We wish you stimulating reading and hope to see lots of you, dear readers, at the agricultural conferences in 2020 and 2021.



Ueli Hurter

Climate Change and Agriculture

Lin Bautze, project leader of "Living Farms", and Ueli Hurter, co-leader of the Section for Agriculture in Dialogue

Lin Bautze Recently the special report of the Intergovernmental Panel on Climate Change (IPCC) on "Climate Change and Land" was published. Since 1992 several hundred scientists in this body have been gathering the most up-to-date research results on climate change on behalf of the United Nations. The report summarizes four core aspects in relation to our food system and agriculture:

- 1) Humanity is dependent on land resources and agriculture. With all the climate change scenarios calculated, our food security world-wide is being negatively influenced by climate change. The degree of impact varies according to the geographical location as well as social, economic and ecological resilience.
- 2) Agriculture is one of the most vulnerable sectors and thus particularly affected by the effects of climate change. Soil quality and quantity are here explicitly seen as threatened. The current rate of soil erosion in the conventional way of farming is up to 100 times higher than the parallel rate of building up the soil. In the long term, this situation massively threatens the agricultural basis of production.
- 3) Agriculture can either produce further emissions or else contribute towards preventing or compensating for these. Biodynamic and organic ways of farming are expressly recommended in order to reduce emissions in future and at the same time to improve the resilience of agricultural practice.
- 4) So as to have a sustainable future the IPCC recommends actions to protect the climate that are quick to implement and suitable locally. It should be possible to realise these through the wealth of experience of local protagonists from all parts of the value creation process and thus enacted in co-operation.

Ueli Hurter *Agriculture is never climate neutral. There are historical and current examples of where it improves the climate (Timbuktu Collective, Agricultural Conference 2019), and there are numerous examples of where it is harmful to the climate. What is new to the situation in 2019 is 'just' that we have a global awareness and the data are available too in order to draw up a balance sheet for the global climate. How come agriculture has such a strong effect on the climate? Because it is intrinsic to its very being that it permeates what is below with what is above and what is above with what is below. The inauguration of agriculture in the Old Persian culture consisted in tearing up the earth with the plough. That was an incredible deed! Striking down into the depths of darkness, a step into Ahriman's realm. However, the upper,*

light and warmth, - symbolised in the Persian culture in the sun being, Ahura Mazdao – was thus able to penetrate the lower. Through this, food grew in quantity and quality in the field and in the garden, something that enabled a tremendous step forward in human evolution: the step of becoming settled, also known as the Neolithic Revolution. Thus mankind became citizens of the earth; now no longer "the splendid stranger" (Novalis), but "mankind is called upon to fashion the earth" (Novalis). From this time on, agriculture as the basis of a settled existence is opportunity and danger for the soil, the water and the atmosphere. What the IPCC report shows with current data is that agriculture is part of the problem but also at the same time part of the solution, which is also right from a deeper understanding of the inner nature of agriculture.

If we take it a step further, it becomes evident that the 'lower', which opens itself to 'above', means in particular carbon and nitrogen in the organic realm. In fact, CO₂, CH₄ and N₂H are the most important climate gases. In the troposphere, 8,000 to 18,000 metres above the earth's firm surface, they form an umbrella (a surface in the atmosphere), which reflects the sun's warmth that is radiated from the earth and sends it back to the earth (greenhouse effect). This results in a global rise of temperature in the atmosphere. Through various forms of feedback this process is strengthened and accelerated. So much for atmospheric physics. Is there such a thing as atmospheric biology? Or even biodynamics of the atmosphere?

Potential of biodynamic agriculture

LB For farming practice these results can be interpreted in two extreme ways. We can deny climate change, ignore it and hope that nothing more will happen or that the whole body of scientists has made a mistake after all. That would mean maintaining the status quo, not cutting back on emissions and hoping for people who are adaptable and technically adept. The other extreme would be a radical change: renouncing further emissions and acting aggressively. The special report opts for acting decisively, and in our society, at least since Greta Thunberg and the Fridays-for-the Future demonstrations, the will to take action appears to have taken hold.

The report emphasises in addition that agriculture has to develop resilience, its inner robustness, as quickly as possible. This demands of us, above all, that we accept the new inevitable conditions, such as developing trust in our own ability to act, to rise up above the crisis. It means reflecting on our own farm, having a holistic overview and adjusting in good time. This requires a trained eye, having a knowledge of various options for action and the will to

realize the reality of our own situation. If we now consider the possibilities quite rationally which biodynamic agriculture offers for protecting the climate and resilience, we will realise that this form of agriculture:

- does without chemical fertilisers, pesticides and herbicides with their emission intensive and costly production and instead uses its own local, organic fertilisers.
- invests in improving the soil through keeping a balanced number of livestock in the fields, composting and diversity in crop rotation.
- develops a certain sovereignty, for instance, through thinking in closed farm cycles; whereby for example, it is possible to do without soya imports from Brazil.
- attends intensively and conscientiously to its own soils, plants, animals, human beings and interactions on the farm and in the world, time and again.

Expressed in figures, this means that, if we in the EU convert 50 % of agricultural land to organic and biodynamic farming, by 2030, we would be able to save or compensate for up to 30 % of farm emissions. Concomitantly, in long-term trials it has been shown that organic and biodynamic agriculture can deal with climate fluctuations and extremes. The crop losses turn out to be less with a good soil structure, when facing extreme weather events and droughts than with conventional farms. Parallel to this, the diversity in the fields, in livestock keeping and the branches of the farm practised on biodynamic farms protects them economically. Thus, the people on the farm will remain more capable of acting in the future too. We then have the possibility in agriculture of taking a course that uses the already present, practised potential of biodynamic agriculture. This must be considered according to the place and the possibilities for acting of each individual. In some regions or branches of the farms actions can be taken more rapidly and be more effective than in others. Thus I may realise, when I consider my farm, that, for example, composting or the strategic planting of trees or hedges are easier to carry out and take less time than improving the humus of the soil.

UH *In the Agriculture Course in 1924 Rudolf Steiner did not speak in a Persian mystery language, but accommodated his audience to such an extent that he used a highly topical agronomists' language. He spoke about sulphur, carbon, oxygen, nitrogen and hydrogen – precisely the elements that people are dealing with at present. Carbon (C) is the substance that forms the basic structure in the organic realm. A plant forms its body from carbon; it germinates, grows, blossoms, bears fruit and dies away. What is left over is the seed of this specific plant and the humus, which is like a universal seed. Carbon lives dynamically in the life cycle within the individual*

plant, in the whole field of plants, in the whole landscape with over a hundred years' cycle, if we think of the trees. If we manage to keep carbon in life's cycle, then we not only refrain from damaging the climate, but contribute positively to a healthy climate. With nitrogen it is such that it has difficulty entering organic life from out of the air where, in its atomic form N_2 , it is present on a huge scale. Something on a soul level needs to form a body for itself in order for nitrogen to enter earthly life. That is the case with animals and with the plant family of the legumes. With these two sources it is possible to have nitrogen on the farm in sufficient quality and quantity. The synthetic, industrially produced nitrate fertiliser – which escapes into the atmosphere as laughing gas (N_2O) and has a global warming potential 265 times of the CO_2 – is not necessary! Though, for a farm's own nitrogen management a level of livestock keeping, in particular, ruminants, is necessary. This principle is realised in biodynamic cultivation, right through to the Demeter guidelines, which stipulate the inclusion of animals as mandatory.

In practice people do not work with the chemical substances, but the concepts people have of them have a lot of influence on the how and the what in farming. With the knowledge outlined above of the substances as the bearers of life, soul and spirit in nature's household I work differently from thinking of them as dead chemical atoms. Consequently, in biodynamic cultivation the unit which enables the living flow of substances in a closed cycle and can carry it, the basic unit, with which we work practically, is the individual farm. It is really a "farm individuality", which forms its body in the farm organism. All the efforts of the practitioner are directed primarily towards this whole and only secondarily towards the particular branches of the farm, which may be seen as organs in the sense of the farm organism. With this approach of always thinking, feeling and acting out of the whole, the biodynamic farmer has the nature of a bit of a dreamer. For the whole is not concretely graspable, it has to be conceived or "imagined". This can lead to astonishing ways of proceeding. I once came to a farm which had to wrestle with a high rate of calf deaths. The measure taken by the farmer was – among other things – to plant lots of hedges. Now you could say, he is a dreamer or he is crazy! However, it was clear to him that, if he wanted to strengthen the lack of structural forces, which were causing the disastrous diarrhoea among the calves, then they needed to be improved with hedges in the landscape so that they will reach the calves through the feed and the milk of their mothers. Is that not like working atmospherically? You go with a phenomenon, weighing it up inwardly, right out to the periphery and from there comes a flash of inspiration, which allows you to act at a particular point, apparently far removed from the cause. In other words, biodynamics always acts out of the periphery, from its approach it is climate agriculture.

Making the available potential visible

LB If we return to the large picture of climate change at the moment, the question arises as to why not more farms are converting to biodynamic agriculture and climate-friendly agriculture at present. For such a conversion knowledge, role models and options for acting are required. Every farm is individual, unique and consists in specific interactions between people, animals, landscape and the global environment. If we want to enable conventional, organic and biodynamic farms to act on the same basis, it requires the portfolio of knowledge, from which practicable and ecologically, socially meaningful solutions can be created. It requires the inspiration of people who have already put solutions into practice and their readiness to share their own experience with others. Then farms can act locally and at the same time keep an eye on the global picture.

In order to fill this gap, a new research project has been started at the Agriculture Section. In the project "Living Farms: potential of biodynamic places in times of global change" 15 to 20 farms world-wide are being visited, researched and portrayed. In short videos their strategies, thoughts and options for acting are shown. Thus farmers, advisors and also consumers can have access to the world-wide repertoire of possibilities of biodynamic places. This access will enable people to grow together with the challenges of global change.

UH *Climate change concerns us all; it affects us all. It calls for lots of insights, lots of prototypes, lots of ways of resolving it.*

Biodynamics are not THE solution. They can make a contribution. For, as we have seen, in its very being it has its focus on, and its actions are directed from, the whole to the particular – and this is just the call of the climate crisis: the earth is a whole, the earth is a living being and wants to be treated by us humans as such. Our contribution is actually the farms; it is not the science (anthroposophy, the "Agriculture Course") and also not only the (Demeter) produce, which can be so inspiring for many people. However, we think our farms could have the impact on lots of people of their finding inspiration and encouragement for their own actions. For, the farm is concrete, soil, plants and animals are actually there, the people and the community are not thought of in an ideal sense, but with 100 % of their difficulties they are part of the whole. The farms are also social laboratories, where, for instance, new forms of ownership are being tried out. Farms are food workshops as well, where neither fast food nor slow food is being produced but true food. In this way we want to show people our farms in all modesty. So that people in Nepal, on the Philippines and in Iceland can see them, we are putting these portraits into video films. Thus we are back with Ahriman, the circle is completed, agriculture arises from the dynamics of the encounter between sun and earth.

You can find further information about the project on:

www.livingfarms.net

Facebook: [Sektion.fuer.Landwirtschaft](#)

Youtube: [Sektion für Landwirtschaft](#)

Instagram: [@section_for_agriculture](#)

The “Biodynamic Agriculture and Hybrid Varieties” Project

Ueli Hurter

We are faced with a dilemma. As a biodynamic community we want to grow open-pollinated varieties that we have bred ourselves, which is the message we give. At the same time in commercial biodynamic vegetable growing hybrid varieties from the major seed companies have a strong presence on the market. The alternatives up until now, traditionally bred varieties, are steadily disappearing from the market and are mostly being replaced by hybrid varieties instead of by biodynamically bred varieties.

However, without suitable varieties biodynamic cultivation is unsustainable in the long term. On the one hand, because, in the long run, we cannot get it across why something should be biodynamic, if Monsanto has its fingers in it. On the other hand, the economic sustainability will be affected, because dependency on the big seed companies will inevitably increase, if something does not change soon and biodynamic agriculture fails to win (back) its sovereignty over its seed.

It is a major concern for a large part of the biodynamic movement that Demeter and biodynamic agriculture remains authentic and able to act in the long term, and marketable varieties which are the property of the sector are part of this.

Therefore, the Agriculture Section, in co-operation and consultation with those involved in breeding and the seed sector and Demeter International, has set up a working group for the issue of “Biodynamic Agriculture and Hybrid Varieties”; this is to tackle the problem fundamentally, to lead discussions and initiate an awareness process which, hopefully, will be able to arrive at a solution to our conflicted position.

It was decided to organise various discussion sessions to work on the following questions, amongst others:

How did we get into this situation? What ways are there out of the dilemma? What are the arguments in favour of and against each of these? Are there any open questions, i.e. an actual need for research, to resolve the dilemma once and for all?

We are inviting experts and others involved in this field to the Goetheanum from 19th to 21st March 2020 to discuss and debate our topic and the questions mentioned. We hope to make significant progress together towards solving the dilemma described.

Rudolf Steiner's "Anthroposophical Soul Calendar" – a Companion for deepening one's own relationship to the Course of the Seasons

Albrecht Römer

"The human being thinks with the same forces as those through which he grows and lives; just that these forces have to die off in order for the human being to become a thinker.

That is the point at which the true relationship can become apparent in the reasons for the human being grasping reality through thinking. In his thoughts he has the dead picture of what forms him from living reality.

The dead picture, this dead picture, however, is the result of the working of the greatest painter there is, the cosmos itself. It is true that life is left out of this picture; if it were not left out, then the ego would not be able to develop. Nonetheless, in it there are all the contents of the cosmos in its splendour".

(Rudolf Steiner, GA 26, "The anthroposophical Leading Thoughts". Goetheanum, January 1925).

The Soul Calendar is a poetic work with 335 lines. In 52 numbered verses, also called verses of the week, the course of the year, the archetypal picture of all development, from birth through death and the cosmic mid-night hour to a new birth, is followed.

The first and the last verses:

1 *When from the vastness of this world
The sun speaks to the human mind
And joy from the depths of soul
In beholding joins with light;
Then thoughts that burst from out the self
Stream into distant space
Unknowingly uniting
The human being with the Spirit's life.*

52 *When from the depths of soul
The spirit seeks the Being of the world
And beauty swells from far and wide
Then from the farthest heaven, living force
Streams into human limbs,
Purposefully uniting
The Spirit's Being with our human life.*

The Soul Calendar first appeared in 1912. In 1918 it was published in the series of "colourful leaflets" as a supplement to the cigarette packs of Waldorf Astoria in a print of 50,000 copies with a newly written foreword. The Soul Calendar appeared a second time in 1918 in the "Library for the German War Wounded". From 1918 on Rudolf Steiner created the eurythmy forms for all the verses of the week. As late as 1925 he collaborated with others on a new edition.

The following quotation is intended to point to both forewords from 1912 and 1918, which are helpful over and over again in dealing with the Soul Calendar: *"The course of the year has its own life. The human soul can share in this life. If the soul lets what is speaking in a different way from week to week out of the life of the year affect it, then it will truly find itself through this experience. It will feel how forces thereby grow for it that strengthen it from the inside out.*

The soul will notice that such forces want to be awakened within through the interest it can take in the meaning of the course of the world as it runs in the sequence of time. It will thus become aware which delicate yet significant, connecting threads exist between the soul itself and the world, into which it was born". (From the foreword to the second edition 1918).

In the more than 100 years since it appeared various approaches to this work of verse have been published: explanations of the structure of the verses, portrayals in pictures, musical arrangements, etc.

For a great number of people, the verses have a firm place in their lives, in lots of places they are read in a community setting in one or the other form or else recited. It often proves to be stimulating, valuable, to share with others what they mean to us or them, to share our respective questions and experiences.

Spatial orientation for people is given in reference to themselves with in front, behind, right, left, above and below. In the horizontal plane the directions East, West, North and South are more objective.

With time we orient ourselves in the course of the day in the location we are in: we divide the day into morning, afternoon, evening and night, we do it more precisely with the help of the clock.

The seven days of the week have a cultural character of their own in terms of our civilisation.

The twelve months, besides having this cultural character, have more of a local stamp, i.e. they are determined by the length of the day and climate. In the course of the year the seasons form the framework of reference.

In all this the whole cosmos speaks with the heavens and the earth as a basis.

For the human soul the day-night rhythm with morning, afternoon, evening and night (see above) is most formative of all. Then it is the course of the year with spring, summer, autumn and winter. Within it the religious festivals of the year, and also some official occasions such as, for example, national public holidays are embedded, and not least the personal birthdays and other days of commemoration.

The Soul Calendar can support the orientation of our own souls in the passage through the year.

What the Soul Calendar means to me has developed further in recent years through my living with not only the verse of the relevant week but also time and again a number of verses in a series. Twelve verses per season and each time with a transition, that is how I find my bearings in the warp and weft of connections of the 52 verses. At this point Christof Klemmer's article in Circular 115 on the basis of GA 223, 8.4.1923 is particularly worth mentioning; in it he has collated the "angel workings giving impulses to the cosmos" externally and the "angel workings giving impulses to human beings" internally (see below).

If you arrange the twelve weekly verses of a season into four for the preparation, four for the actual festival time and four for its fading away, for digesting it, then starting from each week you can view the whole course of the year. Each week has a somewhat different colouring from the other 51, closer or more distant connections.

Thus it is possible to experience a connection of the present point in time, the mood of the week, sometimes the mood of a discourse in its harmonious connection with the course of the year, with its position in the course of the year.

The structure referred to will be gone through in the following:

Spring, the **Raphael season**, begins:

(47) *From the womb of worlds will arise
Joy in becoming, quickening the senses' life.
May it find my thinking armed
Through the might of God
That lives so strongly in my soul.*

(47), (48), (49) and (50) are the preparation period for Easter,
(51), (52), (1) and (2) form the festival period, Easter tide,
and the fading resonance is formed by (3), (4), (5) with (6). Thus the Raphael time comes to an end - the time of the resurrection, the new birth has happened:

(6) *My self from its narrow bonds/ Has risen up to find itself/
As revelation of the worlds/ Evolving in time and space;/
Everywhere this world reveals to me/ As godly archetype
The truth of my own image.*

Next there is the transition from **Raphael** to **Uriel**, from spring to summer:

(7) *My self is threatening to escape,
Lured by the world's pure light.
Let now these intimations come
To claim their rightful place,
Supplanting thinking's power
That tends to lose itself
In the bright wonder of the senses.*

The summer time, the **time of Uriel** begins:

(8) *The power of the senses grows/ In union with the gods' creation, /
And vigour of thought subsides/ To a dreamlike drowsiness.
When godly being wills/union with my soul, /
Then thinking must accept/ In quietness the state of dream.*

(8), (9), (10) and (11) are the preparation (Advent) for the St. John's festival time.

(12), (13), (14) and (15) form the St. John's festival time, the Uriel time.

The ripening time, time for digesting (16), (17), (18), (19) ends with:

(19) *To clasp in memory the secret grace/ That newly I received,
Be this my striving now, / And as it stronger grows,
My own powers will emerge/ And in their fullness give myself to me.*

Then the transition from summer to autumn comes, from **Uriel** to **Michael**:

(20) *And now I feel my existence, /Remote from the world's reality,
Alone might cease to be, / For if it only built on its base
Alone it would bring death upon itself.*

The **Michael time** begins with:

(21) *I feel a strange power bearing fruit/ Whose strength bestows myself on me;
I sense the seed maturing/ Light-filled anticipation weaving
Within me to make selfhood strong.*

Coming out of the **Michael time**, bringing the autumn to a close it sounds like this:

(32) *I feel my powers bearing fruit, / And gaining strength to grant me to the world;/
My inner life, I feel, grows strong/ Inviting clarity
In the weaving of life's destiny.*

The transition from the **Michael time** to the **Gabriel time**, from autumn to winter, seems to me to be the moment of death in the developmental course of the year. Here it says:

(33) *And now I feel the world out there, / Without my soul's engagement/
Is but a frozen empty waste, / Revealing its own powerlessness; /
In souls it springs to life anew, / But in itself it only death could find.*

Verse 34 forms the beginning of the **Gabriel time**; in it a reference is made to verse 19, the end of the Uriel time, after the whole of the Michael time (21-32) has been lived through.

(34) <i>To feel what ages guarded secretly, Revived in me Through newly-risen selfhood; This waking shall pour out cosmic powers Into my outward deeds And, as I grow, will print me in existence.</i>	19 <i>To clasp in memory the secret grace That newly I received, Be this my striving now, And as it stronger grows, My own powers will emerge And in their fullness give myself to me.</i>
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Verse (34) together with (35), (36) and (37) forms Advent, leading up to Christmas time, then the festival time follows with (38), (39), (40) and (41), after that the dying resonance, the digesting of the Gabriel time, with the verses (42), (43), (44) and (45). Verse (34) forms the beginning, (45) brings the winter time to a close:

to

(45) *The power of thought grows firm/ In union with the spirit's birth; /
What charms the sleepy senses/ Is now lit up in clearest forms. /
And when the bounty of my soul/ Joins in the world's becoming, /
These revelations of the senses/ Must then receive the thinking's light.*

The transformation from **Gabriel** to **Raphael**, from winter to spring, sounds like this:

(46) *The world is threatening to benumb/ The innate powers of the soul; /
Now, memory, from spirit depths/ Appear in shining light/
To strengthen my beholding/ Which only through the power of will/
Can be sustained.*

(47) is again at the beginning of spring, the **Raphael time** (see above).

The four **transitions**, the transition from one archangel to another, "the passing of the golden pail", are:

(7) spring/summer – from Raphael to Uriel	(8-19) Uriel – summer
(20) summer/autumn – from Uriel to Michael	(21-32) Michael – autumn
(33) autumn/winter – from Michael to Gabriel	(34-45) Gabriel – winter
(46) winter/spring – from Gabriel to Raphael	(47-6) Raphael – Spring

As an example of the **passage through a whole season**, the twelve verses of winter, from "(34) To feel what ages guarded secretly..." to "(45) The power of thought grows firm..." will be considered:

Against the background of "the archangel workings, giving impulses to the cosmos" (Gabriel in winter externally) and "the archangel workings, giving impulses to humankind" (Uriel in winter internally), as seen below, with the step by step passage through the twelve verses, a constant sounding out of external and internal is taking place:

Preparing (34-37), the festival time (38-41) and resonating afterwards (42-45).

Gabriel externally: with loving gaze, with a blessing gesture, weaving in winter clouds in a white, snowy robe

Uriel internally: power of thought, stimulates the powers of judgement in the head, wants to make the human being a citizen of the cosmos, the sternly admonishing one, judging.

"Beware of evil", the mystery word of winter speaks.

This article is intended as one possible approach. Therefore, here is an express mention of the concluding words of the foreword:

"It would be facile to say, the soul should meditate in the way given here, if it wants to nurture a bit of self-knowledge. This is not being said, because the individual's own path should find stimulation from what has been given to it, and not pedantically obey a 'path of knowledge'. (From the foreword of the first edition, 1912).

The verses of the weeks, in their flexible connections with one another, can become a new experience in thought and sound, time and again. Unusual word combinations and new word creations often become eloquent only from their context. Over the years the "Soul Calendar of the Year" can become a friend, a true companion, on the soul's path to its own self; then in the goal of this path "all the contents of the cosmos in its splendour" are included.

N.B. The quotations from the Soul Calendar are taken from "The illustrated Calendar of the Soul", translated by John B. Thompson, Temple Lodge 2004. (translator's note).

Slovenia, a Garden Country between East and West Europe

Jean-Michel Florin

The last meeting of the Circle of Representatives took place in Slovenia, a small country with an area of about 20,000 Km² (25 times smaller than France) and about 2 million inhabitants which after the end of the Second World War belonged at first to the Federation of Yugoslavia. In 1991 Slovenia was the first country in Yugoslavia to declare independence and to join the EU.

Despite its small size this country at the interface of East and West Europe reveals richly diverse landscapes to the visitor: in the North-West the end of the Alps with the Triglav Massif, which rises to 2,800 metres with the holy mountain of the Slovenes; in the South-West the Karst Massif begins – which has given its name to geological formations of this kind, full of caves and holes like a Swiss cheese. This region is the gateway to the Balkans. We had the opportunity to visit a huge cave, through which a torrential river flows – a breath-taking underground landscape! And in the East in the direction of Maribor there is hilly landscape, which opens up further to Hungary. Slovenia is a country of contrasts: on the one hand, very wet, on the other dry, because the karst does not retain any water. It has something of the Alps and something of the Adriatic coast. This richness and diversity gives Slovenia the possibility of playing an important go-between function between Central Europe and the Balkan states as well as East Europe.

The meeting took place in Lesce-Radolica near Bled, the well-known holiday resort. We were staying in a U-shaped glacial valley between the Karawanken Massif, which forms the border with southern Austria and the boundary to the Triglav Massif. When we arrived we discovered immediately that this is a region with intensive garden work. Instead of fenced-in meadows and fields the whole landscape near the villages is strewn with gardens. Nestling beside individual buildings there is sometimes a small garden in the middle of a meadow and at the end of the settlements the gardens spread out in the meadows. Two aspects mark this garden landscape in particular: for one thing, the numerous paths that allow you to walk discreetly between all spaces and areas, and, for another, the lack of rigid fences and locks. The small gardens always combine the useful – vegetables, berries and trees – with the beautiful – decorative flowers and bushes. However, this clear-cut distinction is not quite right, for the red runner beans, for example, are used as food as well as for decoration on account of splendid contrast between the green of the leaves and the bright red of the flowers and are even used as a fence. To under-

stand this landscape, we need to remember that Yugoslavia was a country of self-government. President Tito had tried to develop his country in a third way between the East Block and the West Block. Therefore, there was no great forced collectivisation as in the communist states so that the farms remained small. When I visited Slovenia in the 1990s, I saw traditional small farmsteads with four or five cows without any machines. The hay harvest was still being carried out by hand and the hay was dried on specially set-up frames. Agriculture of this region was small-scale, 'gardening' agriculture at this time – and this still moulds the structure of the farms that we visited this time.

The current developments with the strong influence of capitalism have introduced a new, individualistic culture, which is marked by monotonous cedar hedges and other bushes from garden centres. Nevertheless, the combination with the open gardens which are only defined by vegetation without fences fits into the landscape overall.

Biodynamics started in the region in these settings of small farmsteads and gardens. In 1981 Meta Vhrunc, a translator in Germany at the time, discovered this approach, after she had been suffering from severe health problems, as, for instance, strong allergies in the case of her children, which led her first to anthroposophical medicine and to Waldorf education. Through this connection she discovered a Maria Thun Calendar at a garden party in the home of Waldorf school parents. Meta, an energetic and resolute woman, then decided to meet the person who had drawn up this calendar. This was the beginning of a long-lasting collaboration. From 1985 Maria came regularly to Slovenia and Meta invited other German-speaking people to hold lectures and to translate. Thus, more and more gardeners became interested in biodynamics, which led to the founding of an association called Ajda (buckwheat in Slovenian). Through organising seminars, writing articles as well as publishing the Maria Thun Calendar each year from 1988 on, Meta succeeded in promoting biodynamics in the country on a large scale.

The Ajda Association was soon divided up into regional groups: in the years 2000-2009 16 associations with around 2,000 members developed from it. After this strong beginning and an adolescent crisis in the 2010s the Slovenian biodynamic movement has established itself well in the meantime. Besides the small gardener associations, a Demeter association has been formed in the meanwhile, which brings the farmers together. At

present, 40 enterprises (36 of them farms) are Demeter-certified. In roughly the last ten years, younger farmers and agronomists have also become involved in the association's council so that now various generations are represented there. Moreover, the Demeter Association has a good network: there are connections to universities (for example, in Maribor), agricultural colleges, other associations and even to the press.

One of the pillars of the association is Maja Kolar, agronomist and teacher, who is engaging in the development of biodynamics in Slovenia with all her might and main. With the help of her comrades-in-arms from the association, she invited the Circle of Representatives of the Agriculture Section (i.e. 30 people) to the Bee Centre of Lesce, where the seat of the seed initiative is. Among other things Maja has set up a biodynamic school garden in her village of Radoljica – a project, which initially was co-financed by a European school garden programme. On the edge of the village, in front of the school at the foot of a glacier moraine, which forms a small, wooded, protective hill, 3,000 m² of land were transformed into a garden that serves the village school, the small Steiner school as well as people with disabilities. After the establishing of the garden one person was employed to look after the garden regularly by the mayor of the village. Maja works there as a volunteer and uses the garden as an educational support with the organisation of biodynamic gardening courses, beekeeping courses etc. A very interesting initiative to open up biodynamic agriculture further and also to get it known among young people!

During our trip, besides meeting the president of a regional association of garden plot holders, we had the opportunity to visit the farms of three members of the council of the Demeter Association, Andreja, Matjaz and Rado. In future the association would like to found a biodynamic college and to become active with horticulture and agriculture in the education/ training sector.

Firstly, we stopped at the end of a cul-de-sac in a small village and visited Ajda Domzale, the president of the local biodynamic association, which has 150 members, five farmers among them. This is a typical situation in Slovenia; the farms are still situated in the villages. The president, who was by now getting on in years, used to have a small farmstead with a few animals. Now he still takes care of his big garden and – very importantly – of the producing and maintaining of the biodynamic preparations. His association produces all the biodynamic preparations most carefully: they are stored in large wooden boxes with four sides, a double-layered peat filling and a second one from coconut fibres, according to the directions of U.J. König, in this central place, where they are

available for members free of charge. One of the most important services for the members is shaking a large 500 or 501 barrel on the spot for all gardeners interested. A list is provided to inform everyone who is looking for their preparation, already brewed. This is an excellent opportunity to overcome the "stirring time threshold". Thus here the maximum service is offered with seeing the mixing by hand through. In the storeroom everything is really clean and in order, as it is outside. Moreover, the preparations look very good and appealing. Andreja, the vice-president of the association, joined us and invited us to visit her on her family farm, a few kilometres away.

Thus we came to Pr' Cajhnu, the oldest biodynamic farm of the country, which converted to biodynamic farming 21 years ago. Andreja's parents, who were both working elsewhere, were living on the family farm. When Andreja's mother became unemployed, she decided to stay at home to reactivate the farm with its seven hectares of land. However, at first, there was no perspective and no vision. Nevertheless, then, at a meeting with Meta it just clicked: biodynamics opened up new ways of seeing things with looking after the land and the earth and gave meaning to their work on the farm. And so the farm has been run by both of them for 21 years. Andreja, their youngest daughter, has got involved in the work with great enthusiasm in the last few years. At the same time, she has been studying environmental sociology at university. On this small farm with seven cows and two pigs of the local Slovenian breed everything looks tidy, clean and orderly. There are three hectares of fields, on which field vegetables are grown, especially vegetables for winter storage such as carrots, potatoes etc., as nearly all Slovenians produce their own vegetables in the countryside. In July in the same year, after the harvest of the buckwheat sprouts, which provide blossoms for herbal teas, there follow grains, which are dried and milled into flour as well as various further crops in rotation, for example, the cultivation of spelt that they have imported from Germany. There are five hectares of meadows to gather green grass, which is brought to the cows from April to October, which do not have any grazing land for themselves, because the farm is too small and has been brought into the village. Yet Andreja explains that they are definitely convinced that being close to humans compensates for the lack of grazing in the pastures. Besides, of course, the cows have an outdoor area where they spend the main part of the day.

If a farm does not use high-tech technology, the farmers have settled for using low-tech instead. Andreja's father is very proud of his more than 50 year old tractor, which still functions perfectly well, except for when the winter is too cold, something that can quite easily happen in

Slovenia. Besides, he invests in low-tech, technology that is appropriate for him and easy to manage, such as, for instance, in a buckwheat dryer, in which the buckwheat is processed directly to flour without being husked. Furthermore, he constructs sowing machines and weed-killers with wheels or else a blade to pull out carrots in order to make the harvest easier. A fine inventive genius!

The farm is present at lots of events to sell its produce. They are often transformed into delicious dishes by Andreja for various courses and meetings. Andreja is constantly endeavouring to improve the value of their produce through innovating and combining with original recipes.

The next day we visited the Turinek family near Maribor, in a hilly region with marshy valleys and mountains, where traditionally at the foot of the sloping fields and on the mountain tops fruit and wine are cultivated. Matjaz Turinek and his wife, Maja, who live on the family farm, Zlate Misli, in the village, leased old apple orchards a few kilometres from the village eight years ago and converted them to biodynamics. The trees were weak, so they originally had the idea of replanting all the orchards. But the farmers did not have the money for this. Fortunately, says Matjaz now after two apple crop failures. Instead they have diversified very widely, first with fruit, which stretches from strawberries and raspberries via black currants right through to blueberries. Then vegetables and grain followed, which are partly marketed directly through a co-operative farm venture or else processed into jam, chutney etc. The orchards are enlivened by a small herd of sheep from Ouessant. Matjaz thinks that having animals changes everything: when you arrive in the orchards, you come across the sheep first, which welcome you. The family farm is in the village; there we visited the processing room that is no bigger than a family kitchen. It contains a pasta-making machine, a multi-purpose drying machine (for pasta, dried fruit, herbs and spices etc.) and a gas hob for various jams. Once again the greatest diversity with low-tech in the tightest spaces! Maja and Matjaz worked for a time with the help of Woofers, but they stayed for too short a time to really learn anything. Now they have settled on a new option: they work with young people doing their international conscientious objection service, who stay six to nine months. This makes work much more efficient.

We took the bus again to visit Rado's Vinogradnistvo Suman vineyards nearby. As soon as we arrived in the vineyard, Rado explained to us how he has always felt

connected to the plants. Even in the past he was already using plants like chamomile for the treatment of his vines. When he discovered that biodynamic practitioners used the same plants, he was very interested in the approach, although he found the way of applying the plants odd. With Rado biodiversity is the main subject. In order to enliven his vines, he allows wild plants to grow. He also plants healing herbs like lavender and thyme at the base of the vines. The sign for him as to whether he has enough biodiversity is the bees. Thus it is his goal for the bees to find enough pollen and nectar in his area the whole year round. In order to clearly show the relationship to biodynamics he has painted the six preparation plants on his beehives.

The Ouessant sheep herd that lives in the vineyard grazes from the great diversity of plants, which is enriched by the regular sowing of seeds. The compost is taken from the remains of the harvest as well as from the pulp of the grape pips after the oil extraction. Mixed with sheep dung, this gives a good biodynamic fertiliser for the young plants.

Like his colleagues Rado is very inventive too. In order to get the horn manure preparation into the soil, he has developed a machine that digs the furrows in the grass and simultaneously spreads drops of 500 onto the soil.

Small is beautiful – for me this expression summarises the quality of agricultural work in Slovenia very well. The Slovenians have a feeling for caring for nature and its beauty, a great love of detail and inventive genius. Out of a little they make such a lot!

Even if in recent times the consumer society with its industrial areas and trading estates has been expanding, in many regions you can find respect for nature as well as development of culture from nature's potential.

Overall, biodynamics also and biodynamics in particular appears to have a strong potential for development. The challenge will be to make the special quality of the produce known through good processing and local marketing. The aim seems rather to be local and regional market development, since there is little potential for large-scale production, but all the more potential for great diversity in a small framework. "Agrotourism" (holidays on the farm) and gastronomy can definitely be interesting forces and developmental factors in this very attractive country!

We would like to take the opportunity to warmly thank all the Slovenian friends who welcomed us so kindly!

Book Review

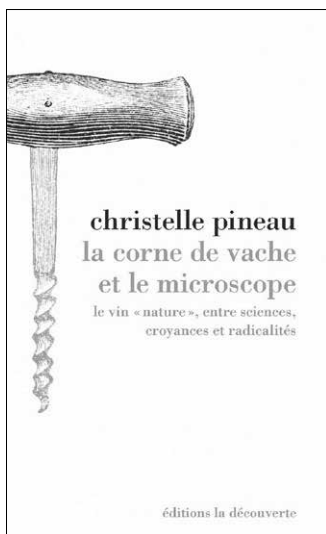
Jean-Michel Florin

Christelle Pineau. *La corne de vache et le microscope, le vin nature entre sciences, croyances et radicalités*. (The Cow Horn and the Microscope, natural Wine between Sciences, Convictions and radical Approaches). Ed. La découverte. 234 pages, 20 Euros.

In recent times several social science researchers, for instance, anthropologists, sociologists and ethnologists, have been interested in biodynamics. This trend is developing especially in French-speaking countries or regions like France itself, Romance-language speaking Switzerland or Quebec in Canada. This way of understanding the relationship between human beings, nature and the reality of life is described fundamentally by the works of the famous French anthropologist, Philippe Descola (see, for example, his book "Beyond Nature and Culture"). Descola names four different possibilities for understanding the world, which he calls ontologies: animism, totemism, analogism and naturalism. Thus he demonstrates that the naturalistic world-view (which asserts and claims for itself that it is the only correct one) is just one of many.

The book "La corne de vache et le microscope, le vin nature entre sciences, croyances et radicalités". (The Cow Horn and the Microscope, natural Wine between Sciences, Convictions and radical Approaches) is the result of this new stream of anthropology and the current development of and research on biodynamic agriculture. The author, Christelle Pineau, herself an anthropologist, endeavours here to identify the contours and structures of the new form of natural wine-growing based on personal commitment. This includes biodynamic wine growers as well as other producers of natural wine. This recently founded wine growers' movement has people interested in it and 'consumers' as well as its wine taverns in Paris and other cities; it even publishes its own journals such as "Le rouge et le blanc".

After Pineau has first of all defined the concepts organic, biodynamic and natural wine, she presents two key personalities: the oenologist, Jules Chauvet, and Rudolf Steiner. With this she shows how the 'new' wine-growers



are far removed from being dogmatic. They are pursuing a kind of personal synthesis by bringing together and integrating contributions from conventional science to natural wine production (Chauvet) and elements from biodynamic agriculture (Steiner); whereby an essential aspect of biodynamics is emphasised, which is often overlooked by commentators and journalists: a central point of the method (Goetheanism, extended by Steiner) is "starting out from experience" in order to discover the inner nature of the world. Thus Pineau does not postulate the usual clichés about biodynamics, but rather tries to understand the basis of

it completely and thoroughly: she cites the research of Nadia Breda, the Italian anthropologist, who has the view that recognised authors, such as Descola and Tim Ingold make it possible today to view the anthroposophical movement as an independent culture and no longer just add the "complex and controversial" term of esoteric.

Furthermore, the author shows by means of life stories, in particular a detailed description of the vineyard work of Anne-Marie Lavaysse through the seasons, a biodynamic wine grower in Minervois, that it is not simply a matter of a change of methods, but a change in the way of living, of culture, as well as the relationship to nature. This is mirrored in the titles of the chapters of her book: "re-building one's life", "autonomous husbandry", "contacts", "alternative streams", "open cycles".

This comprehensive and well-researched book illuminates a lot of thematic aspects with its numerous references and provides well-founded arguments for fetching biodynamic wine-growing out of the "esoteric ghetto", in which several of its critics want to imprison it. It shows that, quite to the contrary, biodynamics along with other similar trends (for example, organic and natural wines) is aiming to give wine growers their responsibility back. This is illustrated by a sentence at the end of the book, "(...) for pleasure, to produce and to drink wines with unprocessed, non-standardised flavours, but also so as to uphold public welfare, be it with regard to the plants, animals or human beings".

Transformation through a “mind-shift diet”

Thoughts on Nutrition for the Future of human Beings and the Earth

Jasmin Peschke

“Our Actions are our Future” was the motto of this year’s World Food Day of the FAO (Food and Agriculture Organisation of the United Nations). Of course, we realise that we have our future in our hands. What we decide today (head) and do (hands) determines how our life looks tomorrow. On the other hand, we also shape our future by reflecting and giving space to impulses from the future (heart). Genuine developmental progress is only made with the interplay of head, hands and heart.

On 5th November 2019 the United States of America withdrew from the Paris climate change agreement at the ending of the moratorium, which had been concluded in 2016 and which 200 states had signed up to. It was the first possible opportunity to withdraw, it takes effect after twelve months. The USA are the second biggest producer of the harmful gas, CO₂, after China.

Our actions determine our future. What kind of future are we facing with such decision making? At this point it is unnecessary to enumerate the observations, facts and scientific results to demonstrate that we find ourselves in the middle of climate change. And indeed it is not just in recent times. Scientists have been speaking of climate change at least since the 1970s. Today it has come so far that each one of us experiences the one or other effect of it quite personally, whether it be through droughts or floods, whether it be through extremes of weather, wildfires or even illnesses. “The climate needs change from us now” is the title of the most recent issue of the Swiss “FondsGoetheanum”. Who is being addressed here? Who should change and face the changes in the climate? On 22nd October 2019 many conventional farmers in Europe demonstrated by going onto the streets with their tractors. They were objecting to being held jointly responsible for the climate crisis. They do not want to be the scapegoats. They are pushing the responsibility onto the system and the too low prices, and do not see themselves as capable of acting any differently than by poisoning the environment with Glyphosate and letting the animals suffer; otherwise, farms could not be run, they believe. They even postulated “Do not forget, we provide the food on your plate” - ; however, how would it be, if we did not want to eat what is produced by this kind of agriculture? A study just published shows that almost every second German (42%) is afraid of harmful substances in food. This means that the consumers know of enough food

scandals that originate in the fields, in livestock sheds or in processing that they are afraid of the food on offer from conventional farming. Trust in the basis of life is shattered. Here is where change is needed, for just the ongoing fear and worry that food could make people ill generates illness before the harmful substances themselves make people ill; whereby organic produce that protects the environment could feed the world. This has been calculated in a study at FIBL (Forschungsinstitut fuer Biologischen Landbau, CH Frick, Research Institute of Organic Agriculture). The conditions necessary for this are there, that food waste is minimised, meat consumption drastically reduced and no more field crops are used as livestock feed. For healthy nutrition needs food that is grown on healthy soils, this is the condition for a sustainable, healthy future for human beings and the earth. There is nothing exclusive about buying organic – it is essential. Even better for the climate would be food from biodynamic agriculture.

But who is responsible for beginning the change? The Brazilian president, Jair Bolsonaro, who watches as the Amazon rain forests burn down so that fields are made for growing G.M. soya? Concentrated feed from soya is fed to livestock in factory farming in Germany, for example. With so many animals in such tight spaces a lot of liquid manure is built up. The excessive spreading of liquid manure pollutes drinking water with nitrates, and the environment is polluted with gases that are damaging for the climate, but the meat is exported to China. If one finger is pointing at Bolsonaro, at the same time at least three fingers of the same hand are always pointing at oneself. You cannot demand of others that they save the earth and change the climate, if you are not prepared to contribute your bit and to start with small steps.

We know so much, have so many facts there in front of us and new reports are coming in almost daily. Why does what we have in our heads, about which we are informed, not become the spur for action? There is a specialised term for it: action gap. A lot of what people have in their heads does not find its way to their hands – and does not touch their hearts at all. This is a so-called disconnectedness, a fragmentation, which can be observed on several occasions, also among other things in working together socially. Responsibility is not taken on, connections are not established. The empty coffee

cup is simply thrown away in the full knowledge that the plastic will turn up again in the sea and in the tissue of the smallest creatures. Beef steaks are supposed to be as cheap as possible in the full knowledge that the animals get soya imports fed to them and the conditions the livestock are kept in arouse sadness and embarrassment at the sight of the suffering animals.

That the head and the hands cannot be linked up is a problem of nutrition. The connection cannot be made. Ehrenfried Pfeiffer observed in 1924 that spiritual or mental insights are not acted upon. Rudolf Steiner answered his question on this by saying that this is a problem of nutrition. Thus, the way food in general is constituted means it no longer gives the strength for the spiritual to manifest in the physical. On the one hand, this is a question of the quality of the products, which are meant to stimulate the senses and inner activity and thereby not only nourish people according to the substances in them and just fill their stomachs. The other side is the question of the will, which is more acute today than ever. Thus, a lot of people would like to eat healthily, yet this wish does not always lead to the logically consistent choice of food and to appropriate shopping behaviour. The consumers are also involved in shaping the earth's development. This fits exactly to the motto of the World Food Day "our actions are our future". The World Food Day could scarcely be more topical. Let us dare to look the facts in the face and take responsibility.

Through what kind of nutrition do head, heart and hands link up? Our senses are the organs, with which we are in a relationship to our surroundings; they build up our body and become effective through being activated. Taking care of sensory activity builds up relatedness, connectedness is established. A meeting of beings is only possible through turning to what is around us, perceiving and through soul activity. With the activation of the senses each person grows and becomes enlivened. Highly nutritious, ripe biodynamic food calls on the individual to encounter and consciously perceive their surroundings.

A simple and effective means of nudging this change is to ask yourself three questions. This can be integrated into the day at any time. It could be called mind-shift. Thus, you can start with the daily meal, perceiving it consciously: how does it what is on your plate look? How does it smell and taste? How digestible is what you have eaten, does it agree with you? This approach is called mindful eating and is successfully used by nutritionists with various kinds of eating disorders or even with overweight. The effect is that the patients build

up a connection to their diet, to the food with its aroma and learn again to enjoy it and to pay attention to the signals of their bodies, and thereby get better. I form a relationship or connection and let myself be touched – and for this I must, first of all, perceive myself. This requires food that is tasty and that comes with a quality to stimulate the senses; that is obvious. When food or a meal tastes especially good, it is interesting to find out how it has been prepared or produced, where it comes from and how it was produced. Curiosity about and interest in the production and the provenance of produce and in the lifestyle of the producers create a connection. And then it is no longer easy to drink cheap coffee, if it becomes evident that the harvest labourers get ill from the pesticides and are too badly underpaid to be able to afford a doctor.

Attentiveness, consciously turning towards and perceiving our surroundings are key qualifications and essential for the change which must be a change of heart and mind, a mind-shift. In an article on the question of whether our existence puts a burden on the earth, Andreas Neider describes how we can endow our environment with new life by perceiving consciously and attentively ("Das Goetheanum", no. 43). Being inattentive and superficial has a rather deadening effect. This is really an approach that is worth trying out. "Perceiving attentively" means engaging our senses consciously and being favourably disposed to forging a relationship.

In the same issue of the journal *Renatus* Derbidge writes about the climate crisis as a truly existential crisis; a crisis, which, like all crises, calls for pausing and reflecting. In order to get through the crisis, it needs a "change your ways" moment, and he suggests people look at the facts, perceive them. Once again, perception is there as the first step to learning something new and as the first step of an encounter which ushers in change or transformation.

11,000 scientists recently made an urgent appeal to the general public and spoke of a climate emergency. They called for immediate steps to be taken, such as reducing meat consumption and food waste. However, it will not help in the long run, if one guideline replaces the other. Just as there are continually new forms of nutrition and diet, the "climate diet" would soon be superseded by a new trend.

Society and the value system require a change in the attitude of each and every one of us, connecting is required, and the qualities of head, heart and hands are required. Then thinking and actions will be linked up and form the vertical axis of a cross, while openness and

turning to the environment will be the horizontal. This is the cross of nutrition.

People speak in this connection of transformation or of mind-shift. In a transformative economic system, besides goods being produced, cultural and social values are created and community comes about. Transformation is significant for the question of nutrition as well, because through nutrition the organs and forces for a new inner attitude, for attentiveness, for the faculty of perception and for nurturing relationships are developed. Transformation and a "mind-shift" diet are urgently needed for our future.

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The Farm Individuality and the Bees

Michael Weiler

As a beekeeper I am moved by the fact that Rudolf Steiner omitted to mention two subjects in the Agriculture Course, the elemental beings and the honey bees.

Bees create more than Honey...

... they enliven, they fire up, they give soul to, they enthuse! We need to take note that the honey bees are representatives in a special way: they represent all the hymenopterans (insects with four transparent wings) – and, in particular, those that visit blossoms.

"... an extraordinarily fine substance, processed by nature..."

Right at the start of the "Bee Lectures for the Workers" (lecture of 26.11.1923) Rudolf Steiner makes a very clear appeal, "Every human being must actually take the greatest interest in beekeeping, because truly more depends on beekeeping in human life than people think".

Straight afterwards he characterises the special way of life of the honey bees: "(...) that in the first place with the bee we have a creature which ingests the extraordinarily fine substance, processed by nature, that it uses for its own household". What this extraordinarily fine substance, processed by nature, really means and what goes with it, there will be more on this later on. Martin Dettli, in his edition of

the Bee Lectures with his comments, points to a further fact: honey bees and the closely related insects that visit blossoms "(...) are the only creatures that nourish themselves without weakening or destroying other living creatures".

The honey bee colonies internalise the quality of the blossoming plants of the landscape.

The reversal of this activity and the impulse-giving significance for life of these insects is explained by Steiner in the seventh lecture of the Lectures for the Workers on the Bees (15.12.1923):

"While the little bee is sitting there, sucking away, the flower experiences such well-being that it directs a juice or sap to the place where the bee is ingesting. This is very interesting, gentlemen! When the bee is sucking away, the flower sends juice to the spot. And, while the bee is removing something from the flower, venom from the bee flows into and is added to this juice.

(...) This is necessary. For, if this would not happen, if these bees, wasps and ants were not there which descend on the world of flowers and consume a part of them, then the necessary formic acid and the necessary venoms would not flow into these flowers, and after a time the flowers would necessarily die out".

Furthermore:

"...Venoms are Foragers of the Spirit"

Thus venoms are remedies as well. Basically the flowers are continually growing more and more diseased, and these little bees, wasps and ants are continually serving as little doctors that bring formic acid to the flowers, which they need, and which, in turn, heals the disease so that everything can be healed again. You see, these bees, wasps and ants are not just robbers, but rather, at the same time, they bring something that gives the flowers the possibility of living".

It is remarkable that these statements are documented in shorthand – this statement corresponds to the statement "when the bees disappear, then human beings will die out after some time (four years)!" It is attributed to Albert Einstein, something, however, that is vehemently contested by the Einstein Association. Yet, if we relate this statement not only to the honey bees, but to all the insects related to the honey bee that work in this way, it sounds more plausible. Einstein was definitely intelligent enough to have been able to see this connection.

A 'golden' Web over the Landscape

In order to visualise the contribution of honey bee colonies, let us imagine the following:

"We are hovering over the centre of our farm; a bee hive is standing there, or, at least, there is a colony of bees there. From the heights of our viewpoint (for example, from the basket of a hot air balloon) we are easily able to command a view of a radius of up to three kilometres. It is a fine, warm summer's day and we enjoy the time from dawn to the evening up there. We look down at the bee hive and follow the flight of the bees. As we do so, we draw a fine (golden) thread after each of their flights or else we draw a line over the landscape with a (golden) pencil. The line follows the bee on her way from the bee hive to the first blossom, from there to the next blossom etc. and finally back to the bee hive again. We do this the whole day long with every bee that flies out. In the evening the entire landscape, belonging to our farm, will be covered with a fine (golden) web. Not a single point that has not been visited or at least flown over by a bee..." (Here I thank Johannes Wirz expressly for suggesting this magnificent picture!)

With the substances foraged by the bees (nectar, pollen, bud resin and water) the beehive is filled with an intense, concentrated 'consciousness' of the quality of the surrounding landscape. And, in turn, the bees have an effect on this quality of the landscape, by shaping it.

Can an idea of the quantities involved be formed?

This is served by a "bee-blossom-honey-arithmetic", which I would like to develop as follows:

This 'arithmetic' originates from two directions of the relationship between the bee and the landscape:

1. The need of the bees for substances that are formed through the life processes of the plants and that the bees need for their physical presence on the earth:
 - nectar (and honey dew)
 - pollen
 - bud resin
 - water
2. The need of the plants for
 - encounter
 - pollination and fertilisation
 - receiving impulses

Now for the Figures

Part 1: Basic Facts

- Nowadays people reckon that a bee colony that is full of vitality produces between 150,000 and 250,000 individual bees annually in alternating warm climates in order to maintain its existence and productivity.
- With this – so the reckoning goes – the individual colony requires 150 to 250 kilos of honey for its own use. (The beekeeper's honey harvest amounts to ten per cent on average).
- Furthermore, the bee colony requires approx. 35 kilos of pollen for its own needs to build up its physicality.
- For the bees to be able to produce honey, they require roughly three times the amount of nectar. (3 Kg. nectar is enough for 1 Kg. of honey).

Part 2: Material Factors

- A bee weighs approx. 0.1 grams.
- Thus 10 bees weigh approx. one gram.
- Thus 10,000 bees weigh roughly one kilo.
- One bee can transport about half its own weight of nectar, i.e. 0.05 grams.

Part 3: Collective Achievements of Foraging

- The trip of a bee foraging nectar may take about 45 minutes.
- This involves the individual bee visiting between 200 and 400 blossoms and gathering "this fine substance nature has prepared".
- To do this it needs to fly approx. three kilometres.
- 10,000 bees can bring approx. 500 grams of nectar to the hive in one trip.
- Thus with three trips that is 1,500 grams.
- From this the bees can make a pound (500 gms) of honey.

- This does not include what the bees need for themselves so as to do this.

Part 4: Blossom Dimensions

- For a pound of honey, the bees of a colony visit between six and twelve million individual blossoms.
- For a kilogram of honey, it is therefore around 20 million.
- Therefore, for the colony's own needs for honey the bees may visit three to five billion individual blossoms – 3,000,000,000 to 5,000,000,000.

In this way, the bee colony provides for itself what it requires from the substances of the earth for its physical existence and for its productivity – and it offers interaction to the plants through visiting their blossoms and thereby – physically-physiologically – pollination.

However, far more is going on than this!

Bees enliven and give soul, fire up and enthuse

- Each bee carries bee venom – in fact, 0.0003 grams in the venom sac, which is filled by the venom gland in the bee's abdomen.
- The bees of a colony spread at least 45 to 75 grams of bee venom in their surroundings each year.
- Bee venom activates the life forces – it fires them up and invigorates life anew time and again.

However, Rudolf Steiner does not just include the honey bees in this kind of effect, he relates it to all insects that live and are active in this manner on the earth – at least to all the relations of the honey bees, all hymenopterans (to which the ants, the wasps and hornets, the parasitic wasps, the bumble bees and solitary bees belong as well). And, if you realise that all these insects carry venom too, that they all have an effect in some way or other with their venom on the vitality of natural processes, a necessary effect, then this may give rise to a sense, at first just a faint glimmer, of the dimension of this silent working in nature.

Taking Stock

Bees, wasps and ants are for Rudolf Steiner, so to say, continually active *"little doctors that bring formic acid to the flowers, which they need, and which, in turn, heals the dis-*

ease so that everything can be healed again. You see, these bees, wasps and ants are not just robbers, but rather, at the same time, they bring something that gives the flowers the possibility of living".

Thus, they are permanently busy with gently permeating the sphere of the soil and the plants with their venom. For its part the venom has a revitalising effect on the elemental life forces time and again. Only in this way, according to Rudolf Steiner, does the plant receive the impulse to reproduce itself anew through the seed that has been formed. The wheel of life receives a new impetus at the point of death. If the insects are missing which revitalise these life forces time and again – and Rudolf Steiner means here all the relations of the honey bee – , then even the biodynamic preparations can only have a muted effect. For, if what they are meant to regulate is weak, then what they can achieve is only limited.

At present, the number of insects that visit blossoms is constantly declining. The decline is largely caused by the simple-mindedness with which people think the living realm in a reductive way and act accordingly. The Agriculture Course promotes just the opposite. However, most of the vanishing wild bees cannot be brought back just like that, here people can only work on the environment, the habitat that they need. Culturally, we humans have a long-standing connection to the honey bees, as their representatives, and we can establish them just where we realise they are needed.

Repeatedly calling to mind your farm and its surroundings with this activity of the bees creates consciousness in the farm individuality. This is yet another reason for bees to belong on every (Demeter) farm. The farmer does not necessarily need to keep the bees him- or herself; every form of co-operation enriches the social and life dimensions of the farm.

- Besides the human beings who want the agriculture and think it through, plan it and carry out the work,
- the honey bees will become some of the most important partners in the development of the farm organism
- or – as it is put in biodynamics – of the "farm individuality".

Astronomical Influences on the Dynamics of Plant Growth

Hartmut Heilmann

In the Agriculture Course Rudolf Steiner points out the connection between sunspots, earth magnetism and plant growth. You can see how important this question was for him from the fact that he spoke four times of sunspots and 18 times of the magnetic needle in three lectures. (In comparison, valerian, as an important preparation, appears only once in a longer sentence). Furthermore, on 14th June 1924, Rudolf Steiner believed he needed to draw a magnetic needle for his audience to show the heightened urgency involved.

After 1868 Selim Lemström undertook four Lapland expeditions, in which he described the basis of the polar lights and, while doing so, found out that plant growth follows the rhythm of the sunspots. He demonstrated that a current from space which is dependent on the earth's magnetic field enters the earth and, on the other hand, leaves the earth upwards as an electric current. The soil absorbs the biophysical energy flow and transforms it. Lemström's book, "Electroculture" (German edition 1902) founded comprehensive international research. In 1915 the dendrochronological findings of the astronomer, Andrew Ellicott Douglass, were reported in the German Reich: even tree growth follows the eleven-year rhythm of the sunspots. This report was amplified by the comment that this could be found straightaway with the pines near Eberswalde.

Rudolf Steiner was evidently a comprehensively informed scientist. In his body of lectures, he refers to sunspots 14 times. To illustrate this, compare the drawing on page 152 of the Agriculture Course (fourth edition 1963) and his detailed explanations of the "streaming upwards of the cosmic" on page 47. In his comment about the influence of sunspots on the earth (page 33) Rudolf Steiner

emphasises the emancipation of higher organisms from these rhythms. Lower organisms such as plants show a closer connection to the rhythm. A doctoral thesis by Werner Oswald of 1933 showed that taking account of these natural interconnections brings out a high productivity of nature. Forestry research enables us to understand trees' growth and the damage to them in the light of their dependence on sunspots and the earth's magnetic field still to this day. In 1880 Hermann Fritz demonstrated the interconnections between the relative number of sunspots, planetary constellations and earth magnetism; on the basis of this he predicted a culmination for 2020. This is emerging as well.

The way the Agriculture Course has been adopted in its 90-year history has led to a restrictive pattern of interpretation. The editors formed the present concept of biodynamic cultivation with the new title of the cycle ("Geisteswissenschaftliche Grundlagen...", i.e. Spiritual scientific Basis...) and with the formulation of headings and summaries. In the German-language index of the Agriculture Course, unlike the English-language edition, the reference to sunspots is missing. The astronomical cosmos, scientifically describable, and the natural phenomena on the earth belong together. It is possible to close this gap and no longer to exclude these important viewpoints altogether.

The biophysical interconnections mentioned do not just have an influence on plant growth. Their vitality can also be measured biophysically. I will demonstrate this in my contribution to the Agricultural Conference 2020.

Available literature can be proven.

Agenda 2020

Date	Title	Description
10 th – 11 th Jan.	Nutrition Circle	International Working Group of Nutrition Experts. Study Meeting. By invitation. Goetheanum, Dornach, Switzerland
12 th – 17 th Jan.	Shaping the Future – Empowering Changemakers in Food and Farming	Intensive study week Goetheanum, Dornach, Switzerland
12 th – 14 th Jan.	Working Group on Biodynamic Fruit Production	Dottenfelderhof, Bad Vilbel, Germany
3 th – 5 th Feb.	Meeting of the Members of the Circle of Representatives for Biodynamic Agriculture	By invitation Goetheanum, Dornach, Switzerland
5 th – 8 th Feb.	Agriculture Conference 2020: Finding the Spirit in Agriculture	Annual International Conference of the Biodynamic Movement Goetheanum, Dornach, Switzerland
5 th – 8 th Feb.	<i>Woven Skin</i> by Claudy Jongstra	Exhibition in Goetheanum Park, Dornach, Switzerland
9 th – 10 th Feb.	International Working Group on Biodynamic Preparations	Meeting on Preparation Research Goetheanum, Dornach, Switzerland
9 th – 10 th Feb.	International Biodynamic Advisors Meeting & Training	English, Dornach, Switzerland
19 th – 21 th März	Conference «Biodynamic Agriculture and Hybrid Varieties»	Goetheanum, Dornach, Switzerland
3 th – 5 th Juli	Faust 1 und 2 (gekürzt) Von Gretchen zu Greta – Wie hältst du es mit dem Klimawandel?	Goetheanum, Dornach, Switzerland Conference: German, French; Performance: German
21 th – 22 th Sept.	Symposium on Biodynamic Research – the Farm Organism as a Holistic Approach?	Pre-Conference OWC in Rennes, France
22 th – 27 th Sep.	Organic World Congress 2020	in Rennes, France
4 th – 6 th Nov.	Meeting of the Members of the Circle of Representatives for Biodynamic Agriculture	By invitation Goetheanum, Dornach, Switzerland

2021

3 th – 6 th Feb.	Agriculture Conference 2021 Climate Change – ecologically, socially, spiritually	Annual International Conference of the Biodynamic Movement Goetheanum, Dornach, Switzerland
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