

1971



1971

The Golden Blade

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BOOK REVIEWS

Edited by Adam Bittleston

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EDITORIAL NOTES

EVERYTHING in this year's *Golden Blade* is concerned – for the most part directly, elsewhere indirectly – with the earth as a living organism, to which plant, animal, and man belong, and many other beings as well. This theme appeared again and again in Rudolf Steiner's lectures and writings between 1900 and 1925, particularly in the later years. Not long before his death in March 1925 he published in a series of letters to the members of the Anthroposophical Society one headed: 'What is the Earth in reality in the Macrocosm?'¹

We have become accustomed to the fact that man can look out from the earth into the universe and *calculate* the movements of the heavenly bodies. But Rudolf Steiner describes in this letter (as he had done before in other connections) that this would not have always been possible. For spiritual vision a far past time is revealed when the Macrocosm, the great universe, was so filled with life that its manifestations could not have been calculated. The entry into calculable regularity was for the Macrocosm a process of death.

Because this happened, man became able to think in the way that gives a foundation for his self-consciousness and his freedom. But the thoughts themselves, out of which modern civilisation has been constructed, are only shadows. We project back into vast distances of time the calculability which is found around us today. We picture a world machine out of which plant, animal, and man have somehow arisen.

The earth has often been described as an insignificant grain of dust in the vast universe. Rudolf Steiner shows how differently it appears to initiate vision. In an external Macrocosm that has entered into death, the earth is seen as the seed of a future universe. Where there is autumn and winter, indeed, the earth shows how it shares in the process of death. But the growing plant has not only life *for itself*, for its own development of leaf, flower, and fruit, but *more*; a germinating power which streams out beyond the earth. Into this there enters as well what comes as formative power from that realm of the earth

¹ *The Michael Mystery Letter XIX* (Rudolf Steiner Press).

which we regard as dead, the mineral realm; and all this is drawn together into a great sphere by what comes from the entire company of the animals.

While human thinking bears witness to the process of death, we are in our wills part of the earth's renewing life. But this does not enter at first into our waking consciousness. Where – not through what is implanted in us by convention, but in a genuine, individual sense – we feel the influence of conscience, and recognise this in our thoughts, then something works up into the light from the deepest realms of will.

It seems that for increasing circles of people, especially among those who are young, a conscience on behalf of humanity in general is waking in recent years, calling us to observe and rectify what is being done to the earth. Warnings about the dangerous pollution of water and air are no longer regarded as matters only for experts, though the experts are very much needed to keep watch on them. They are everyone's concern.

Not long ago it would have seemed inconceivable that man could seriously disturb the life of the oceans which form two-thirds of the earth's surface. Now Commander Jacques Cousteau, a man with wide and intimate knowledge of undersea life, when his ship the *Calyпсо* concluded a voyage lasting three and a half years, covering 155,000 miles, said 'The oceans are dying. It is man's fault they are sick.' He estimates that in the last twenty years life in the oceans has diminished by forty per cent. Such a figure should not be regarded only quantitatively; it indicates disturbed ecological relationships at every level, many of which at present cannot be assessed with any certainty. 'In the past, the sea renewed itself. It was a complete cycle. But this cycle was upset. . . . Mankind cannot live, if the oceans die.' (*The Times*, 17th September 1970.)

That state of mind which makes individuals, groups, and nations act simply in their own short-term interest is leading today on several different paths to the destruction of the earth's life. But it is not the only element in human consciousness. Allied with the awakening of conscience, there is the power of compassion, which extends not only to other human beings but to the animals – though this is not yet able to prevent, in Britain and other countries, the most far-reaching cruelties ever inflicted on animals, by factory farming and vivisection, which

are described by Mr Peter Reeve in this issue. These cruelties are defended as economically necessary, or necessary for research. Such arguments only carry conviction because we have developed too little that kind of thinking which can grasp problems as a whole 'imaginatively' – using this word to denote an objective method of knowledge.

In real Imagination thinking is no longer bound to the past, to what is finished and calculable (predicting the future only as a continuation of the past) – but enters sensitively into the qualities of developing relationships. Here are to be found the first beginnings of actual spiritual perception. For such perception, a whole new realm of earthly beings becomes visible. With fine humour, Dr F. H. Julius describes in his article the possibilities and pitfalls at the beginning of such discoveries. This realm does not only contain beautiful and helpful beings; we ourselves produce beings – through social injustice, fanaticism, and untruth, for example – which show themselves there in their appallingly misleading and destructive power. Not only in measurable ways, in water and air, is the earth polluted. It will be necessary for man to extend his consciousness in the future, to recognise and love the elemental beings who do infinitely much for the life of the earth, and to master and direct into good purposes those harmful spirits for whom he is himself responsible.

* * *

In June 1924 Rudolf Steiner spoke for the first and last time to a considerable group of practical farmers and landowners. And what he said was entirely practical. It formed the basis of the bio-dynamic method of farming and gardening, which has been faithfully pursued since then in many countries. This method does not regard a farm as a factory – a view which has the practical consequence, as recent reports on the English Midlands showed very emphatically, of steadily destroying the life of the soil – but as a sensitive organism related in a many-sided way to the universe beyond the earth. Where bio-dynamic farming is well established, consumers begin to recognise the quality of its products – and are ready to pay for them! But there are tremendous obstacles to its development, under the conditions which farmers meet today both in 'developed'

and 'underdeveloped' countries – illuminatingly described here by Mr Rolf Gardiner and Mr John Soper.

In Britain the method is sponsored by the Bio-dynamic Agricultural Association, under the chairmanship of Mr David Clement, which publishes twice yearly *Star and Furrow*, edited from its beginning until 1969 by Mrs Doris Davy. Here every aspect of bio-dynamic farming and gardening is discussed, and detailed advice given. An outstanding figure in the bio-dynamic movement in the English-speaking world was Dr Ehrenfried Pfeiffer, to whom Mr Gardiner pays a worthy tribute. It is very remarkable to observe how clearly he saw the problems of which the world is now slowly becoming conscious, as early as 1947, when his book *The Earth's Face* was published. To a limited extent the warnings given by him, and by others better known in public life, were heeded; but not deeply enough.

* * *

Human beings are not only concerned with the earth while they are living in an earthly physical body; it has a significance for them, though this goes through great changes, all through the period between death and a new birth. The souls of men can learn in this time to look on the earth as a whole in a way that is shared by greater beings, the spirits of the Hierarchies, to feel the majesty of what the earth once was, and to experience their intentions for its future. We bring the heritage of all this into life here as wonder and reverence, which can come to enliven, as we grow up, our rejoicing eyes. That the earth is seen in this way by men is not meaningless for it. It is one of the deeds which make a right future possible, preparing the positive community with the elementals that has been described. To look properly at a bird, or the rainbow, or a wave of the sea – does much to free a man from the narrowness of consciousness from which the earth suffers.

After death once more what we have well seen prepares us for the rainbow vision of the whole earth, described by Rudolf Steiner in the second Berlin lecture from which passages are printed here. In the fourth year of war, with Europe plunging deeper and deeper into the chaos from which it has not yet recovered, Rudolf Steiner described what the dead can see and

reverence – the earth within which Christ works, beyond all differences of nation and race. In the first lecture he enters into the subtle variety of the ways in which the Archangels of the nations work, and goes on to say (in the part not here printed) that the reality of the Mystery of Golgotha transcends all this; in the second lecture he paints the full Imaginative picture of this fact.

It is remarkable that in C. G. Jung's *Memories, Dreams, Reflections* a vision is described which he had during a critical illness early in 1944, in which physical and spiritual facts seem intermingled.

It seemed to me that I was high up in space. Far below I saw the globe of the earth, bathed in a gloriously blue light. I saw the deep blue sea and the continents. Far below my feet lay Ceylon, and in the distance ahead of me the subcontinent of India. My field of vision did not include the whole earth, but its global shape was plainly distinguishable and its outlines shone with a silvery gleam through that wonderful blue light. In many places the globe seemed coloured, a spotted dark green like oxidised silver. Far away to the left lay a broad expanse – the reddish-yellow desert of Arabia; it was as though the silver of the earth had there assumed a reddish-gold hue. Then came the Red Sea, and far, far back – as if in the upper left of a map – I could just make out a bit of the Mediterranean. My gaze was directed chiefly towards that. Everything else appeared indistinct. I could also see the snow-covered Himalayas, but in that direction it was foggy or cloudy. I did not look to the right at all. I knew that I was on the point of departing from the earth. . . . The sight of the earth from this height was the most glorious thing I had ever seen.

Right relationships between man and man, man and animal, man and the whole earth, depend upon the extending of consciousness, so that we can begin to share with understanding the weaving of the elemental beings, the opening of the souls of the dead to the mighty working of the spirits of the Hierarchies, and the healing labours of the Christ.

THE EARTH AS BEING WITH LIFE, SOUL, AND SPIRIT¹

RUDOLF STEINER

*Passages from two lectures given in Berlin,
30th March and 1st April 1918*

ANYONE who has rightly understood what was brought forward in recent lectures, describing how the human soul can determine its own relationship to the supersensible worlds, and how it can work freely at this relationship, need not be disturbed because it is also true that man is dependent upon the universe, upon the entire environment. Human life really swings to and fro between these two things – the free establishment of a relationship to the supersensible world, and the dependence on the environment, the entire universe – notably because man is bound between birth and death to a particular physical body. One part of this dependence upon the universe we shall consider in these days in a special connection – a connection that can be near to the human soul at the present time.

From much that you have made your own of spiritual science it will have become clear to you that our entire earth, which we as whole humanity inhabit, is a kind of great living being, and that we ourselves are included as members within this great living being. In various lectures I have spoken about particular living phenomena of this being, our earth. In the most manifold ways is the life of the earth expressed. In this way, among others: that certain relationships exist between particular regions of the earth and man, as dweller on the earth. Just as it is a truth, though a very superficial one, that humanity is a single whole, it is also a truth that the parts of humanity spread out over the regions of the earth are differentiated – not only through the many influences investigated by external science and geography, but through much more mysterious influences coming from particular regions of the earth's sur-

face. There do exist certain inner relationships, not lying entirely on that surface of things which is scientifically investigated, between man and the soil he inhabits, the part of the earth from which he springs. This can be best seen from the fact that such relationships develop – not in shorter, but in longer historic periods. This could be seen in the alteration undergone by European people who migrate to America and settle there. Of course the time since America was settled by Europeans is still so short that this appears at present only in indications – but it is strongly and definitely indicated. The outer form of European people changes, through life in America – not at once, but in the course of generations. In the formation of arms and hands, for instance, and in the face, Europeans gradually come to resemble the old American Indians. But you should not picture this crudely, but in slight indications.

Such things in a broad way call our attention to the connections between the mighty organism of the earth and its separate members, its particular inhabitants. We know that man as he lives on the earth is connected with supersensible beings, with the beings of the higher Hierarchies. We know that what is called the 'nation-soul' is not the empty abstraction of which materialistic people speak, but a kind of Archangel-being. We need only read the Christiania cycle on the Folk-Souls¹ and we shall find that the nation-soul is a real being, in which a man is as it were imbedded. Altogether, man is continually connected with the higher and lower beings of the Hierarchies. Today, and in the following days, we shall consider this connection from one particular point of view – as is always necessary with such things.

It is necessary to be clear that for the spiritual-scientific observer of the world what is called in a materialistic sense 'matter' does not exist; this too is resolved into spirit, if it is observed in a really thorough-going way. I have often used a comparison to make clear how these things are. Take water; when it freezes, it is ice, and looks quite different. Ice is ice, water is water; but ice is also water, only in a different form. It is much the same with what is called 'matter'; it is spirit in another form, spirit that has passed into another form as water

¹ From notes unrevised by the lecturer. Published by kind permission of the Rudolf Steiner Nachlassverwaltung, Dornach, Switzerland, and in agreement with the Rudolf Steiner Press.

¹ Published in English by the Rudolf Steiner Press. (New edition, winter 1970-1.)

does in ice. When we speak in spiritual science of material processes, we are looking at something spiritual then too. Active spirit is everywhere. That active spirit comes to expression in material processes as well belongs to one particular form in which spirit becomes manifest. But it is active spirit everywhere. When we are considering more material phenomena, we are still describing ways in which the spirit works, where these appear in some realm as external processes, more or less materially.

In man there are continually material processes going on, which are really spiritual processes. Man eats. He takes up into his own organism substances from the external world. Solid materials, which are transformed into liquids, are taken into the human organism and thereby altered. Man's organism consists indeed of all possible substances, which he takes from outside; but he does not only take them into himself, as he does so they go through a certain process. His own warmth is conditioned by the warmth he receives and by the processes through which the substances he consumes pass. We breathe, and thereby take in oxygen; but not only this, for since we are involved by the process of breathing with what happens in the external world, in the atmosphere, we participate too in the rhythm of the outer world. (I have even once expressed this in figures.) Thus with the rhythmic processes which go on in our own organism we stand in a definite relationship with the environment. Through these processes, which are such that external processes of nature play into our being and work on in it, it comes about that the influences become effective, which are exercised on individual men for instance by the nation-spirit. We do not only breathe in oxygen. Something spiritual lives in the breathing of oxygen, and in it the nation-spirit. We do not only eat; substances are transformed in us, and this material process is also a spiritual one. As we take in and transform substances, the nation-spirit can live in this process. The life of the nation-spirit with us is not merely something abstract, but is expressed in our daily activity and the life of our organism. The material processes are at the same time an expression of the ways in which spirit works. The nation-spirit has to make this detour, entering us through breathing, nourishment and so on.

The particular nation-spirits, which have been described in

The Mission of the Folk-Souls and differentiated from other points of view, work on men in different ways, which concern the processes I have just indicated. In this way the nations of the earth acquire their particular character. This depends on the nation-spirits. If we try to observe by means of spiritual science along what paths the particular nation-spirits work, the following results, among others, are obtained.

Man breathes. Through this he stands in a continuous connection with the surrounding air; he breathes it in and breathes it out. And when in a particular case the nation-spirit, through the configuration of the earth and through the most varied relationships, chooses out the path of the breathing – and calls forth the special form and character of the nation in question through the breathing—then it can be said 'the nation-spirit works *through the air* upon this nation'. This is actually the case, in an outstanding degree, with those peoples who at one time or another have inhabited the Italian peninsula. Upon the Italian peninsula the air is the medium for the effects of the nation-spirit upon men. It can be said: the air of Italy is the means through which the nation-spirit impresses his influence on the human beings who inhabit the Italian peninsula, to give that particular configuration, through which they are 'the Italian people' or were 'the Roman people' and so on. What are apparently material effects can be studied in their spiritual foundations, on the ways of spiritual science.

It can be asked: how is it with the other nation-spirits? What means are chosen by the nation-spirits, in order to bring to expression national characteristics, if we look at other regions of the earth? Among the peoples who have inhabited present-day France, or who inhabit it today, the nation-spirit takes a path through the fluid element, through all that does not only enter our bodies as fluid, but works as fluid within them. Through the nature of what comes into contact with, and works upon, the human organism, the nation-spirit vibrates and hovers, determining in this way the national character in question. This is the case among the peoples who have inhabited present-day France or inhabit it today.

However, we do not grasp the matter fully, if we look at this relationship of man to his environment only from one side; to do so would produce a very one-sided picture. You must

remember what I have often said; man is twofold, the head and the rest of the organism have their distinct activities. The influence which I have just described, upon the Italian and French peoples, works only upon the remainder of the organism, outside the head; and from the head there proceeds another influence. Only through the co-operation of the influence from the head, and that from the rest of the organism, there arises what is expressed in the national character in its completeness. The influence from the head is neutralised, so to speak, by the influence from the rest of the organism. Thus what the inhabitant of Italy breathes in through the air – what through the breathing gives a special character to the rest of the organism, outside the head – with this, for him, there works from the head the configuration of the nervous system of the head, in its spiritual differentiation, in so far as man is ‘nerve-man of the head’. – In France this is different. What lives in the organism as *rhythm* is a particular rhythm for the organism as a whole, and a special one for the head; the head has its own rhythm. While in Italy it is the nerve activity of the head which works together with the influence of the air upon man, in France it is the rhythmic movement of the head, the vibration of rhythm in the head, which works together with the influence of the fluid element in the organism. Thus the national character is built up – through the particular way in which the activity of the individual, in the head, joins forces with what is effected by the nation-spirit, working from the environment.

As the nation-spirit of Italy through the air, that of France through the watery element, so the nation-spirit of Britain goes through all that is *earthy*, above all through *salt* and its compounds in the organism. What is solid is the chief thing. While the fluid element is at work in the French national character, we have in Britain the effects of the solidifying, salting element, passing through everything which comes into the organism through air and nourishment. This produces the special character of the British people. But here too something works from the head neutralising what comes from the environment. Just as there is rhythm both in the rest of the organism and in the head, so too there is digestion, metabolism, both in the rest of the organism and in the head. The way in

which the head performs its metabolism, the particular character of this exchange of substances, joins forces with the salting element in the organism, and this brings about the British national character. As the nation-soul works through the salting element, there comes to meet it, from the head, the head’s peculiar metabolism. You will be able to study all the special traits of a national character, if you take into consideration these particular metamorphoses in the way in which the nation-souls work.

With America it is different again; there a sub-earthly element is at work. While with Britain we have to do with the earthy, the salty, in the American national character a sub-earthly element has its effect, something vibrating under the earth; this has there an especial influence upon the organism. The nation-spirit brings about the national character of the American people by working upwards through the sub-earthly magnetic and electric currents. And again, something comes from the head to meet this influence, to neutralise the effect of the sub-earthly magnetic and electric currents; there rays out to meet it, real human Will. That is the peculiarity of the American national character. While with the British national character we must say: it depends essentially upon the earthy element, in so far as man takes this into his organism, which then enters into mutual relationship with the metabolism of the head – in the same way, the *will* that comes to expression in this people, among the Americans, works with what comes up from the sub-earthly, shaping thus the American national character.

* * *

If we observe the East, which will gradually arise out of chaos¹ and shine out in its own true form – there one encounters something peculiar. As the nation-spirit works through the air for the Italian character, for the French people through the water, for the Englishman through the earthy element and for the American from the sub-earthly, so for the Russian, the Slav element, the nation-spirit works through *light*. In the vibrating light the nation-spirit significant in the East is in fact

¹ March 1918 (Tr.)

at work. When at last what will grow in the future in the East has freed itself from its embryonic wrappings, it will become evident that the nation-spirit in the East works quite differently from the nation-spirit in the West. Though I must say 'the nation-spirit works through the light' – the curious thing is that he does not work *directly* through the light vibrating towards us; he works through the light shining down into the ground, and reflected back by it. It is this light arising back from the earth which is used by the nation-spirit with the Russian, in order to work upon him. But this does not work on the organism in general, but upon the head itself, on the mood of thought, on the way in which mental pictures and impressions are formed, and so on. The way in which the nation-spirit works is here just the opposite of that in the West, where he works from the rest of the organism, and something encounters him from the head. In the East he works through the light. The light that streams back from the ground is medium for the nation-spirit, and this works principally upon the head. And what here works back, comes from the rest of the organism, particularly from the organism of the heart. It comes in the opposite direction, towards the head, and alters the influence which comes from there. (Today it is still in chaos, in embryonic wrappings.) It is the rhythm of the breathing, which beats up towards the head, and neutralises what comes from the nation-spirit on the detour through light.

What comes out in this way, in the East that is nearest to us, is present in a still greater degree when we go further eastwards. That is the special quality of the Asiatic East; that the nation-spirit partly still works through the light taken up by the ground and thrown back by it, working on the head. Or the nation-spirit works as well through something that is no longer light, that is indeed not visible at all; the harmony of the spheres, which vibrates through everything, and which for a spiritual humanity of the Asiatic East is equivalent to the effect of a nation-spirit – when the nation-spirit works directly through the harmony of the spheres, which however is reflected by the earth and works upon the head. Against this there works the rhythm of the breath; in this lies the mystery of the fact that the seekers for the spirit in the East have always sought through a special training of the breathing their connection

with the spirit. If you study Yoga, you will see that it claims to develop the breathing in a special way. This depends upon the fact that the individual as a member of humanity – not as separate individual – seeks to find spirituality through the nation-spirit; he seeks it in the way which is really founded in his national character. Thus the further we go to the East, the more we find this. Naturally it could be shown how something of this sort is expressed in fine variations of such nationally characteristic effects, and also in distortions of these effects, deviations from them, in which entire peoples and races share, when there are disharmonies, for example, in the accord between the effect of the head and the effect of the rest of the organism. . . .

How is it with the peoples of Middle Europe? We are speaking more of geographical relationships, and are not considering 'Middle Europe' from a social or political point of view. A central Europe is meant to which France and Italy do not belong. It is the peculiarity of the nation-soul being that is at work in Middle Europe that its effects come – as I have described for other regions that these come through air, water, what is of the nature of salt, and so on – immediately through *warmth*. The nation-spirit chooses in Middle Europe the path through warmth. Now this is not entirely fixed, but can have individual variations. There can be human beings in Middle Europe among whom this effect of the nation-spirit can be different; sometimes upon the rest of the organism, sometimes upon the head. And according to whether the warmth comes directly from the air outside, or through food or through the breathing. This is all a medium for the nation-spirit. What comes to meet this influence is again warmth. Thus in Middle Europe warmth as an external influence is a medium for the nation-spirit, and what comes to meet it is again individual warmth, coming from within. What works in the organism as warmth, through the nation-spirit, is encountered by the head's own warmth. If the nation-spirit's warmth works through the head, the warmth of the rest of the organism streams to meet it. Warmth works towards warmth – and works especially in such a way that it depends mainly upon the greater or slighter activity of the senses, the capacity of perception. A man of livelier spirit, who looks at the things around him lovingly,

develops more warmth of his own; a man who is hasty and superficial, who does not feel much when he perceives, but passes everything by, develops less warmth of his own. This life with the environment, when a human being has a heart, or an open eye, for what is around him – this is what comes to meet the warmth which works through the nation-spirit, so that warmth encounters warmth. That is the peculiarity of the way in which the nation-spirit works in Middle Europe, and much in the character of its people depends on this. For warmth is so intimately related to warmth. The other ways of working are not so closely related. Will is not in the same way related to electricity, the salt-process is not so closely related to the metabolism of the head, or the other influences which have been described. Warmth produces the European character which is also expressed in the capacity to be absorbed into all sorts of things. (This is not a matter of value judgments – anyone can regard it as he likes, as virtue or fault.) Warmth meeting warmth; this produces malleability, plasticity, which can find its way into everything, including other national characters. If we study history, it shows how the particular German tribes have been absorbed in other peoples, have adopted another element.

From what has been said today the great contrast between the Asiatic East and America becomes most evident. Light, and even what lies beyond light in the ethereal, is what the nation-spirit uses in the East to approach man, although this light shines back from the earth; while in the West it is the sub-earthly element. This can lead us deeply into the organic and psychic life of the earth-organism in its association with man.

* * *

Berlin, 1st April 1918

... Picture what the universe is, apart from the earth, if regarded by the Copernican world-conception alone: a set of calculations! It cannot be this for spiritual science, but must be something which is presented to spiritual knowledge. Why do we have a geology which believes that the earth has only developed through the purely mineral world? Because the Copernican world-conception had, as a matter of course, to produce

the present-day materialistic geology. It has nothing in it that could show how the earth is to be thought of, from the cosmos, or from the spiritual, as a being with soul and spirit. A world thought of in Copernican terms could only be a dead earth! A living, ensouled, spiritually permeated earth has to be conceived from another cosmos – really from another cosmos – than that of the Copernican view. Naturally, each time only a few characteristics of the being of the earth can be given, as it appears when it is looked at from the universe.

Is that an entirely unreal conception; to picture the earth as seen from the universe? It is not unreal, but very real. It occurred once to Herman Grimm¹; but he immediately apologised, when he had written about it. In an essay written in 1858 he said that one could imagine – but he remarks at once ‘I do not want to put forward an article of faith, but a fantasy’ – that the human soul, when it is freed from the body, could move freely in the cosmos about the earth, and would then in this free movement observe the earth. Then what happens on the earth would appear to man in quite a different light, thinks Herman Grimm. Man would get to know every event from another point of view. For example, he would look into human hearts ‘as into a glass bee-hive’. The thoughts arising in the human heart would appear as if out of a glass bee-hive! That is a beautiful picture. And then one could imagine: this human being, who has floated round the earth for a time, and observed it from outside, might come to incarnate again on earth. He would have father and mother, a native country and everything that there is on earth – and would then have to forget everything that he had seen from another point of view. And if he was a historian, for instance, in the present-day sense (Herman Grimm at this point writes in a subjective way!) he could not help forgetting the other – for with the other way of looking at things one cannot write history!

This is a conception which strongly approaches the reality. It is quite right that the human soul is as if floating around the earth, between death and a new birth, but – in a way conditioned by karmic connections, as I have often described – looks

¹ Herman Grimm (1828-1901), art historian, is described by Rudolf Steiner in his autobiography, particularly chapter XIV.

down at the earth. Then the soul has the definite feeling that the earth is an ensouled and spiritually permeated organism – and the prejudiced view ceases, that it is something without a soul, only something ‘geological’. And then the earth becomes something very much differentiated; it becomes, for observation between death and a new birth, differentiated in such a way that for instance the Orient appears otherwise than the American Occident. It is not possible to speak with the dead about the earth, as one speaks about it with geologists; for the dead do not understand geological conceptions. But they know: when from cosmic space the East, from Asia until far into Russia, is observed, then the earth appears as if wrapped in a bluish radiance – bluish, blue to violet; such is the earth seen from this side out of cosmic space. If one comes to the Western hemisphere, if one looks at it where it is America – it appears more or less in burning red. You have there a polarity of the earth, seen from the cosmos. The Copernican world-conception can of course not of itself provide this – it is another way of seeing, from another point of view. For him who has this point of view it becomes comprehensible: this earth, this ensouled earth-organism shows itself outwardly otherwise in its eastern half, otherwise in its western; in the east it has its blue covering, in the west something like a glowing out of its interior, hence the reddish, burning glow. There you have one of the examples of how man can be guided between death and a new birth by what he then learns. He gets to know the configuration of the earth, the different appearance of the earth out into the cosmos, into the spiritual; he gets to know – it is on one side bluish-violet, on the other burning red. And according to his spiritual need, which he will develop out of his karma, this determines for him where he will next enter again into incarnation. Naturally one must picture these things as much more complicated than I have said now. But from such relationships man develops between death and new birth the forces which bring him to incarnate in a particular inherited child body.

What I have given are only two specific colours; apart from colours, there are other definite qualities, many others. For the present I will only mention: between East and West, in the middle, the earth is more greenish as seen from outside, in our regions for instance greenish. So that in fact a threefold member-

ing is produced, which can lead to significant conclusions about the way in which the human being can use what he can observe between death and a new birth to guide him to come into incarnation in this or that region of the earth.

If this is taken into consideration, one will gradually acquire the conception that between the human beings incarnated here on the earth in the physical body and the human beings who are out of the body certain things play a part, which are generally not taken into account at all. When we go into a foreign country and want to understand the people, we must acquire their language. When we want to come to an understanding with the dead, we have also gradually to acquire the language of the dead. This is at the same time the language of spiritual science, for this language is spoken by all who are called alive and all who are called dead. It reaches from over there to here, and from here to over there. But it is specially important to acquire not just abstract conceptions, but such *pictures* of the universe. We acquire a picture of the earth when we imagine a sphere floating in cosmic space, gleaming on one side in shades of blue and violet, on the other side burning, sparkling red and yellow; and between a belt of green. Conceptions which have the character of *pictures* gradually carry us over into the spiritual world. That is what matters. It is necessary to put forward such picture-conceptions, if one is speaking in an earnest sense about the spiritual worlds; and it is necessary too that such conceptions are not regarded as if they were arbitrary inventions, but that something is made from them – on this one depends. Let us consider it once more: the eastern earth, gleaming in blue and violet – the western earth, sparkling reddish-yellow. But other differentiations come in. If the soul of one who has died contemplates certain points in our present age, then he perceives at the place that is designated here as Palestine, as Jerusalem, out of the bluish-violet something of a golden form, a golden crystal form, which comes to life. That is Jerusalem, seen from the spirit! That is what also plays a part in the Apocalypse (in so far as I speak of Imaginations) as ‘heavenly Jerusalem’. These are not things which are thought out. These are things which can be seen. Contemplated from the spirit, the Mystery of Golgotha was as it is in physical observation when the astronomer directs his

telescope into cosmic space and then sees something that amazes him, for example the appearance of new stars. Spiritually, observed from the cosmos, the event of Golgotha was the appearance of a golden star in the blue earth-aura of the eastern half of the earth. Here you have the Imagination for what I described in conclusion the day before yesterday. It is really important that through such Imaginations conceptions of the universe are acquired, which enable the human soul to find its place in feeling within the spirit of this universe.

Try to think this with someone who has died: the crystal form of the heavenly Jerusalem, building up in golden radiance, amid the blue-violet earth-aura. This will bring you near. This is something which belongs to the Imaginations, into which the soul enters at death: 'Ex Deo nascimur, in Christo morimur!'

There is a method of shutting oneself off from spiritual reality, and there is a method of approaching it. One can shut oneself off from spiritual reality by attempting to *calculate* reality. Mathematics is certainly spirit, indeed pure spirit; but employed upon physical reality it is the method for shutting oneself off from the spiritual. The more you calculate the more you shut yourself off from the spiritual. Kant once said: there is as much science in the world, as there is mathematics. But from the other point of view, which is equally justified, one could say: there is as much *darkness* in the world, as man has succeeded in calculating about the world. One approaches spiritual life the more one penetrates from external observation, and particularly from abstract conceptions, to picture conceptions. Copernicus brought men to calculate the universe; the opposite way of seeing things must bring men to form pictures of the universe again; to think of a universe, with which the human soul can identify itself – so that the earth appears as an organism, shining out into the cosmos: blue-violet, with the golden, shining heavenly Jerusalem on the one side, and on the other side sparkling reddish-yellow.

From what does the blue-violet on one side of the earth-aura originate? If you see this side of the earth-sphere, what is physical of the earth disappears, seen from the outside; rather, the light-aura becomes transparent, and the dark of the earth vanishes. The blue which shows brings this about. You can explain the phenomenon from Goethe's Theory of Colour. But because

the interior of the earth sparkles out from the western half – sparkles out in such a way that it is true, as I described the day before yesterday, that man is determined in America by the sub-earthly; because of this the interior of the earth shines and sparkles as a reddish-yellow glow, as a reddish-yellow shooting fire out into the universe. This is only intended as a sketch, in quite feeble outlines; but it is meant to show you that it is possible to speak today not only in general abstract ideas about the world in which we live between death and a new birth, but in very concrete conceptions. All this is capable of preparing our souls to reach a connection with the spiritual world, a connection with the higher Hierarchies, a connection with that world in which man lives between death and a new birth.

WISDOM AND THE LIFE OF THE EARTH

JOHN DAVY

THE deepest experience which astronauts appear to bring back from their space journeys is not their encounter with the moon, but their new vision of the earth.

The moon, whose silver light graces the earth's nights, becomes for the astronauts, at close quarters, a giant cinder, a wasteland of dark rock, a fossil of past cosmic dramas. The lunar landscape inspires awe but not affection. There is nothing there for man but emptiness and desolation.

In contrast, the earth hangs in a dark, star-pricked space like a giant water drop, a shining blue jewel in a black and white universe. The mathematical fact that two thirds of the globe is covered with water becomes direct perception. The continents are seen as a kind of bone structure in dim greens, dull browns, dusty yellows embedded in the brilliant blue sphere of the oceans. Both oceans and land are often veiled in vast streamers and vortices of vapour, the great weather systems which unfold where water and air flower as clouds in the light of the sun. This seems to have been an overwhelming experience for many astronauts, but especially for those who have travelled far enough into space to look back on the earth from the region of the moon. It is then borne in on them, with all the force of a religious experience, that the earth is man's proper home, the only place in the material universe where he truly belongs and which holds a future for him.

This experience of man's home as a kind of living water drop contrasts in a curious way with the experience of those terrestrial explorers who set forth in ships at the beginning of our modern age, who felt they had come 'home' when they stepped once more onto dry land. The upright citizen is designed to live on *terra firma*. But the astronaut standing on *luna firma*, well supported on solid rock, looks back and experiences his true home as a shining watery sphere. And it is the oceans of the earth which first receive the American astronauts when they return from their space journeys. Coming home is not a stepping onto dry land, but a 'splashdown'.

It seems to me that there is here an image, in miniature, of a new relationship to the earth which is beginning to emerge among human beings. It is a remarkable fact that, coinciding more or less with the moon voyages, whole communities and even nations have started to discuss the problems of conservation and pollution.

Industrial activity is based on transforming the physical body of the earth. But we are now realising that this activity is threatening the water and air of the planet. Water is the great life-bringer – where it is present, living processes can unfold; where it is not, we have physics and chemistry, but no biology. Air mediates, in many subtle ways, between the earth and the sun, forming weather and climate which shape so strongly the patterns of life and vegetation on the earth's surface. All over the world, water supplies are beginning to be dangerously strained, both in quantity and quality. In arid countries, the need to conserve water is part of every person's awareness. But industrial cities first grew up in temperate regions, where water appears to be cheap and plentiful. So even today, it is not realised how near to the limit we are even in some parts of England, an island whose citizens spend part of their time lamenting the abundance of rainfall, and another part nurturing their uniquely green lawns which the rain makes possible.

The simple fact is that cities and city dwellers have to flush themselves with enormous and growing quantities of water to keep themselves clean. In itself, this is admirable. Running water and main drainage are now taken for granted by most people in this country, but it is not so very long ago that the gutters of many London streets ran with sewage all day long. The first step was to channel it all into drains, which eventually emptied into the nearest river or the sea. But this turned the rivers into sewers, and the fish died. The next step was to build sewage disposal plants to process the wastes first. This is still going on, at considerable cost. But there are some visible improvements: conditions in the Thames have improved recently, and fish have been seen near London Bridge for the first time since the last century.

All this helps – but the problem remains formidable. To begin with, increasing amounts of water have to be taken from

ivers and underground reserves to pump through the cities and flush away the wastes. A great many modern industrial processes consume water on a grand scale, and may produce effluents containing chemicals and other wastes which cannot be digested by ordinary sewage plant. There are now a considerable number of rivers whose flow would shrink to a trickle in summer if they were not fed with effluents from sewage plants. These effluents may be relatively clear and inoffensive, but they are likely to contain a lot of dissolved salts, and to bear little resemblance to the fresh water which originally cut the river channel in which they run. Furthermore, this degraded water is now increasingly recirculated, via chemical purifying plants, to provide water for communities further downstream. There are townships in the American Middle West where water is recirculated some twelve or thirteen times before it escapes to freedom along the river bed.

To meet these problems, increasingly ambitious water collection and distribution schemes are being prepared. There is an idea for a kind of 'water grid' which would eventually collect water from the northern and western parts of Britain, where there is still a surplus, and distribute it to drier regions in the south and east. On the North American continent, vast schemes are being discussed to divert whole river systems which now run into sparsely inhabited northern territories, so that they will water the cities and more arid lands to the South. These schemes are on such a scale that some scientists are asking whether such a massive redistribution of water might not affect the climate, in unpredictable ways. However this may be, in all industrialised countries, a natural and free circulation of water from hills, through streams and rivers to the sea, is gradually being replaced by a man-made grid of reservoirs, pipes and processing plants.

Yet despite all these efforts, there are growing signs of a major water crisis within a few decades. It may well be the impossibility of sustaining a sufficient supply of usable water that will put a limit to the explosive industrial expansion which has characterised 'advanced' societies in recent decades. As for many less advanced communities, they are already in deep trouble. Cities like Calcutta, which are ringed by nauseous slums, are the result of exposing a peasant culture to a western-

type industry and economics which has evolved over centuries. All the social and economic forces which create large cities are released quite suddenly into such societies without providing any of the resources or experience needed to keep them habitable. The result is the creation of centres of chronic social and human catastrophe. All over the 'developing' world, European technology is creating rural unemployment; the unemployed flock to the cities, which cannot house, feed and employ them. There are growing up unbelievable expanses of shanty slums for which no solution is in sight. In Lima, Peru, for example, 1,000 peasants a day are arriving on the city's outskirts, and nobody knows what to do with them.

The water crisis is accompanied by growing concern about the atmosphere. Here again, much has already been done to control the crude black smoke generated by coal-burning, a legacy of the nineteenth century's industrial revolution. The problem of the twentieth century is the combustion of oil and petroleum, which releases acrid sulphur and nitrogen compounds from chimneys, carbon monoxide and complex poisonous chemicals from car exhausts. To give only two examples: there is evidence that fumes from the British Midlands, carried by prevailing south-west winds, are contributing to acrid rainfall which is stunting forest growth in Scandinavia. And some recent studies have shown a dulling of mental alertness among drivers inhaling exhaust fumes in traffic-filled streets.

On a more global scale, there is a good deal of scientific discussion about the effects of the vast amounts of dust and carbon dioxide which are being poured into the atmosphere, with effects now detectable all over the globe. The earth's atmosphere has been measurably darkened during the past 50 years, and this could lead to far-reaching climatic changes. The carbon dioxide level has also measurably increased – perhaps fortunately, for it could offset the effects of the dust: carbon dioxide helps trap the sun's warmth in the atmosphere; suspended dust reflects sunlight back into space.

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Many of these problems have been visible to those interested for twenty years or more. What is remarkable is the quite

sudden way in which large numbers of people all over the world have become aware of the issues. It is as though some new kind of global consciousness were in the making, a consciousness which knows that in the end, every human individual on earth is involved with and dependent on every other. This is in sharp contrast to the essential attitudes which made the industrial revolution. This revolution was made, in great part, by the entrepreneur, the pioneering industrialist, who went his own way, the self-made man. Such men took hold of the solid substances of the earth and bent them to their individual wills. One can recognise in the developments which led from the fifteenth century, through the industrial revolution, up to the twentieth century, a kind of schooling for individualism which brought men into a new awareness of the solid earth and of themselves. This belongs centrally to what Rudolf Steiner called the Consciousness Soul, a phase in the evolution of human consciousness in which man becomes aware of himself as an Ego, independent of 'Nature'. Every man becomes an island, standing on his own inner 'rock'. Technology has been a crucial aid in forming this consciousness. But if we are now becoming aware of the shadow sides of the industrial age – egotism, self-centredness, brutality, disinterest in the wider effects of one's actions on others – it may be because we are becoming ready for a further step.

In certain spheres, a good deal has already changed. In the early parts of the last century, millowners strode blindly past the coughing and exhausted child workers in their mills. The cities were filled with a huge, degraded proletariat, living and working in appalling conditions. But as time went on, groups of liberal reformers began to struggle for change (Charles Dickens was one). The remarkable thing is that from such small groups, a new consciousness spread. It is no longer necessary to argue, as those groups had to, that child labour and sweatshops are humanly intolerable. We have acquired a new, shared standard of humanity, based on a capacity to venture out from our enclosed personal islands, and enter with imaginative sympathy into the life and work of others. There may still be a long way to go: both unions and employers still negotiate on the assumption that labour is a commodity to be bought and sold. But at a purely physical level at least, our whole feeling

for what we owe to the dignity of human life has changed, and is still changing.

I think that a similar change – or perhaps the same change manifesting in a wider sphere – may be beginning to show itself in this new awareness of the environment. We now begin to see that each individualistic enterprise has its repercussions throughout the globe. Continued for much longer, such individualism could devastate the whole planet. We need a new, more 'oceanic' kind of awareness, spread out over the whole world and over the whole community of men, in order to develop a wiser relationship to the earth and its resources. Such an awakening out of the isolated Ego consciousness, a dissolving of the rocks of Egotism by the waters of imaginative understanding for our surroundings, is described by Steiner as the particular problem and task for the future development of the Consciousness Soul, in preparation for a more truly 'social' order.

To pursue this theme further, we may ask whether similar problems and changes are discernible in other spheres of human life. I think they are. The environmental crisis concerns, essentially, the bodily life of man and of the earth, and the health of both. But Steiner asks us to understand man also as a spiritual being who enters into a relationship with a physical body in order to experience the earth. As a spiritual being, he is a creative individuality, capable of bringing new things into the world. But in experiencing the world and his fellow human beings, he develops a soul life, a rich interchange of inner and outer experience. In more familiar language, we could say that man has a creative intellectual life, and also a social life. And here too, there are profound changes and an element of crisis.

In the spiritual, or intellectual life of man, there has developed what is now called the 'information explosion'. Just as industry generates a barely manageable tide of goods and services, so the human intellect has become, in a certain way, almost uncontrollably productive. Particularly in science, but also in other fields of knowledge and scholarship, great mountains of data are accumulating at increasing speed in books, journals and the memory stores of computers. Many laboratories are now really fact-factories, equipped with appar-

atus which allows unbelievable productivity in recording and accumulating new observations.

This situation is increasingly experienced by scientists themselves as a kind of environmental crisis within the spiritual life of man. There is a kind of pollution by undigested and unprocessed facts. It is not merely the difficulty of analysing any particular body of data. The industrialisation of research generates a competitiveness and haste which make it increasingly difficult to find the time and inner quietness to think what data should be gathered next or how they should be evaluated and understood.

The spiritual capacity which orders and relates such fragmented data, which enables them to grow into an ordered whole, is imagination. As water unites all physical parts of the body of the earth and brings dead substance to life (so to speak), so imagination gives life and meaning to dead data. Recently, many scientists have begun to see this, and there is a deep new interest in the human imagination as the faculty which can bring wholeness and healing into the fragmentation of knowledge.

The third 'environmental crisis' which I think is now confronting us is more difficult to describe, because it concerns the environment of the soul. And the soul life of man includes all his instincts, prejudices and passions. Yet I think it is significant that recognition of the environmental crisis and concern about the information explosion have developed along with profound social changes which we have come to call the 'permissive society'. Sexual behaviour – both normal and abnormal – has become a matter of public discussion, comment and display. These changes have been seized upon and commercially exploited with great energy by the entertainment and promotion industries. Sex has been made a kind of obsession.

A great obstacle which hinders a clear perception of the real issues is that sexual 'liberation' has been widely associated by progressive people with the battle for freedom. This idea goes back to Freud, who believed that as we grow up, the 'free expression' of our 'natural' being is inhibited and frustrated by external authorities and abstract rules. Society implants in man a 'Super-ego', a kind of spectral schoolmaster constantly wagging an admonitory finger at every urge of the Id.

This picture has appealed deeply to many people because it seems to describe an important experience in most people's lives, the time especially in adolescence and early adulthood when the idealism and vigour of youth meets rigid and uncomprehending attitudes and rules of an old society. As a result, creative spiritual capacities and ideals of freedom become linked with sexual capacity, sexual freedom and youth, while tyranny and prejudice become associated with sterility and age.

There is indeed a link between sexual vigour and creative idealism. But the great confusion of the Freudian tradition is its failure to see that where the fire of the individual human will becomes bound to the vigour of the living physical body (as in part, of course, it must), it becomes *instinct* and therefore unfree. Least of all are we free in our sexual instincts – their very power resides in their capacity to drive us to sexual behaviour. But Steiner sees the individual will as an expression of the spiritual being of man, born out of spiritual worlds, and finding its connection with that world on earth in striving for the great spiritual ideals of truth, beauty and goodness. These ideals do not impel us in the same way as the appetites of the body. The decision to seek them lies in ourselves, and it is a free decision.

This search, for the spiritual worlds which we almost forget when we are born into a physical body, has risen up in all kinds of images and pictures in different times of human history. But I think that today, behind the scenes of the permissive society, so to speak, one may discern a delicate process going on, which is part of this search, and which is expressed in the words 'communication', 'community' and, quite simply, 'love'.

A great many young people know, or soon discover, that sexual behaviour *on its own* contributes nothing to human relationships. One physical body simply uses another to assuage, temporarily, a biological appetite, thus emphasising rather than diminishing the separateness of the bodies involved, and of the human souls who live in them. But out of this recognition there is growing a more subtle interest in the intercourse not of bodies, but of souls.

In discussing these questions, one phrase crops up again and again: someone will say that in order to truly understand another person, you must 'open yourself to him', receive something of his being into yourself. And a further comment may

be added to the effect that you soon discover, that the biggest obstacle to achieving this lies within your own soul. It does not need much thought to see the truth of this. Social relationships are all too often polluted by a dragon of self-seeking or prejudice, which seeks to dominate, exploit or dazzle the other for its own satisfaction. There is no freedom for either party in such a relationship. But if the dragon can be stilled, and one soul opened to another, then the true spirit, the ideal being, of one person, may speak in the heart of another. This is what 'free love' should really mean. It is an ideal which is struggling to find expression in the social life of many people today. But it is easily obscured by a social environment polluted by so many appeals to instinct and appetite, and particularly to sexual appetite.

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In the permissive society, the word 'virgin' has come to have a very limited, purely biological meaning. But I believe that uniting all the phenomena I have been describing is the beginning of a new discovery or striving for something which is virginal, in a much deeper sense, in the soul and in the world.

We could not be aware of an 'environmental crisis' unless we also had a sense for an unpolluted nature, an ideal which speaks through language particularly when we have to do with water. We still talk, for example, of a 'virgin spring', and we can easily feel that fresh, unpolluted water bubbling from such a source is a kind of physical embodiment of all that we feel to be the ideal of purity and self-sacrificing goodness.

It is perhaps less easy to see that the second crisis of which I spoke, the fragmentation of knowledge, also involves a search for a virginal quality, this time within the human mind. The modern scientist seldom opens his powers of cognition to nature; instead, he imposes certain forms of thought upon her, and imprisons her. It is of the essence of modern experiment to subject nature to measurement – and the information explosion is essentially an explosion of measurement.

The thoughts we embody in measurement are only applicable to dead phenomena – for measurement means dividing up into units which can be counted, and no living thing can be thus fragmented without dying. It is a form of thought en-

tirely appropriate to the inanimate world, but quite inadequate for apprehending life. We do not ask often enough how we come to think dead thoughts of this kind. According to Rudolf Steiner, we can do this by drawing on an unconscious experience of the dead and dying parts of our own body – the mineralised bones and the nerves. The Consciousness Soul could only develop through taking hold of these death forces, and using them to acquire an intimate knowledge of all that is dead in nature. But it should not be surprising if a technology based on such knowledge brings death to living nature. Today a quite new step is needed. Human beings must learn to draw upon the living forces of their organisms, with the full strength of their Egos, and create a faculty for understanding the true life of nature. The beginnings of this faculty are already familiar in the life of imagination, that aspect of the inner life of man which so deeply interested the Romantic movement.

Today, scientists are already beginning to see imagination as the faculty which can heal and order the fragmentation of knowledge. But Steiner speaks of a further development, an imagination so purified of all that comes from the physical world, so permeated by the spiritual activity of the Ego, that a new faculty is born, an organ of spiritual perception for the formative forces in man and nature which Steiner called Imagination. This faculty must be the basis for a new ecological wisdom in the future.

Finally, in human social relationships, the sexual obsession needs to be metamorphosed into a perception of a drama which takes place in every meeting between two human beings. An individual may live in a male or a female physical body, and can never have more than a one-sided experience in a purely physical relationship. But in the social sphere, every person is both male and female, both giver and receiver. Within each soul is a knight, who rides out to adventure. But each soul is also a virgin, who can receive the individuality of another in true social understanding. And each soul is a battleground, where dragons would imprison the soul in prejudice and transform the knight into a self-centred entrepreneur.

Thus the environmental crisis, together with the other crises which I have mentioned, reflect back to man a moral question, a challenge to development in his own nature. When speaking



Albrecht Dürer, 'Michael casts down the Dragon' (Revelation 12)

of paths of meditation and spiritual development, Rudolf Steiner often stressed the need for three steps of moral development for every step in spiritual experience. In doing so, he is pointing to the need for the knightly sun-filled Ego forces of each individual to free his own soul nature from the grip of egotism and untruth, before a new spiritual child can be born in the soul. In more technical anthroposophical terms, it is the task of transforming the astral body so that the Spirit Self can be born.

I think that the twentieth century, for all its apparent darkness, violence and corruption, is bringing events and experiences which are gradually educating many human beings to a deeper and truer experience of this situation. It is as though many people were coming to stand, not necessarily in full consciousness, but in a kind of dream, before the picture which confronted St John as he wrote the twelfth chapter of Revelation – a woman clothed with the sun, the moon beneath her feet, upon her head a crown of stars, and near her, the Archangel Michael battling with the great dragon who would destroy the child to whom she will give birth.

It is a picture which is renewed in Steiner's account of Michael's battle in the present age to help man find again in his own soul, but in full personal freedom, a deeper more living wisdom with which to transcend the dead knowledge which now threatens to destroy him. This wisdom will lead him once more to a living connection with the spiritual worlds out of which he has descended and into which he must now be re-born. Steiner has described how this wisdom can be experienced as a spiritual being, related to Sophia, the Goddess of Wisdom in whom the Greek philosophers felt all their knowledge to be harmoniously embodied.

Today this Being approaches man not from without, as the Greeks experienced her, but from within, when she is freed in the purified soul by the sun-filled powers of the individual Ego. There man, the Anthropos, will meet the Sophia as the bearer of a wisdom renewed and rejuvenated, personal yet universal. From this meeting, a heavenly wisdom can find a way again into the world through man. This is the picture behind the word 'anthroposophy' which Rudolf Steiner chose to describe his life's work. Anthroposophy exists to serve Anthroposophia.

When they come to the moon, the astronauts find no new wisdom, no life, no future for man, but only a dead relic of the past. They look back and see the earth as a living whole, desperately in need of a wisdom which cannot be born out of exploration of the physical spaces of the planetary system, but only within human souls. They return and find crisis and disorder on every side. But the crises are working as an educative initiation force within human life which is gradually dissolving the veils which are still obscuring the Virgin Sophia.

CAN FARMING SAVE EUROPEAN CIVILISATION?

ROLF GARDINER

TWENTY years ago some of us organised a visit for the late Dr Ehrenfried Pfeiffer, president of the Bio-Dynamic Association (and at the time resident in the United States) to the British Isles. Descending on us like Hermes, armed with a caduceus of healing wisdom, following a prepared route map, Pfeiffer sped around by chartered plane and car, revisiting landscape regions, individual farms and gardens previously known or advised by him. Everywhere he focused a mind richly stored with both scientific and intuitive knowledge, bringing to bear his singular powers of observation on the environmental situations drawn to his notice. It was a memorable tour. Concurrently we held a partly itinerant conference of European agrarians which culminated in two meetings at which Pfeiffer was the main and honoured speaker. On a hot summer's day, at Springhead in Dorset, he spoke in the shade of a multiple-stemmed locust tree (*Robinia pseudo-acacia*) which seemed peculiarly appropriate, being a legume often used to restore impoverished soils, and as it might be a symbolic Yggdrasil, each root a fountain of wonderful virtues. Gathered around were some distinguished earth-healers, Sir George Stapledon, Lord Portsmouth (author of *Famine in England*), Theodor Oberländer, shortly to become a Minister in Adenauer's Government, Richard St Barbe Baker (founder of the 'Men of the Trees') and a large company of Young Farmers, foresters and organic growers.

The second occasion was a great gathering, which I chaired in Caxton Hall, Westminster, when Pfeiffer gave trenchant consideration to the question: '*Can Farming save itself and the world?*' Pfeiffer began by putting the question: *From what?* and answered: 'From a situation in which it is becoming ever more technicalised and commercialised, and is, in consequence, using up the resources of the earth and not properly restoring what it takes away.' He went on to cite the declining figures of human beings engaged on the land, saying: 'Literally, the land

is depleted of human beings. It is a fact that should be put in the main focus of consideration. When nowadays we deal with soil- and crop-deficiencies, we do not usually consider this: but it is a basic deficiency, the deficiency of human beings. These few people have to clothe and feed all the rest of mankind.'

It is appropriate twenty years later, in the European Conservation Year 1970, to recall Pfeiffer's words, and to consider the march of events in the agrarian world: the growing concern of men and women all over the globe for the pollution of our terrestrial environment, and the part which agriculture is now asked to play in the onerous duties both of feeding mankind and of maintaining the landscapes surrounding our cities. 1950 was one of the last years in Britain when the hayfields and harvest fields still rang with the cries, and even songs, of men and women toiling together, loading nobly-wrought wooden waggons (ancient landships manned by husbandmen but now probably serving as tractor-trailers) while stacks of hay or corn-sheaves were built by skilful hands to raise impassive temples of Ceres on the clean-swept stubbles. Very soon all this social farming was to disappear, and the huge dinosaur combines, manufactured by Klaas or Massey-Harris, were to become the sole agents of an immemorial task, steered by nervously attrited mechanics masked in goggles and mouth-pads, while tractors with drivers' cabs rattled over the ploughlands, and noise became the chief evidence of outdoor work.

This revolution, changing a basic industry which had altered relatively little since the days of the Pharaohs, is probably the most damaging that has ever affected mankind. Historians will record it as being a crucial alteration of man's way of subsistence alongside ever swifter forms of locomotion and the invention of mechanised communications. Here and there in Europe, in Tuscany and behind the Iron Curtain, one may even today see white oxen drawing ploughs and turning the furrows. But in Britain the horse no longer serves his masters in the seasonal tasks of farming. Moreover we are fast approaching a manless agriculture. The number of full-time farmers is below 300,000, out of a population with 24 million people in various forms of employment. And yet this tiny field force, maintaining the face of the land, is supported by a colossal baggage-train of manufacturers and suppliers of machines and

chemicals, together with innumerable governmental or commercial technical advisors, veterinary practitioners, economists, analysts, researchers, a provisional army which must run into millions if all the people employed are added together.

To this trend Dr Sicco Mansholt, the Dutch vice-president of European Economic Community, has added the compulsion of reducing the farming population by a further 5 million souls by 1980. This target is aimed principally at the small family farmers and especially those on land least able to conform to factory unit methods, the peasant or yeomen farmers of the Alps and Uplands. In a ruthlessly argued plea against over-production of certain commodities on the one hand, and for equalising farm incomes with those obtainable in industry or commerce on the other, Mansholt has marshalled the economists in an attempt to influence governments and to destroy the last strongholds of domestic agriculture. The pitilessness of this Calvinist Socialist is accompanied by a powerful ambition to be the arbiter of European agriculture. He is a man evidently impervious to counter-argument, and hostile to any form of sentiment. But he is only a symptom of the stranglehold which urban-based economists have obtained on the farming policies of European governments, that divorce between calculation and quality which is the malaise of all modern welfare states.

There is everywhere today a growing opposition to the distress which technology is inflicting on the peace and health of mankind, a demand that its automatic ascendancy should be controlled and restricted, that plants, beasts and human beings should not be treated as machines, and that the real problem of work is neither to shorten its duration, nor render it subordinate to leisure, but to make its processes more interesting and physically enjoyable. This surely is where farming, in its traditional seasonal forms, holds up a model to industry. This is one of the ways in which it can offer clues as to how European culture can be revived and replenished before it succumbs to a wild and violent repudiation of all forms of civilised order and discipline. But the forces available for this defensive action are already sorely diminished, as we have seen. On the bigger farms today, seasonal tasks are no longer accepted as muscular duties demanding relatively short periods of effort and endur-

ance; they are downright drudgery, a stoic submission to surmounting the hazards of weather and work-volume in an allotted number of days. The mechanics in charge of the machines have to grit their teeth and get through the job, with little physical pleasure in it, and a disproportionate amount of nervous wear and tear. It is these factors which the economists persistently ignore, and which only the doctors and psychiatrists are beginning to assess.

Dr Mansholt, it is said, as might be natural to a Netherlander, has no real understanding of the peasant way of life in the Alps or Uplands. He regards the mountain farms as archaic anachronisms, picturesque to tourists, but economically expendable. He would admit the retention of the local population as guides, ski-instructors or holiday lodging-house keepers. But this would be mainly for the elderly. The young folk must descend and find industrial employment in the plains. As for the land, it must be allowed to become forest, either by natural means or by deliberate planting. The result would be mostly a monotonous and impenetrable blanket of spruce, unrelieved by glades or odoriferous floral pastures. Even the tourist would shrink from an unattractive landscape, and the skier lose his slopes. But above all the life of robust and independent local communities would shrivel, their cultural and artistic traditions atrophy. The loss would be irreplaceable.

Fortunately the family farmers of the Alps, in particular, of several Swiss cantons, of Upper Bavaria, of Carinthia, Styria and Tirol, are highly intelligent and resourceful people. They know how to adapt themselves to adverse economic pressures. They may have to give up labour-intensive practices like the annual drive of the cattle to the upper pastures, where formerly herds and dairy-girls made butter and cheese throughout the long gay summer months. They may have to rebuild their steadings within reach of vehicular roads, amalgamate dairies, take part-time employment in valley industries. But, in spite of inroads into a customary way of life and lack of hired labour, they will hang on, taking advantage of many modern technological devices, but retaining their traditional costumes, their music and their Catholic church festivals.

Matters are less auspicious in the highlands and islands of Britain. For one thing, they lack prolonged snowy seasons.

Snow on the Continent is a capital asset, providing winter playgrounds for the reasonably well-to-do. Instead there is rain; and everywhere are dreary wet-deserts, moorlands and fells, attractive to the bold and solitary, to grouse shooters and deerstalkers in season, but bereft of husbandry except for the flockmasters and keepers of hardy breeds of cattle. The degradation of the hill-lands of Britain, the expulsion of their hardy communities as in Scotland, or their evacuation because of dwindling incomes and restricted stock-carrying capacity as in Wales, goes on in spite of the magnificent pastoral improvement work of Stapledon and his disciples; and of hill-farm subsidies. The failure is less that of Governments, although the blame is levelled at water undertakers who plunder valleys to build reservoirs, and at the Forestry Commission for blanketing hillsides with monotonous spruce forests, than of regional leadership and teamwork. The best blood of our hardy hill communities has been drained away to vitalise overseas development. City life lured the young women. The ancient homelands have become deserted, and the yeoman tradition has wilted and died. Probably the chief cause has been the British evaluation of wealth in terms of money. The acquisitive society, which came about through the Puritans, made Britain the greatest trading nation since the Phoenicians. Commerce and usury went hand in hand, and wealth became more and more arithmetical, making money, not land or skill, the status symbol of everyone from top to bottom.

Meanwhile economic democracy, the unprecedented rise in general affluence, has brought the problems of leisure to every class of worker whether in employment or not. While a minority of men and women carry the burdens of responsibility and decision-making, and more often than not receive inadequate payment for their self-imposed exertions and sacrifices of time and health, the masses expect facilities and privileges which carry ever fewer duties and civic obligations. Reward is no longer the need of harder work or service, but an automatic process springing from the illusion that economic and technological growth are laws of Nature, that everything will get bigger and more convenient, and with no conception that invention and industry are exhausting irreplaceable terrestrial or cosmic resources. Even 'pollution', made a

sensational word by the mass-media, is shrugged off as the responsibility of those with power; the individual is not answerable and can blithely carry on, using whatever the advertisers and salesmen put on the market.

A healthy society is always one which allots functions to its members. This was true of the medieval village with its manorial courts and parish offices; it was a basic principle of the guilds. Everyone needs the self-respect which comes through fulfilling a duty. Everyone needs to have a special gift or responsibility, however humble, acknowledged by his fellow citizens. Everyone gains interest if he can make decisions in his job or craft. In farming it is the principle of delegated responsibility which leads to contentment in work: the shepherd, the dairyman, the pigman, the ploughman. And in forestry, the more tasks are allotted so that there is visible achievement, the greater the pride of the individual worker. Individual function and responsibility, and teamwork are the twin-poles of any rural society. But when this society becomes so thinned out, and its jobs more and more mechanised, the fun goes out of the game, and endurance has to cope with boredom or strain.

Much play is now being made with the word 'participation' in planning and local government. May not the future of farming be affected by the participation of part-time countrymen? In some parts of Europe farm-holidays are becoming a source of mutual benefit to the farmer and the visitor. The holiday-maker wants health and refreshment and some meaningful activity, a change from the grind of indoor office work or factory employment. The farmer needs any additional income he can acquire, and often enjoys the company of people from other walks of life. In the marginal farms of the uplands intensification of the farming enterprise, the growing of local food for the holiday market, could be brought about if voluntary labour in the summer half of the year were available. The visitor will relish the opportunity of contributing to the productiveness of the countryside which he has come to enjoy. His interest will be stimulated by his identification with the improvement of the rural economy. The Conservation Corps and other volunteer groups are already achieving this in growing measure. But families who acquire holiday homes in the countryside can pursue the trend further, not only by out-

door pursuits such as fishing, walking, riding, bird-watching, or the many forms of water-sport which both inland and coastal waters invite, but by contributing to the maintenance and improvement of the rural environment. This interflow of townsfolk and countryfolk was the theme of much of Sir George Stapledon's last books: 'how to set about educating the urban population to make the wisest use of their holidays', and at the same time, by the process of gradually blending the urban and the rural, 'to bring to the urban something of the simplicity, fragrance and restfulness of the country'.

It may well be that Mansholt's factory farms in the lowlands will meet their nemesis through the disease and other problems brought about by unbiological methods, by sheer size, or by the competition of the synthetic food manufacturing firms. The future of European farming, the health and vigour of our society, and the nutrition required to promote these, may very well lie in the redevelopment of the hills and mountains and the participation of the holiday-maker or retired family in the ecological enrichment and diversification of the upland economy. Ehrenfried Pfeiffer in his admirable book, *The Earth's Face; Landscape in its relation to the health of the soil*, said a people conscious of its hills were independent. And Sir George Stapledon, in his introduction to the same book, called this 'a thrilling statement'.

The problem of human health is going to loom ever larger in our overcrowded and technicalised society, and doctors and psychiatrists are going to link this problem ever more closely with the health of the environment. A great deal of destruction and suffering awaits us. The dangers of suicidal pollution and derangement of the earth and the ether, grows larger every day. The situation may be on a knife's edge. But redemptive forces are also becoming more powerful. Among these the farmers in their dwindling numbers could be arrayed if they were encouraged to see themselves as the frontline fighters in the defence of civilisation, the guardians not only of fertility and beauty, but of health in all its aspects. Such encouragement can only come from the consumers of farm products and from the holiday-makers in the farming countryside. By an alliance of the part-time countryman, or persons retiring to live in the countryside, with the farmers and foresters, a new type of

civilisation may come into being. As A.E., the great Irish visionary and practical organiser of farm co-operatives, wrote: 'Our civilisations are a nightmare, a bad dream. They have no longer the grandeur of Babylon or Nineveh. They grow meaner and meaner as they grow more urbanised. . . . Truly the creation of a rural civilisation is the greatest need of our time. It may not come in our days, but we can lay the foundations of it, preparing the way for the true prophet when he will come.' When these words were actually written, I do not know. But since then we have had Stapledon and Pfeiffer and a score of others, a polyphony of constructive wisdom, the voices of which have been those of Europe. I believe that it is the mission of European farming to save civilisation.

ANIMAL WELFARE IN BRITAIN

PETER HENRY REEVE

THE animal welfare movement has developed in Britain, in England in particular, over a century and a half. Certain challenges have been met, certain principles established, but there is still much to be achieved. One thing is certain. There is no room for complacency about this country being an animal-loving nation. For though one can note progress in the treatment of animals and a growing responsibility for animal creation, one is also aware of advances that can only be called sinister. We can observe the course of events leading to the present-day situation from the standpoint of spiritual science.

What then was the condition of animals early in the nineteenth century? This was the time when cock-fighting and bull-baiting was still taking place. There were no laws to prevent them, and, indeed, the police force was not established in England until 1829. There was little protection for animals other than individual human consideration. Fairs and markets were obvious places of cruelty, with their dancing bears, and with sheep and cattle driven with blows to their deaths. Children would help to drive the livestock with sticks. Animals on their way to slaughter often had their eyes poked out. Calves probably suffered most: they would be packed into carts with their legs tied, and, later, with straps round their mouths, would be bled to death. But in the countryside there must have been a good deal of sympathetic handling of animals. Shepherds and cowmen were valued for their stockmanship. Many owners prized and took care of their livestock: they were about to enter the golden age of English farming. Winter, though, could still be a miserable time. Neither were all owners kindly disposed: much depended on the master, and his temper. The life of stray dogs and cats was difficult – as always. Cats used to come in for a good deal of prickly treatment. Working horses led a hard life – there were always whips, goads and bits to be endured. Coach horses were often exhausted at the end of a stage. Only in the 1820's did the steam locomotive start to take over from the toil of animals.

Not that life was easy for people. Men worked long hours on farms for pitiful wages. They came to hate the drudgery of the land, and were glad to escape to growing industrial towns. But this could be an illusion. Working conditions were bad and hours were long. There were many accidents with machinery. Women scrambled on all fours to pull coal-trucks in the mines. Children of eight years and less worked from five in the morning until eight at night. But even whilst Robert Owen, factory owner and Scotsman who started life poor, was improving working conditions, beginning the task of factory legislation and establishing the right of the State to interfere on private property, so was Richard Martin, aristocratic Irishman, Member of Parliament and a Protestant, struggling to raise the cause of cruelty to animals. In 1821, Martin set down a Bill to protect 'any horse, ox, heifer, steer, sheep or other cattle'. Despite derision and setbacks, he got the Ill-treatment of Cattle Act passed the following year. This was the first legislation ever on behalf of animals. He also got inspectors to make prosecutions to enforce the law. Over the next two years, with the great assistance of the Rev. Arthur Broome, who resigned his living in Devon to give himself to the cause, the two men brought into existence a 'Society for the Prevention of Cruelty to Animals'. Present at the inaugural meeting in 1824 were Fowell Buxton and William Wilberforce, both of them champions of penal reform and abolitionists of the slave trade. In 1835 Princess Victoria took on the patronage of the Society: five years later as Queen she allowed the Society to call itself 'Royal'. She laid it down as an axiom that no civilisation can be called complete that does not include the proper treatment of animals. It was in 1835, too, in an active period of social reform, that the first law was passed to protect domestic animals and that cock-fighting and bull-baiting were outlawed.

Thus, there was becoming established a body of opinion which wished to ameliorate the harshness of life for animals and to curb obvious cases of cruelty in the markets and streets. Societies sprang up in Scotland and Ireland. The animal welfare cause was on the move. But if these people's aims on earth had to be achieved partly by political means, whence came their spiritual inspiration? Some attempt can and will be made in answer, for it is clear that many men and women in the move-

ment were stirred by spiritual love and compassion, and moved to act out of Christian conscience and the support and power of prayer. But if we do not find much of a direct lead in this matter from Church spokesmen of the time, we can turn to the poets.

O Lapwing, thou fliest round the heath,
Nor seest the net that is spread beneath?
Why dost thou not fly among the corn fields?
They cannot spread their nets where a harvest yields.

So wrote William Blake. He at any rate was sure that when agonised by the sight of a wild creature in a trap, or a tiger in a cage, we experience God in our heart-rending pity. Such wonderful thoughts have drawn many animal lovers to love and to quote Blake's poetry. William Wordsworth and Samuel Taylor Coleridge, too, were most aware of animal creation and the beauties of nature, and aware of the treatment that animals were receiving. But it is to the brief life of Percy Bysshe Shelley (1792-1822) that one turns for the most influential poetic teaching. Shelley stands out as one who not only preached but practised his ideal 'to live as if to love and live were one'. He accepted vegetarianism completely and wrote about it; though he was not of course the first to do so. Pythagoras and Gautama Buddha also taught the virtues of the vegetable diet. It is sometimes suggested that the references in the Gospels themselves to eating fish and meat can be taken as encouragement, though the practice would seem to be at variance with Christ's other teaching. The ambiguity has created problems in the past. Esoteric understanding resolves this difficulty. The fact is that many animal welfare workers and vegetarians have professed themselves Christian and have led inspired lives.

One such, Catherine Booth, who became Mother of the Salvation Army, let loose her righteous indignation at field sports, a cry that has been taken up ever and again since. She had a measure of success in dealing with drunkards amongst women by insisting on an absence of flesh foods. She may have preached her moral beliefs in a way we would no longer welcome, for we know that each of us has to act out of our own sense for morality, but she did act. She publicly derided vaccination, which had become compulsory by law, not merely because the lymph was transferred from sick calves, and from

one swollen arm to another, but because she felt that this was no way to prevent disease. Florence Nightingale, too, despite years of work with the medical profession had her own disbelief in the disease-germ bogey. She felt that there are no specific diseases, but rather that there are specific disease conditions: hence her emphasis on nursing. These women were free-thinking, unafraid and imbued with Christian spirit. They were pioneers for the right of women everywhere to accept responsibilities of all kinds. Moreover, there has continued to be a connection between the animal welfare world and people who have a deep respect for nature and the wisdom of the human body. Animal lovers have particular reason to be grateful to Samuel Hahnemann, who introduced homoeopathic medicine, for these remedies require no tests on animals. It was through observation and love of animals that Schroth and Priessnitz developed a system of natural healing, known now in this country as Nature Cure. The battles against vaccination were to be waged for over forty years by as many anti-vaccination leagues. Enormous demonstrations took place with banners flying, 'Keep Your Children's Blood Still Pure.' It was not until 1898 that a Vaccination Act ended arm-to-arm vaccination, and permitted people to choose for themselves.

Then there was a new challenge to be faced. Experiments on animals! Early in the 1860's reliable reports started coming in from France and Italy describing various experiments by medical doctors in laboratories on cats, dogs and other living creatures. At a veterinary school at Alfort, near Paris, old horses were being burnt, skinned and mutilated. First-hand accounts spoke of their agony. In Florence, birds and other animals were being tortured in a laboratory. There was an outcry but it appeared that the Tuscan law could not touch the matter. Had not the very Pope declared animals to have no souls and therefore to be without rights? The R.S.P.C.A., as it had become, opened a special fund to oppose vivisection. Miss Frances Power Cobbe, an English lady, took up the cause. Due to her efforts a Bill to regulate the practice of vivisection was presented in the House of Lords in 1875, but it was never passed. A compromise led to the Cruelty to Animals Act in 1876. If it was intended that animals should suffer no pain, this law has proved to be quite inadequate, for by means of special

certificates any experiment could still legally be carried out. *The British Journal* said at the time that the Act afforded full liberty to 'science'. The real effect of the Act was to ensure that vivisection was carried out behind closed doors. The public could no longer gain access, which has handicapped animal welfare workers ever since.

Now Miss Cobbe was a practical woman: she sought at first to restrict vivisection, not to prohibit it. She enlisted support for a new society. The Archbishop of York agreed to join, writing: 'I quite agree with you; total prohibition would be impossible.' Lord Shaftesbury also agreed to join, but he wrote: 'Prohibition I doubt not, would be evaded; but restriction will, I am certain, be exceeded. Not but that a little is better than nothing. But you will find many who will think with much show of reason, that by surrendering the principle, you have surrendered the great argument.' The society was formed even before the Vivisection Act was passed, and so failed in its initial aims of obtaining a satisfactory law to protect animals. Another society was also formed at the same time on a basis of total prohibition. Though very disappointed, Lord Shaftesbury felt that any Act, however imperfect, was better than nothing. With his help, Miss Cobbe subsequently got the society she formed to change its policy to one of total prohibition. This is a very interesting case of policy-forming within a society that is still pertinent to this day. Lord Shaftesbury himself attended every meeting of the society for ten years, until the year of his death in 1885. One can never deny Lord Shaftesbury his leading role as social reformer. He brought the children out of the factories and the women out of the mines. He was dearly loved in the slums of London. Add to this an extraordinary faithfulness to the cause of tormented animals. As Stephen Coleridge has written: 'He was a true soldier of Christ, . . . the friend of the friendless, the champion of the helpless, and who, endowed with undying faith and radiant hope, yet recognised the supreme greatness and glory of love.'

Anna Kingsford was another tower of strength in the anti-vivisection movement. Attractive and feminine, and religious with a mystic streak, she made single-handed lecture tours all over the country denouncing vivisection. She was a gifted doctor and she challenged M. Louis Pasteur, whose name had been heralded

as a saviour of mankind, and accused him of obtaining rabies serum by subjecting dogs to terrible and continuous pain. She did not know that Pasteur was exploiting commercially the discoveries he had taken from Professor Béchamp, who was hurting no living thing. Years later in the French Academy of Science, Pasteur's behaviour towards Béchamp was denounced, and it was established that the Professor, doctor and naturalist, was the great genius. But Pasteur had made his name and thousands of animal experiments followed, with a public apparently convinced that these were a necessary boon to mankind. Feeling overpowered by the tide of misery, Anna Kingsford used all her spiritual power to bring the experimenters' work to an end. In this she hoped to enlist the support of Madame Blavatsky, who had founded the Theosophical Society with Colonel Olcott in 1875. Madame Blavatsky invited Anna Kingsford to Ostend, hoping in turn to gain support for the Theosophists. This was impossible, for as Anna Kingsford's close friend, Edward Maitland, later pointed out: 'While our purpose was the restoration of the true esoteric and spiritual Christianity, theirs was the total subversion of Christianity itself.' Neither did Anna gain the assistance she wanted. She was to die a year later of pneumonia. Shortly before her death she wrote these verses:

What joy have I in all sweet things!
How clear and wild my spirit sings,
Rising aloft on mystic wings
While sense and body sleep.

In some such dream of grace and light
My soul shall pass into the sight
Of the dear Gods who in the height
Of inward Being dwell.

From these noble beginnings, the animal welfare movements gathered strength. Many people gave a lifetime of service to the cause. The work spread itself into new fields and the number of societies grew. The R.S.P.C.A. benefited from its patronage, gifts and legacies, and has grown into a large and respected organisation. It has helped Members of Parliament to plan and pass new legislation such as Humane Slaughter, Exportation of Horses, Protection of Wild Birds and the Sale of Animals as

Pets. The law that preceded these, however, the Protection of Animals Act of 1911, which made it an offence to cause unnecessary suffering, came in a period of social reform, as had the earlier Acts in 1835 and 1876. It is as if from time to time people and Parliament have made their responsibilities to animals self-evident. Most legislation on animal welfare is introduced as a Private Member's Bill, as was Martin's Act in 1822, but when a Member is fortunate enough to be allocated a Bill on ballot, the Bill can be stopped in the House by a single voiced objection. Privately sponsored reforms sometimes take years to get through. An Amendment to the Protection of Performing Animals Act of 1925 was defeated by one vote in 1933: the R.S.P.C.A. are still trying to get another Bill passed. They are also trying to get new legislation on ritual slaughter, deer-hunting and hare-coursing. A private Bill that would have stopped hare-coursing in this country was adopted by the last Government. It had reached its second reading in 1970 when the Labour Government fell and the Bill automatically lapsed. A similar Bill may never get through in the new Parliament. A number of Private Members' Bills introduced in 1969 to further animal protection failed to make progress. It is a real problem to get legislation of this nature passed. These days the economic sphere is dominating the cultural and social spheres. Some reformers would, rather than change the law, change people's attitudes. Like Anna Kingsford, they go out lecturing or they write books. Other people turn to prayer. The anthroposophist tries from inner spiritual strength to set a personal example. It may be that he can find within himself a link to the silver thread that has run through the lives of the dedicated people in animal welfare.

The R.S.P.C.A. also aims to educate young people—with leaflets, magazines and films. It has free veterinary schemes and over 200 full-time inspectors. It handles the majority of the 300,000 stray and unwanted dogs found each year in this country. Most of these are held for a while in animal sanctuaries: 36,000 dogs are found new homes each year. The R.S.P.C.A. has also opened a new transit hostel at London Airport that now handles one million animals a year. The number of complaints of alleged cruelty reported to the R.S.P.C.A. in 1969 was 24,000; nearly 4,000 more than the

year before. There were 1,000 prosecutions last year. In all, the expenditure by the R.S.P.C.A. is now running at £1 million a year. A society like the Royal Society for the Protection of Birds is more interested in the observation and protection of wild life. Conservation societies like this, and that for the protection of wild deer, have a closer natural connection with European Conservation Year and are making special efforts to mark the year. No doubt, awareness is growing of the threat to Britain's wild life, but the pressures on foreshores, woodland, scrub and hedgerows are relentless. The insect life has suffered a tremendous onslaught by pesticides over the last twenty years. Butterflies are now much less common. There is a huge annual toll of small mammals and birds on the roads. It seems beyond hope to make any general reverses for the time being except to protect specific areas as encouraged by the Nature Conservancy. It has been the severe mortality to fish over the last five years that has made the public much more aware about the threat from pollution. There are a number of other animal-minded societies interested in breeding, showing and generally caring for pets. But it is to the active reforming societies that we now turn.

The two anti-vivisection societies have continued with various amalgamations to exist to this day. Some forty societies have associated over the last few years into a Conference of Animal Welfare Societies. These include the National Anti-Vivisection Society Ltd., the Animal Defence and Anti-Vivisection Society Ltd., the League Against Cruel Sports, the Catholic Study Circle for Animal Welfare, the Society for United Prayer for Animals, Beauty without Cruelty, the Vegetarian Society of Great Britain, the Theosophical Order of Service, the International Council Against Bull-fighting, the Friends' Animal Welfare and Anti-Vivisection Society and the National Society for the Abolition of Factory Farming. The Conference has various points of contact with other societies round the world, and does keep a sharp eye open for any forms of animal exploitation. Last year the Conference made representations to the Canadian Government about the annual seal hunts. A general outcry in the press in England and France brought some modifications in their methods of killing seals. But the real reason for curtailing the seal hunts was be-

cause of the threat to the seal population which was in danger of being reduced too far for economic advantage. History shows how little direct power animal welfare societies have to influence external events. Their moral power, though, is out of all proportion to their size. The Conference of Animal Welfare Societies, and indeed the R.S.P.C.A. itself, are united in recognising one day in the year as Animal Day. The idea was to devote the Feast of Saint Francis of Assisi, 4th October, to thought, speech, and action on behalf of all suffering animals. One knows, of course, that St Francis lived a life of love and service to God and the whole of creation, and that his beautiful life has been an inspiration to poets and artists. Despite a slow start in 1928, the idea was consistently pushed by Margaret Ford, secretary of the World League Against Vivisection, and the day is now celebrated by services and special events in over thirty countries. It has become known as World Day for Animals. The Conference is now working towards an international recognition of an Animal Rights Year. The world does seem to acknowledge the work in England on animal welfare. Perhaps its development here does have something to do with the Consciousness Soul: the clues point that way. But as we shall now see, there is too much going on on our home ground to feel in any way satisfied or comfortable.

Since the Cruelty to Animal Act was passed in 1876 it has remained virtually unaltered. Instead of one or two research laboratories, there are now 609 registered premises in the United Kingdom carrying out over five million experiments on animals a year, 88 per cent of which are performed without anaesthetics at any stage. A committee, the Littlewood Committee, was appointed to enquire into vivisection in 1963. After two years they published a report recommending amendment of the existing law in respect of experiments causing pain, recommending a new system of licensing with a closer scrutiny into the purpose of experiments, and an increase in the number of Home Office inspectors from 10 to 21. The Government promised action, but after three years said the reforms did not justify any priority. However, veterinary surgeons have spoken out. Mr Beddow Bayly, M.R.C.S., L.R.C.P., said: 'Vivisection is founded on selfishness... and excuses any cruelty on the plea of utility to man's material welfare.' He added: 'Vivi-

section is an obstruction on the path of real knowledge.' A former Professor of Ophthalmology at Illinois Postgraduate Medical School said: 'Vivisection is a mad scramble for honours over the tortured bodies of animals.' So much research material has now been published that there is a quantity of evidence to cite. Dogs: 'The limb was clamped between wooden boards, at a pressure of 500 lb. for five hours, under pentothal sodium. After release all but one died.' Cats: 'The stomach was exposed and a pouch made to make a smaller stomach; chronic ulcers were formed in ileal loop. After operation a number of cats died from haemorrhage, peritonitis and some from no observable causes.' Monkeys are exposed to radio-active processes, blast from high explosive, brain operations with or without anaesthetics, the infliction of cancer and all manner of diseases. Other animals are subjected to burnings, freezings, injected with blood-clotting factors, used for testing toxic drugs, hammered to death or many other frightful things. All this in the name of progress.

Today the anti-vivisection movement in this country has never been stronger. There are many indications that the public conscience is uneasy about laboratory animals. Research scientists have even set up their own organisation, the Research Defence Society, to defend themselves. Meanwhile, there are a growing number of alternatives to the use of live animals for research. Professor S. T. Aygun (University of Ankara) has claimed that tissue cultures yield results more quickly, are cheaper and more accurate than animal experiments: he also says they are easier, safer and more precise. In the U.S.A. there has been some advance in the production of vaccines by the use of human diploid cell strains. A diploid cell has twice the normal number of chromosomes. Instead of using numbers of animals, it has been calculated that cells derived from a single human diploid cell strain, called WI-38, will grow sufficient virus to immunise millions of people against many virus diseases. Over 200 human diploid cell strains have been isolated. There are other developments. One may interpose here that homoeopathic remedies are safe and highly effective against viruses. News about these developments is being circulated independently to all laboratories by the International Association Against Painful Experiments, a body

formed in April 1969 sponsored by the English National Anti-Vivisection Society. Sir Peter Medawar, Director of the National Institute for Medical Research is on record as saying that the peak in the number of animal experiments will be reached in ten years or even less. But we need not give him the last word. Mahatma Gandhi once said: 'Vivisection, in my opinion, is the blackest of all black crimes that man is at present committing against God and his fair creation.' In Shakespeare's *Cymbeline*, the Queen explains to Cornelius that she wants poison to experiment on 'such creatures as we count not worth the hanging, but none human'. Cornelius replies: 'Your Highness shall from this practice but make hard your heart.' Indeed, we have to feel compassion and not judge those individuals who are able to commit these acts. Rudolf Steiner once said that experimenters experience after death the acts of their life on earth. Holy Scripture sets forth in Galatians 6.7: 'Be not deceived; God is not mocked: for whatsoever a man soweth, that shall he also reap.'

A problem that is growing is the increase in the number of exotic pets and small zoos. Marmosets, tortoises and even tropical spiders find their way into English homes to die. Zoos are often excused for their educational value. Dr Desmond Morris has written: 'There is something biologically immoral about keeping animals in enclosures where their behaviour patterns, which have taken millions of years to evolve, can find no expression.' The British Veterinary Society held a meeting for animal welfare societies on exotic pets early in 1970. Mr Oliver Graham-Jones of the Royal College of Veterinary Surgeons asked if we should really be keeping exotic pets in our homes at all. He said: 'If animal-owning is a responsibility, exotic animal-owning is a serious responsibility.' Import licences were granted for 626,850 mammals and reptiles to this country in 1967. In the U.S.A. 28 million living creatures of all kinds were imported in the same year. As an article by Anthony Smith in *The Times* of 26th May 1969 pointed out: 'this unrestricted trade in animals threatens their very survival.' The trade helps money to flow from the wealthy to the poor countries. A poor country is unlikely to make effective legislation to prevent such traffic. The World Federation for Animal Welfare, another body that germinated in England, is pressing

to reduce the number of animals subjected to this exploitation. There are big losses in the capture and transit of wild animals. One feels that in the future people are not going to be satisfied at animals living their lives in cages.

This leads straight to the problem of intensive animal production for food, or factory farming, as it has come to be known. This has received much adverse public comment but still the systems expand. Over a period of twenty years, the whole pattern of English farming has been radically altered, with farm livestock more and more being kept inside buildings. There are now over 200 million broiler chickens raised each year in windowless houses. The floor space typically allowed to a bird is just over $\frac{1}{2}$ sq. ft. During the last weeks of their attenuated lives, the conditions are conducive to stress and disease, and so to control this, and to make them grow fast, the birds are continually given antibiotics. The British Egg Marketing Board's survey for October 1967 estimated that 72.8 per cent of laying birds were then in battery cages. This trend is continuing. There are constantly some 38 million hens in this country which cannot, to quote the late Professor Brambell, 'fly, scratch, perch or walk freely'. The production of white veal is dependent on creating anaemia in the young calf. It is denied roughage in its food and given only just enough iron to keep it on its feet. Typically, calves are kept in near-darkness in crates 5 ft. by 2 ft. on wooden slats which the calf finds uncomfortable. The number of calves kept in this way is now about 30,000 a year. Pigs are usually bred nowadays in indoor fattening houses which allow the pigs little more room than to lie down as they get older. Ten million pigs went to market in 1969. Ducks, turkeys and rabbits are also reared intensively, and the system is being extended to lambs.

Animal Welfare societies have been vociferous in opposing these methods that deny farm animals access to light, space and fresh air, making their lives a perfect misery. There is no doubt that there is a measure of general unease about factory farming within society, and yet an apathy and a reconciliation to what is seen as necessary in a crowded and hungry world. There is the feeling that this is just another aspect of twentieth-century life, that would have been inconceivable a hundred years ago. When Government recommendations for the keeping of live-

stock were introduced in 1969 as Codes of Practice for the first time in history, Dr Shirley Summerskill, M.P., said: 'They represent the lowest and not the highest standards. The Government are yielding to economic pressures, to economic interests.' This is so, because big vested interests are moving into this sort of food production, and they are making the position of the individual small farmer more difficult. As the market for free-range produce is limited, in effect farmers have to join in using industrial methods which have been described as 'treating animals like plants'. Professor Thorpe, M.A., F.R.S., Sub-Department of Animal Behaviour, Cambridge University, wrote in an Appendix to the now abandoned Brambell Report: 'Physiological studies, as far as they have gone, give no ground whatever for believing that, whether in cattle, sheep, pigs or poultry, suffering due to stress and deprivation can be ignored; on the contrary it must be very much borne in mind in assessing what is permissible in agricultural practice.' There is a point of view held by animal behaviourists, the University Federation of Animal Welfare and by the R.S.P.C.A., that though factory farming is not necessarily liked, it is allowable so long as it is not cruel, assuming one can determine what is cruel, and so they ask for only limited improvements mainly in terms of space within the context of intensive farming. This, say the societies that have sprung up all over the place to oppose factory farming, will not do. It is, in Shaftesbury's words, 'surrendering the principle'. The Conference of Animal Welfare Societies unanimously maintain the principle that the whole system of artificial environments is wrong. These animal forcing houses, these brooding buildings that are spreading around the beautiful English countryside are seen to be malevolent, and an outward expression of an evil influence. As the late E. L. Grant Watson, who died in 1970 after a long life of observing wild life, wrote in his last book: 'As sign of our times the crowing of cocks is much abated. That reassuring sound, traditionally associated in the Christian world with the voice of conscience, is now only occasionally heard. There is no sound as keen as a cock's crow, proud and independent, choosing earth's most silent hour to proclaim the triumph of some higher order. Its call is for vigilance, to be awake and watchful. At the hour when human

vitality is at a low ebb, then it is that the cock crows: all is well with the world.

'Why is the call now so rarely heard?'

At a Catholic Study Circle conference on animal welfare at Spode House in 1969, the Rev. Kevin Daley spoke some wonderful words. He was commenting on the growing respect within Christian consciousness for the animal kingdom. 'Man begins to see that the inflicting of deliberate pain upon an animal is inhuman because it degrades his respect for life. He sees that the exploitation of animals for greed or pleasure is contrary to his appreciation of a shared gift for life. We are beginning to appreciate once more the truth that St Francis knew, the truth of God-within, God present beneath every appearance, and only waiting to be unwrapped to show himself in a marvellous "diaphony", as Teilhard de Chardin calls it. This truth was known and expressed from the beginning and made explicit by St Thomas Aquinas when he describes God as being present and existing in all things by his presence, his essence and his power. God within me has given me the ability to appreciate his presence and to meet him in the depths of my soul. He has further enabled me to be conscious of his presence within all created being. This draws from me a warmth of appreciation which can rightly be called love. It also ensures that the love is tempered by respect. Sentimentality is the absence of respect for the being which is loved and leads to the pampering and self-indulgence which destroys love. So long as we cultivate the sense of God's presence within all things, we will not fall into this trap.'

We know that there are spiritual realities lying within all creation. We know that Rudolf Steiner spoke of the need for the deepest respect for all life, and for love in our every act; that we act out of our own moral imagination as free beings. We may bring to mind that Rudolf Steiner said that in prayer 'we can be led to an intimacy with God so that the Divine shines into us, so that we have in our soul a source of warmth of light' and that prayer, 'by a feeling of submission, leads us out into the world with a force beyond ourselves: we are then united with what shines towards us from the external world'. Then fortified in spirit we are enabled to overcome the evil in the world with good, each of us of our own free will.

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EAST AFRICA IN A CHANGING WORLD

JOHN SOPER

BEFORE starting to think about East Africa and its problems, it might be a good plan to shake ourselves out of our temperate zone rut and build up a feeling for a tropical environment. To begin with one must grasp the difference in the seasons. Instead of our cold winter and warm summer, in East Africa there is a dry season when the earth rests and a wet season when the plants grow; in some parts there may be two of these seasons in a year. The resting season is also cooler, and the snow cap on Mt. Kilimanjaro becomes much larger; but the dryness is the predominant feature. Then one has to get used to the idea that the sun comes directly overhead at mid-day twice in the course of a year, so for part of the year it is in the northern heavens and for the other part in the southern; and as it swings backwards and forwards it draws the rain clouds behind it like the tail of a kite. The length of the days varies only slightly; for example at latitudes around 6° the difference between the longest and shortest day is not much more than half an hour. In fact not so very long ago the large clock on the Zanzibar government offices used to be altered slightly every week to ensure that the sun always set at 6 p.m. (12 o'clock Arab time). It is remarkable that even this small difference is sufficient to influence the growth of some plants, especially rice.

The natural vegetation varies so greatly according to rainfall and elevation that it is quite impossible to draw a general picture. It might, however, be mentioned that the popular idea of steaming jungles is only to be found in small rather rare patches among foothills on the monsoon side of mountains, escarpments and hill ranges. On the leeward side of these features there are 'rain shadows' in which total rainfall steadily decreases with distance to almost desert conditions. On the vast central plateau of Tanzania the undulating southern parts with rather more rain carry an open kind of forest infested with tse-tse fly which renders them quite unsuitable for domestic animals and often for human habitation too. Further north are

found the drier plains of savannah grassland famous for their herds of game. To illustrate this astonishing diversity it can safely be said that every economic crop in the world can find in East Africa a niche of conditions suitable for its growth provided that, like hops, it does not need a long day for full development.

The soil types are as varied as the vegetation. The volcanic soils in north Tanzania are particularly fertile, as are some of those in the alluvial plains; but many soils tend to be on the sandy side and require careful management, especially on sloping land. Where clay soils do occur, they are usually of the type which sets like concrete when it dries out; this was the case in the first area opened up by the Groundnut Scheme with the result that even when some groundnuts did manage to grow, they could not be got out of the ground. As in temperate regions, tropical soils need organic matter and crops respond readily even to small applications. All traditional systems of cropping are based on a sort of composting process *in situ*, but humus is very soon oxidised or burnt up by the high temperatures, especially if the soil surface is left bare during the dry season. Nevertheless in an experiment near the shore of Lake Victoria the effects of a comparatively light dressing of cow-dung could still be discerned in the crop yields ten years later, long after any physical or chemical trace of the dressing could be found. One astonishing fact about tropical soils is that, given a modicum of humus, a tremendous burst of activity is started up when they are wetted. It tails off fairly quickly even though rain may continue to fall; but if the soil is dried out and re-wetted the same activity recurs. From the practical point of view one can make use of this phenomenon by sowing crops immediately after the rains start, or even by sowing dry in anticipation. There is some evidence to indicate that free nitrogen-fixing soil organisms are far more active in tropical regions than in the temperate zones, and further research on these lines would undoubtedly be rewarding.

The peoples of the mainland still retain a predominantly tribal form of organisation, particularly at local government level. This contrasts with the islands of Zanzibar and Pemba where almost all traces of tribalism disappeared long ago under the successive rule of Persians, Portuguese and Arabs. The

internal structure of the tribe, however, has undergone very significant changes during the last 50 years. For various reasons tropical Africa seems to have withdrawn into a backwater away from the main stream of human evolution two or three millennia ago, and its tribes had preserved in more or less degenerate forms the shape of primitive human societies well before the Christian era. In these tribes there was little or no inducement to develop individual potentialities or talents. Everybody was initiated into the body of the tribe and was taught to conform to its pattern. They had a feeling of belonging to something much bigger than themselves and this created a sense of security. All were cultivators, for each family had to grow its own food and to grow it in the traditional manner. Even twenty years ago it was fatal for an individual in many of the tribes to adopt any kind of improved agricultural practice at variance with his neighbours': if he failed, he would be laughed to scorn; if he succeeded, his hut would be mysteriously burnt down. The only way to introduce a new crop or a new method on the land was for the local chief to issue an edict that all must adopt it on pain of being put into gaol.

It was an axiom of British colonial policy to work through the tribal organisations and develop them; but at the same time many disruptive factors came into play. Primary schools were started, both by the governments and by Christian missionaries, on what in retrospect seem to have been unimaginative and far too intellectual lines. Powered transport, initially by railways, put an end to tribal isolation. Initiation rites fell into disuse or else were performed clandestinely, and the total authority of the chief was steadily undermined. A cash economy replaced barter and created a demand for cash crops. In this disturbing but rather exhilarating atmosphere people began to leave the tribal areas in increasing numbers to see more of this great new world and, perhaps unconsciously, to try and find their true selves. For this is what did happen. Those with better developed mental ability found higher education and positions of responsibility. Others discovered a bent for working with tools or machinery and became artisans. Many just drifted and entered paid employment as labourers, or loafed in the growing slums of the larger towns. But some developed a flair for the land and became true farmers; these could be encouraged to

adopt new ideas and act as examples for others to follow. The tribe became a 'Native Authority', having its own budget and running many local services, but no longer claiming the total allegiance of all its members.

As already mentioned most of the tribes had worked out from intuition and experience systems of cropping their land which were eminently suitable for the ecological conditions in which each was situated. All were based on some form of shifting cultivation. The simplest, in areas of poor soil and unreliable rainfall, consisted of cutting the bush and burning it in the dry weather, and then dibbling the seed in as soon as the rains came. Others involved the burying of grass and weeds in various kinds of ridges or beds; on these there was usually a three-year rotation of crops, and then the land was allowed to rest for about ten years to regain fertility. These systems worked well so long as the cultivated patches were small and well scattered. But with increased populations resulting from the cessation of tribal wars and with the introduction of cash crops pressure on the tribal lands grew steadily. The plots under cultivation coalesced into larger and larger areas and opened the way for serious soil erosion. At the same time rest periods became shorter and fertility consequently decreased.

In areas free from the tse-tse fly where cattle could be kept there was little if any tradition of true animal husbandry. Cattle, goats and sheep were merely marks of wealth, and anyone could turn out his animals to graze on tribal land without any restriction on numbers. All were of hardy breeds which can live on standing dried grass in the dry season. They had to be brought back to stockades near the huts every night to protect them from lions, and in this way large heaps of dried dung accumulated; this provided handy fuel for cooking but was seldom returned to the land because the only way to carry it out to the fields was in baskets on the women's heads. This system too was fairly satisfactory so long as numbers remained low. The concept of rotational grazing, of demarcating special areas for early, mid-season and late grazing and changing them year by year, had never entered their minds. Even further from their thought was the possibility that crops might be planted for the sole purpose of feeding stock. Here again as numbers began to increase erosion started, goats being particularly bad offen-

ders because they feed on roots as well as leaves and stems, and so leave a completely bare surface at the onset of the rains: grass seeds are washed away before they can germinate and the land becomes covered with a worthless scrub. This process is very evident where cattle are ousting the natural game fauna; cattle will only eat certain species and will eat them out, but a game complex crops the whole flora and keeps it in balance.

At the time when the East African territories attained independence, some of these problems of a rapid transition were on the way to being solved, at least temporarily, and seeds had been sown for the solution of others. In particular soil and water conservation practices were recognised and were being put into effect. Systems of individual land tenure were being worked out so that a farmer could make permanent improvements to his land without the risk of its being given to somebody else. In Kenya, under the Swynnerton Plan, viable well conserved small holdings on a mixed farming basis with registered land titles were being established in place of the old haphazard arrangements under which one farmer might have several widely-scattered plots. In the pastoral areas many new watering points with a piped supply had been introduced, and some tentative schemes for controlled grazing had with difficulty been started. A simple type of ox-cart which could be made by village carpenters had been designed for carrying manure from the stockades to outlying fields and also for getting produce to market more easily. The forest departments were not only engaged in devising management policies for existing areas of valuable timber, but were more particularly concerned with conservation problems such as planting land which had been seriously eroded or run down and protecting watersheds. The tse-tse fly was being held in check and in some places driven back, though not always by methods acceptable to the conservationist; in this field the prospect has been completely changed quite recently by the technique of releasing large numbers of laboratory-bred sterile males, and as time goes on it is possible that huge areas may be made fit for reoccupation by man and his domestic animals. The Tanzanian beeswax industry, amounting to several hundred tons annually, had been put on a much sounder footing by the introduction of a

hive which could be cropped without destroying the bee colony as had been done in the past.

At this time too the relics of the ill-conceived 'Groundnut Scheme' were beginning to show promise in several directions. When the Scheme was finally wound up in 1952 the viable assets were vested in a new body known as the Tanganyika Agricultural Corporation. By then a great deal had been learnt about the behaviour of pasture grasses under semi-arid conditions, new varieties had been introduced, and almost the whole of the first area of cementing clay at Kongwa was being developed as a promising cattle ranch; plans were in train to enable individual Africans to participate in this enterprise. At Urambo further to the west the land had been opened up on the best conservation principles; trees were left on the ridge tops and strips of the poorer soil types were not cleared. Here a way to grow groundnuts with modern machinery was eventually discovered, and the soil/climate conditions were also found to be suitable for flue-cured (cigarette) tobacco. The cleared land was divided up into tenant farms varying from 10 to 1,500 acres with a view to studying the ways in which centralised machinery pools and workshops could best be integrated with holdings of different sizes and with tenants of varying capacities. The larger units were managed by Europeans, but some Africans graduated up to 150 acres. The African tenant plan, however, first evolved in the southern area at Nachingwea where the most promising annual crops proved to be not groundnuts but soya bean and sorghum grains. Subsequently cashew nuts and limes were introduced as tree crops. So although the dreams of army-planned huge-scale mechanical desecration of the African scene met the fate they deserved, they did pave the way for a number of pilot schemes which must have a beneficial influence on the planning of co-operative efforts in the future. At the same time a centralised semi-government organisation was brought into being for financing, developing and managing new schemes, especially those involving irrigation. The British tax-payers' money was not entirely wasted.

In the lower and more erratic rainfall areas there is undoubtedly great scope for irrigation, particularly by holding back some of the peak flows in such vast river systems as the Rufiji and the Pangani. Both these basins were surveyed in

detail before independence and similar studies were made in Kenya. Working plans were drawn up and one or two smaller schemes were started in order to gain experience of water requirements and water management. Now some of the large dams are under construction and these will provide hydro-electric power as well as irrigation. There are plenty of technical problems to be overcome. For instance the apparently ideal alluvial soils are often highly variable and may contain absorbent sandy strips between the more valuable and retentive loams. In the Pangani basin there are large tracts of saline soil and the salts will have to be washed out before any crop can be grown. There is also a human problem, for the optimum use of water demands a discipline not quite in keeping with the African temperament.

Nothing has so far been said about the impact of tractors and machinery on the African mind. Tractors had of course been used for many years on estates and European farms, and African drivers became extremely skilful. In the Rhodesian Soil Conservation Service machines driven by Africans required far less frequent major overhauls than those operated by Europeans. A tractor became the envy and dream of many an African peasant, but only very few were able to realise this ambition. One or two managed to raise the necessary funds and tried contract ploughing for their neighbours, but they were unable to grasp the economics of the business. For instance one contractor travelled over 20 miles on a rough road to plough a mere half acre, and then came home again; it never occurred to him to charge for the time and fuel spent on the journeys. Some Native Authority ploughing schemes ran into similar difficulties, or else came up against the impossibility of getting urgently needed spare parts in a hurry. To most Africans all tractors, and for that matter buses, have their own individual 'shaitanis' or devils for whom petrol is indeed motor spirit! There is a story told of one tractor driver who was ploughing a large field in which a solitary baobab tree had been left standing: he suddenly got the idea of testing the strength of his 'shaitani' against the tree and charged it; he escaped with a broken leg, but the tractor was a write-off. The official policy before independence was to progress slowly within the means of the peasant by encouraging the use of

simple oxdrawn implements, and animal training centres were set up: this seemed a very appropriate measure in view of the large population of unemployed animals, but it was derided by emerging politicians as an insult, fobbing off the African with the second best. Now, however, it is realised that tractors cost money to buy, to run and to maintain; the draught animal is coming into its own except on the larger tenant schemes.

All the emerging countries in the tropics are now faced with a difficult decision on the question of soil fertility, whether to follow the so-called advanced countries and base their agriculture on artificial fertilisers, or to develop the organic practices pioneered by such remarkable men as Sir Albert Howard and Fergus Wilson. In the past peasant farmers have not been able to find the money to buy artificials, but now things are changing and fertiliser factories are being or have been built in many of these countries. Organic farming means more work, and it is much less trouble to put on pellets or powder from a bag – and yet there are millions of people without any work at all. The desire to become westernised and wealthy is so great that few people, certainly not those in authority, are willing to face the fact that chemical methods are now beginning to be recognised as threats to the biosphere and to the whole balance of nature. It is little short of tragic that those responsible for introducing the new high-yielding 'wonder' strains of wheat and rice were entirely obsessed by chemical concepts. These strains were bred to react to chemicals and they are being grown with large quantities of artificial nitrogen together with herbicides, insecticides and fungicides; the adverse effects of their residues will not take long to show up under tropical conditions, and one shudders to think of the irreparable damage to the whole countryside which is likely to result. It has unfortunately become agricultural dogma in both developed and underdeveloped countries that it is quite impossible to feed the increasing populations without chemical aids, and this idea has been steadily drummed into the general public so that all politicians now believe it. The plain fact is that no determined and adequately financed research has as yet tried to see what can be done without them.

Africa is not only a continent of promise, it is also a continent of plagues, the two most important being quelea birds and

locusts. *Quelea*, which are smaller than sparrows, migrate from place to place in the hinterland feeding on wild grasses and all the small food grains such as millets, sorghums, wheat and rice. What they do not eat is flattened by the weight of their numbers. The flocks begin to build up in desolate semi-arid areas and then invade the cultivated lands where they continue to breed and multiply. Up to a year or so ago the only method of attacking them was to blast the roosting sites with explosives and drums filled with a mixture of petrol and kerosene. To give some idea of the numbers involved, one case is known where the corpses collected from one blast filled a three-ton lorry. Research was started on an international scale about thirteen years ago to try and find some vulnerable stage in the early build-up of flocks, but so far as is known no easy solution has yet been found.

Two kinds of locust may trouble East Africa – the desert locust and the red locust. In certain parts of the world locusts live quite ordinary humdrum lives like grasshoppers; such places are known as 'outbreak areas'. It seems that populations of 'solo' locusts slowly increase until the pressure on the food supply reaches a critical stage. They then become infused with a gregarious urge to band together and seek their fortunes elsewhere; the first swarm is formed and they begin to move. Their numbers increase enormously each time they alight to breed and the swarms then split up. The outbreak area of the desert locust is somewhere in the wilds of Arabia where it is not easy, either physically or politically, for specialised control teams to operate. Consequently swarms have usually built up to dangerous proportions and crossed the Red Sea before anyone is aware that a new outbreak has started, and even then swarms in the waste places of Ethiopia and Somaliland are difficult to locate. Once located they have in the past usually been attacked by one of the chlorinated hydrocarbon insecticides (DDT, BHC, Aldrin, etc.) now being banned because of their persistence in the biosphere. However, new rather less toxic substances which interfere with the breeding cycle have recently been discovered and are likely to be more widely used in future. The outbreak area of the red locust is in the swamps at the south end of Lake Tanganyika, partly in Tanzania and partly in Zambia. Here it has been possible to keep a more

careful watch on them, and there has not been a serious outbreak for nearly 20 years.

As they prepare to enter a new age the people of East Africa are more fortunate than their fellows in the Far East or in South America in that there are no indigenous hereditary large landowners. Even where blocks of land were 'alienated' to plantation companies or to ex-patriate individuals, they were usually on 33 or 99 year leases which are easier to deal with than freeholds. So it is possible to start with a more or less clean slate and to develop ideas of land tenure suited to overall social policy. Before describing the new trends, it may be pertinent to observe that most tropical cash crops require sophisticated processing. Cotton has to be ginned and the oil extracted from the seed; coffee has to be fermented; tobacco has to be cured; rice has to be milled; pyrethrum has to be extracted by distillation; cashew nuts are especially difficult to shell; sisal, sugar and tea all need well equipped factories. In the past African grown produce was bought raw and processed by Asian entrepreneurs; but most of the crops were grown on estates with African labour. Some fifteen years ago when new irrigated lands were being opened up in Rhodesia it was categorically affirmed that the only role which Africans could play in this development was as labourers; but East Africans think differently and demand a full share right up to the finished product. So the tendency now is for individual small-holders or tenants to be grouped round the processing plant. The latter may be co-operatively owned as in the case of cotton ginneries, or it may be what is termed a 'para-state' project in which the state represented by a growers' collective owns a 51% majority of the shares, the minority being held by a commercial company which acts in a managerial and technical capacity. This concept is also being applied to purely industrial undertakings.

In Kenya, in the less specialised agricultural areas, the present policy seems to favour the emergence of yeoman African farmers, and this is having the effect of driving more people to the towns as the more efficient farmers buy up their less successful brothers. In Tanzania, however, as many people as possible are being kept on the land, and the general policy is laid down in a fairly recent encyclical by President Julius Nyerere entitled 'Ujamaa Vijijini' which is rather loosely translated

'Socialism in the Villages'. This plan involves the creation of democratically controlled social groups in which the land and its produce are communally owned, as are the schools and all necessary services and amenities. In outline it is something like the Israeli 'kibbutzim' but on a far more primitive scale and allowing more individuality in that feeding is not communal and families may have their own small gardens. The first of these villages were started from scratch on new land, but there are now reputedly some 500 of them so it must be assumed that older villages are being converted. No doubt modifications will have to be made in the light of experience, but this far-reaching concept puts Tanzania and its leader in a class by themselves among the nations of the world. One cannot however help feeling that, although this may be the pattern of the future in many countries as men begin to realise that their brotherhood is a stronger factor in life than their individuality, it may be rather too ambitious to pioneer it in a region where full individuality has not yet been experienced. On the other hand it may be that the tribal instinct is still sufficiently present to make these communities a success. In that case a phenomenal leap in the evolution of human consciousness would be achieved, and perhaps it was for this very purpose that the peoples of Africa were held back in the primitive state for so long while the rest of the world was developing.

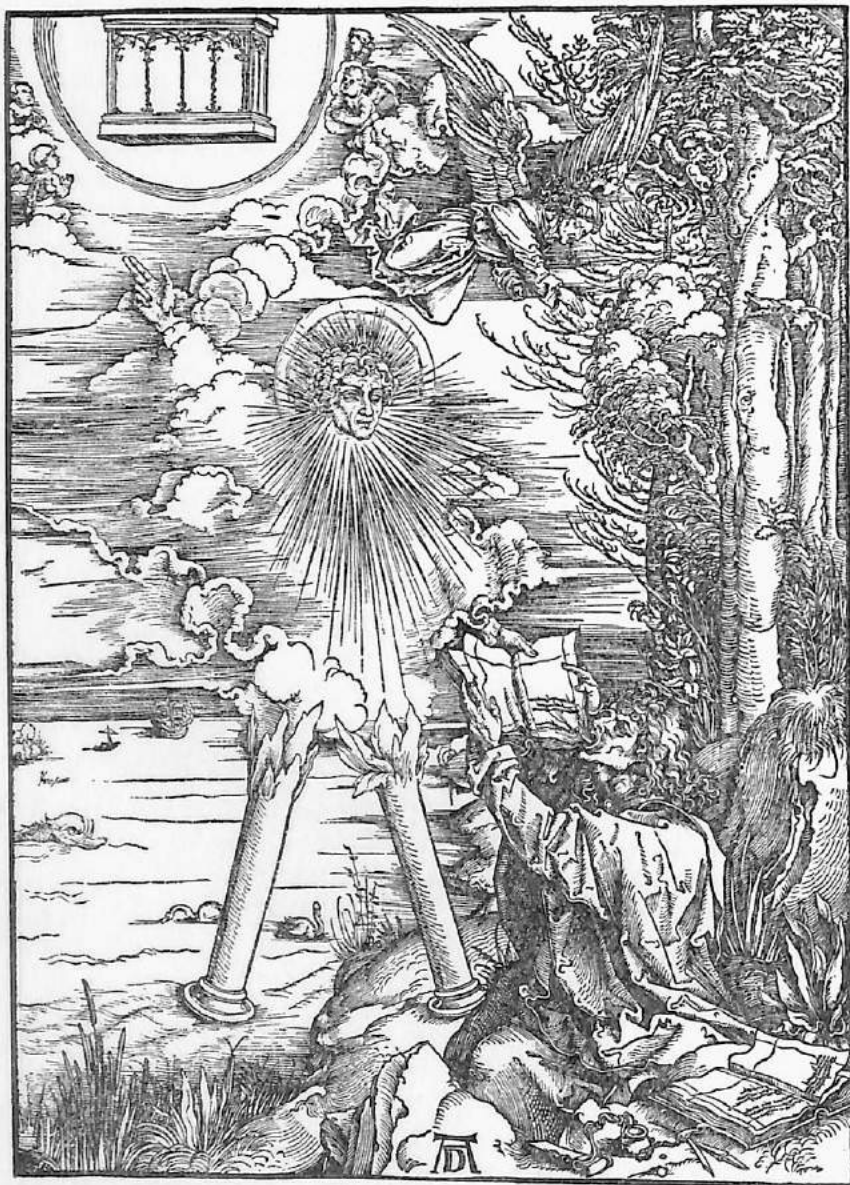
VERSE

OWEN BARFIELD

THE YEAR MAKES ANSWER

And now the world at last is whole –
 One firmament, one aurcole
 Of light distilled by loving gods
 Embracing Autumn's naked pods,
 To have them smile. Against the blue
 Pale leaves downdrifting settle through
 October's ocean – air and sky
 Inseparably one. . . . Am I,
 Am I the mellow heart within
 This sweet whole world's enclosing skin?

The year makes answer: weeks drift past,
 And now the earth is old at last
 And cold, and damp, and dark, and dead,
 All-utterly dispirited.
 Feet struggle through its clammy ground,
 The north wind bites and whips; stormbound
 About me flaps December's robe. . . .
 O ripe and glowing golden Globe!
 Art thou still here, in thine own centre,
 Entirely bright? And didst thou enter
 Deep, deep into my soul, to be
 This candle on her Christmas Tree? . . .



Albrecht Dürer, 'St John devours the Book' (Revelation 10)

A MEDITATION

Light in the world –
World in the mind –
Mind in the heart –
Heart in the night.

Pain in the day –
Strength in the pain –
Light in the strength –
World in the light.

THE AUSTRALIAN CONTINENT

ROBERT WILLIAMS

AUSTRALIA is an island continent, a completely isolated land mass confined to the southern hemisphere, and from the following aspects it would appear that its primeval forces are confined within its shores.

The geographical arrangements of water and land masses in the two hemispheres are obviously different; the northern is predominantly land surrounding the Arctic Ocean and the North Pole, the southern is practically all water surrounding the South Pole and the continent of Antarctica.

Commenting on this polaric difference Rudolf Steiner has shown that the earth can be viewed from a threefold aspect corresponding to the physical body of man, i.e. a head region, a rhythmic region and a metabolic-limb region.

Australia is situated in the metabolic region, that sphere from where the will forces arise. In contrast to Australia, southern Africa and South America, although penetrating deeply into the southern hemisphere, are strongly influenced by the northern stream of forces which is portrayed clearly in their fauna and flora. Australia has in many cases autochthonous fauna and flora.

After Africa, Australia is probably, geologically speaking, the oldest land mass on the Earth's surface and is a brown land, the 'earth colour'. Physical geography has made this country a land of contrasts. It is the earth's flattest continent, averaging less than 1,000 feet in elevation, the highest mountain being 7,316 feet, and, apart from Antarctica, the driest continent. Beyond the east coast the Pacific Ocean stretches 8,000 miles to South America, off the west coast Africa lies 5,000 miles away across the Indian Ocean. To the north are the outliers of the Asian continent - Indonesia and the Philippines.

Within its 11,546 miles of coastline there are deserts occupying some 600,000 square miles (20 per cent of its surface), fertile plains and slopes, tropical jungles in the north and a snowfield in the winter time larger than Switzerland.

Despite the absence of lofty mountain ranges there are some

interesting geographical features, in their own way 'different': Ayers Rock, the 'largest pebble in the world', a brilliant red conglomerate monolith six miles in circumference and 1,100 feet in height, rises abruptly from the red, mulga (acacia) covered plain; the Nullabor Plain is an area of some 60,000 square miles, a little larger than England and Wales, a vast limestone area covered with low scrub, saltbush and grasses; the Indian-Pacific railway line traverses its length some 400 miles and for 330 miles the line is absolutely straight, the longest straight stretch of railway in the world. In its monotony lies its fascination.

Rudolf Steiner indicates that in addition to a physical geography an etheric geography must be taken into consideration, according to which etheric forces are distributed over the Earth in a west-east direction. The four ethers are active in a spectrum from the American continent where the life ether prevails through the areas of the chemical and light ethers to the Far East and Pacific Ocean which is under the influence of the warmth ether.

According to this concept Australia's position on the earth, being situated directly south of Japan and Siberia, is the polaric opposite to the American continent. The warmth ether which streams in from the surrounding sphere is reflected back by the earth's surface and is the ruling ether in Australia. It is this powerful centrifugal radiating force of warmth working through the light that gives a certain character to the atmosphere in this continent. Visiting artists have commented upon it.

The Archean Shield of Australia is very ancient and diverse opinions prevail among geologists as to its position on the original earth face. Whether the hypothesis of continental drift is accepted or not, whether there was one original continent, Pangeae, or two original continents, Eurasia and Gondwanaland, from which Australia separated and drifted to its present position, does not affect the results of the prevailing etheric forces which would be active since the earth had taken its form in Tertiary (Atlantean) times.

The mineral resources in this continent are vast; extensive exploration is taking place throughout and new mining fields are being found. Tremendous reserves of iron ore (20,000

million tons) are constantly being added to by new discoveries; a third of the world's known supply of bauxite, source of aluminium, has already been found here.

Rudolf Steiner spoke of the earth as a living being, as a living organism. Just as the human body has organs which function in various parts, sending their different effects throughout the whole body, so the earth radiates vital forces from certain regions having quite different effects and influencing the human, animal and plant kingdoms. Electro-magnetic forces and forces from the sphere of the living are upward streaming to the earth's surface. As the earth revolves in space it is also subject to the planetary and cosmic forces which are constantly streaming in and spreading over its surface.

Geologically and mineralogically Australia is similar to other countries but the subtle earthly and cosmic forces as mentioned have created its own particular fauna and flora.

* * *

In Australian ecological plant geography there are many examples of epharmony of species, i.e. some species of one genus so closely resemble species of another genus or family that when growing together they can only be classified when in flower.

Plants present two main aspects to the observer, the vegetative and the procreative. The vegetative is the plant 'growth form' in contradistinction to the procreative, its 'systematic form'. It reveals itself especially in the habit and in the form and duration of the nutritive organs.

In the dry areas of inland Australia the epharmonic convergence reaches a climax in which numerous species conform to a few general 'growth form' types. In one such type, the stem, by a system of repeated upward branching produces a multiplicity of branches and twigs all attaining more or less the same height resulting in a flat or convex dense crown with a light covering of leaves which, seen in lateral profile, resembles an umbrella. In this type shrubs and trees of different families are to be found. These 'growth forms' are given to the vegetative element by an external influence.

Rudolf Steiner has given the concept of two principles work-

ing in the plant world: (a) the etheric or life force which is the repetitive element of growth, manifesting in cell formation, the ever metamorphosing node, i.e. the vegetative, and (b) the astral, that which comes from outside and stops the growth with the formation of flowers and gives the outer 'growth form'. The principle which creates inward feeling in the animal gives outer form to the plants.

In the vegetative element are to be found two opposing activities manifesting in evergreenness and deciduousness: in perennial and annual growth: in woody structure and herb formation. Dr A. Usteri in his classification of flowering plants denotes seven classes based upon the seven stages of earth evolution in the light of Rudolf Steiner's book *Outline of Occult Science*. This classification can be used to formulate a science of plant geography. Viewing the totality of the earth's flora it can be said that the growth type of deciduous and annual plants predominates in the northern hemisphere and conversely the evergreen and perennial natured plants in the southern.

The flora of Australia is basically evergreen, perennial and of woody structure, only three species of trees and shrubs being truly deciduous.

The gymnosperms as a class are, with one or two exceptions, evergreen. They do not recognise the rhythm of seasons, are primitive in their floral parts, slow in their fruiting nature and carry the woody structure up into the inflorescence. The main group, the Coniferales, find strong expression in the southern hemisphere. As far as the Australian conifers, fossil or living, are concerned there is no evidence in favour of a northern origin or even an origin in the area immediately north of the Australian region. Of the Coniferales' 32 genera, 11 are found in Australia and five are quite endemic. Of the six tribes five are represented in Australia.

The gymnosperms are representatives of the Old Saturn stream of evolution. They persist in a condition which other flowering plants (angiosperms) have long overcome, i.e. no coloured flowers and no sheath covering for their seeds. In the case of the pines the ovules are borne on top of scales which are collected into hard woody cones. Some conifers take two or more years to produce seeds. The cones of the bunya bunya (*Araucaria*) can grow up to 12 inches in length and 9 inches in

diameter. A cone weighing 10 lbs has been collected. The cones are full of nuts which the Aborigines in Queensland gathered for food, the trees bearing heavy crops every third year.

The Old Saturn condition of earth evolution when the Sun was still within, i.e. no rhythm, no light, and darkness, only inner warmth, is personified in this class of the flowering plants. Other classes in Australia are strongly influenced by these Old Saturn forces which stream into the antarctic region and then spread out over the earth.

The Myrtaceae family, which has two main centres, tropical America and Australia, is evergreen and grows mainly around the borders of the Pacific Ocean. The fruit of the varieties growing in America is mostly succulent, e.g. guava, feijoa etc., but in Australia practically all fruits become hard and woody.

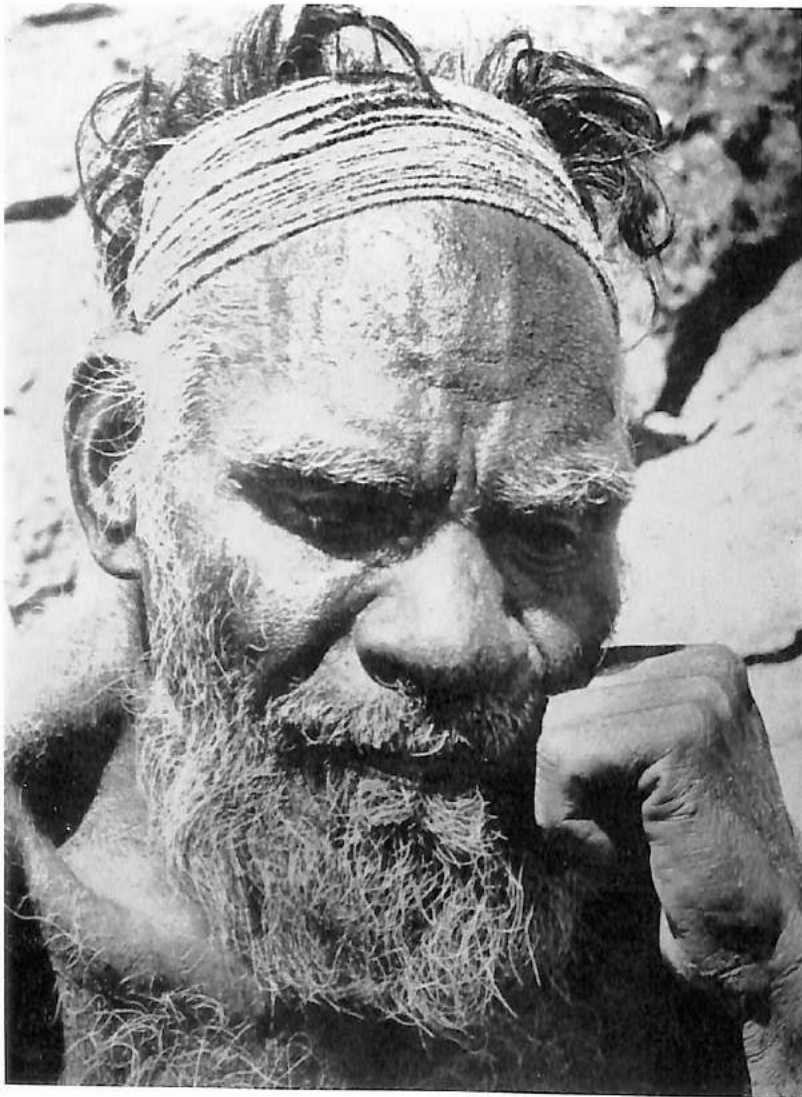
There are 90 genera in the Myrtaceae family; 47 are found in Australia, 33 being endemic, and the great majority are rich in volatile or aromatic oils and bear no edible fruits. The genus *Eucalyptus*, which accounts for some 90 per cent of the forests of Australia, is evergreen; the few species that are deciduous grow in the tropics and shed their leaves in the *summer time*. The average life of eucalypt leaf is 18 months. The overall form of the leaf is spherical, the juvenile form is round and the mature lanceolate or linear, resulting from the influence of the warmth ether. The Old Saturn influence is portrayed even in the floral nature where the corolla and calyx are thrown off fused together in a hard operculum, leaving only the numerous stamens and pistil in a hard woody receptacle.

The eucalypts of some 522 species and 150 varieties are highly individualised trees with completely different forms of bark in different groups, from the smooth-barked gums to the deeply-furrowed ironbarks. The smooth-barked gums shed their bark in the spring and summer and the bark has the capacity to simulate leaf activity in chlorophyll production.

Bearing in mind what was said previously of a form coming into the plant from outside it is of interest to note that basically the inflorescence of the eucalypts is a dichasium, a cymose formation that is also seen in the foliage crown of the trees, i.e. the umbrella shape. The inward streaming astral forces mould both the inflorescence and the vegetative form.



Eucalyptus salmonopholia, salmon gum, which grows in the drier southern areas of Western Australia



A tribal elder of the Aranda people of central Australia

Strong ego stimulating forces are carried in the powerful volatile (etheric) oils of this genus and in many other genera of the Myrtaceae in Australia. The warmth ether and external light here play their role.

The present capacity of the eucalypt to bring into existence new species, apart from varieties, is not shared by many other plants. This Myrtaceae family belongs to the class of polypetalous flowering plants whose creative centre is not physically on earth but which foreshadows the impulses of future capacities and possible development of man in the Jupiter evolution.

The acacias (wattles) are strongly represented with some 600 species, all of them evergreen. In contrast, the acacias of Africa and Asia in the northern hemisphere are mostly deciduous. The acacias also grow in arid inland areas where the eucalypt cannot and its leaf form is peculiar to Australia. The majority have no true leaves but have evolved leaf stalks called phyllodes, taking many forms, from flattened lanceolate shapes to rigid sharp pointed needles. The phyllodes, whatever their shape, function as leaves; the ancestral compound (bipinnate) form is often to be found in the juvenile leaves of seedlings. It is suggested that the great change in the foliage is of comparatively recent origin, the change being brought about by the external effects of the environment. The creative centre of the Leguminosae is to be found in the Old Moon evolution centre – Lemuria (Indian Ocean). Again, the periphery of the phyllodes is mainly due to the activity of warmth ether.

Some annual and deciduous families of the northern hemisphere have species in Australia with opposite characteristics: in the Urticaceae, the tree nettle (*Laportia*), which is an evergreen tree form of stinging nettle growing up to 120 feet in height, in the Compositae, tree daisies (*Olearia*) which are woody and perennial shrubs and trees and in the Moraceae, evergreen fig trees (*Ficus*).

An unusual form of root development in many Australian trees and shrubs is the lignotuber which originates in the axils of the cotyledons and grows down the stem enveloping the upper part of the root and finally, as growth increases, tends to bury itself in the soil until only a small portion or none at all can be seen. If the trunks of the trees are destroyed by fire or desiccation a reservoir of buds in the lignotubers enables a re-

growth to occur. It is as though the physical and etheric principles (life and chemical ethers) of the plant world here are constantly striving against the principles embodied in the light and warmth and against the constant physical threat of bush fires which apparently have for a long time been a part of the environment. This is also borne out in the fact that many endemic plant seeds need fire or great heat as a prerequisite to germination. The Australian bush and forest regenerates rapidly after bush fires, either from the lignotubers or from buds hidden under the protective bark on the tree trunks.

The migration of the Atlanteans both east and west did not touch this continent and no development took place through human endeavour in the cereals, fruits or vegetables although many similar basic floral forms exist in Australia.

* * *

In a lecture given on 17th February 1924¹ Rudolf Steiner describes how the different regions of the earth produce the manifold animal configurations. He described further how the human astral body is dependent upon the animal atmosphere in which man lives.

In the different animal forms live the animal shaping forces which manifest in man only through their effect upon his astral body. Of course the human being lifts himself continually out of what works upon him and yet he lives within this animal atmosphere. The sympathies and antipathies which human beings develop within earth existence and which they bring with them from pre-earthly life depend on what constitutes the animal atmosphere in a particular region.

To compare the forms of animals living in Australia with those of other countries reveals a distinct difference, with emphasis being placed on different parts of the body. The predominant form of Australian native mammals is that of excessive development of the hindquarters and tail with a corresponding lesser development of the forequarters and head formation with no horns or antlers. Mostly small pointed heads are found whereas from the hindquarters are developed tails which do not have the appearance of an appendage but of a

¹ *Karmic Relationships*, vol. I (Rudolf Steiner Press).

continuation of the body. In the overall expression emphasis is to be seen on the metabolic and limb pole of the animal form, that part of the form which is the bearer of the will.

This continent is the centre of the development of the marsupials, of which there are 120 species. A marsupial is a mammal which gives birth to its young in a very immature state, then carries and suckles it in a pouch. The kangaroo is perhaps the most widely known representative of this group. This country is also the home of the world's two existing monotremes (egg-laying mammals), the echidna and the platypus, both mixtures of bird-reptile-mammal. The platypus, found only in eastern Australia from Tasmania to Queensland, lays a soft-shelled egg in a nest underground; the mother goes broody like a hen; at birth the young are suckled, obtaining the milk through the pores of the skin; it has webbed feet and a bill like a duck with the fur of a mammal.

To the zoologists, who a century or more ago enthusiastically adopted Darwinism, the concept was accepted that a simple transition took place from egg-laying mammals (monotremes) through marsupials to the eutherians (placental mammals). Later, doubts arose and it was suggested that monotremes are degenerate marsupials and marsupials are degenerate eutherians.

Common ancestry of the marsupials and eutherians in the Upper Jurassic has been suggested by zoologist Mills, and certainly fossils from the early Cretaceous have now been identified as marsupial, while remains referable to the eutherians have come from the same area.

It is thought that Australia was severed from other land masses during the Cretaceous period. Previously in Jurassic times it was inhabited by the giant saurians of which fossil remains have been found. It is since this period (Cretaceous) that Australia has developed an unique assemblage of animals and the marsupials have developed into herbivorous, carnivorous and rodent-like mammals, strangely similar in their habits to their analogues of the eutherian world. They appear to have reached a peak specialisation during Pleistocene times and one extinct form, the diprotodon, was as large as a rhinoceros and stood erect on four massive feet; another was a giant kangaroo standing about 10 feet high. These facts recall Rudolf Steiner's

words that animal forms become smaller during earth evolution.

The fact that no earlier fossil evidence of the echidna or platypus before the Pleistocene has been found in Australia poses problems as to their first appearance on earth. No evidence has been found of fossil ancestors outside Australia.

Since British settlement the Merino sheep from Europe has been developed from an inferior strain to the best producer of fine wool in the world. This has been achieved under a natural Australian environment, the pastures being endemic grasses, herbage and shrubs.

Earthly forces from the metabolic system of the sheep ray outwards and are partly used in the production of wool. The upsetting of the original balance in the endemic pastures by the use of artificial fertilisers and the introduction of exotic plant species causes deterioration in the quality of wool in Australia. The re-establishment of native forage plants is receiving the attention of scientific studies.

There are about 700 species of birds in Australia. The avifauna is in striking contrast to the marsupials. It is not only thoroughly representative but is about the most highly developed in the world. Of the four families at the head of the bird world three are confined to this country and the fourth is shared with other regions. Of 316 species of parrots and allied birds in the world, 60 species, ranging from five-inch long fig parrots to palm cockatoos more than two feet long, are indigenous. Perhaps the most well-known is the little budgerigar or 'love bird'.

The cockatoos are almost entirely restricted to the Australian region, being found elsewhere only in the Philippines and Sulu Islands. Australia has been called the 'Land of Parrots'. When cockatoos are feeding, sentinels are posted on nearby trees to warn of approaching danger. Illegal gambling schools post sentinels to watch for the 'arm of the law'; these people in Australian slang are called 'cockatoos'. Recent work by a leading European ornithologist on the galah, a rose-breasted cockatoo and prone to antics, claims it to be a most highly intelligent bird. 'Mad as a galah' is a folk saying among Australians.

Rudolf Steiner has drawn attention to the fact that the up-

right posture of some birds enables them to be articulate. The parrots in particular imitate the human voice.

In seeking for an understanding of the anomaly between the marsupial and avifaunal development in Australia it is suggested that there is an inner link between them through their mode of propagation. The monotremes remain at the stage of egg-laying, the marsupial has progressed to the level of producing minute living young whereas the birds are oviparous like the monotremes but do not suckle their young.

The attempt at uprightness in posture in many marsupials (kangaroo, wallaby etc.) and the shifting of the body weight in this uprightness enables them to hop, which is also a bird movement. A marked tendency towards individualisation has developed in both animals and birds in this country. Rudolf Steiner has indicated how in the kangaroo we have an animal that has hardened too much in its physical body so that after death it is cut off from the group-soul and exists as an elementary being.

* * *

Two hundred years ago, on 29th April 1770, Captain James Cook discovered the east coast of Australia and on 18th January 1788 the First Fleet reached Botany Bay carrying the first settlers, 1,030 people including 726 convicts. Eight days later Captain Phillip founded Sydney on Port Jackson; today Sydney has over 2,500,000 people, about one-fifth of all Australians.

It is estimated that about 300,000 aborigines then inhabited the continent, one person to every 10 to 15 square miles; today the figures are approximately 45,000 full blood and 77,000 part blood.

With an area of 2,967,909 square miles Australia today has a population of well over 12,000,000, i.e. an average population density of around 4 persons per square mile. Now migrants come from many different countries. In the Anthroposophical Society in Sydney members from 15 different countries meet together.

Although this is an aged continent it appears that human settlement is relatively recent. The aborigines of Australoid

stock are assumed to have come from the north (Asia) during the last Ice Age (Pleistocene) when the sea levels were lowered, bringing with them a dog, a true mammal, the warrigal or dingo.

The aborigines were nomadic; they used stone tools and kept no written records, perfecting implements only for hunting and fighting, e.g. the boomerang, woomera, nulla nulla etc. A deeply ingrained religious life connected them with a spiritual world. Their general belief that a spirit takes up residence in a physical body and at death leaves the body and is itself indestructable, is variously articulated in the different tribes. Their belief in a 'dreamtime' is understandable in the sense in which Rudolf Steiner speaks of man's early clairvoyance and dream-like consciousness. They were a gentle people and mostly welcomed the early settlers. However, they suffered unjustifiable slaughter of many of their tribes by the white people.

Today an endeavour is made to recognise the aboriginal in his own right; their future and problems are openly discussed; their cause being taken up strongly by many people, particularly among university student bodies.

Australia has suffered no invasions since British settlement, no civil war has torn her inhabitants, no religious strife has appeared, no nationalistic discord of minorities has reared its head and today it is the only continent inhabited by a white people speaking one language – English.

Australians have achieved individual success and contributed to world progress in many fields; in the arts, music, painting and scientific domains.

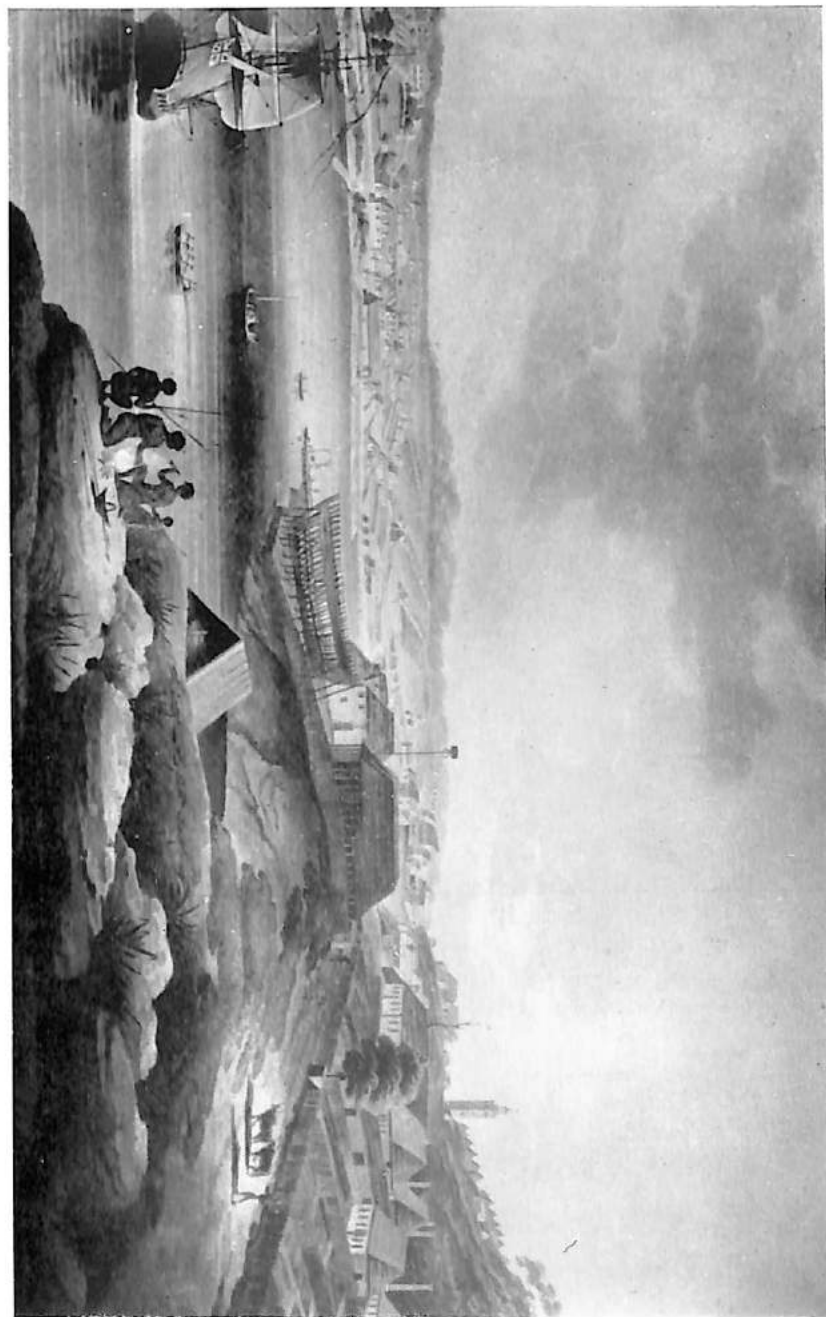
A number of Australian aviators pioneered the world's air routes. All the major oceans of the world with the single exception of the North Atlantic were first flown by them.

In sport Australians have consistently won world championships in swimming, athletics, sculling etc. They have won the Davis Cup in tennis more times than any other country and their results at Wimbledon have been most impressive.

Individualism shows in the desire of Australians to possess 'their own block of land'; nearly 78 per cent of the population own their own homes.

In two World Wars volunteers went overseas to support what

Sydney Cove in 1802, from a contemporary engraving



they thought was a worthy and true cause. Another characteristic is perhaps portrayed in Prince Charles' now well-known remark, 'Who could remain formal when faced with a crowd of Australians?'

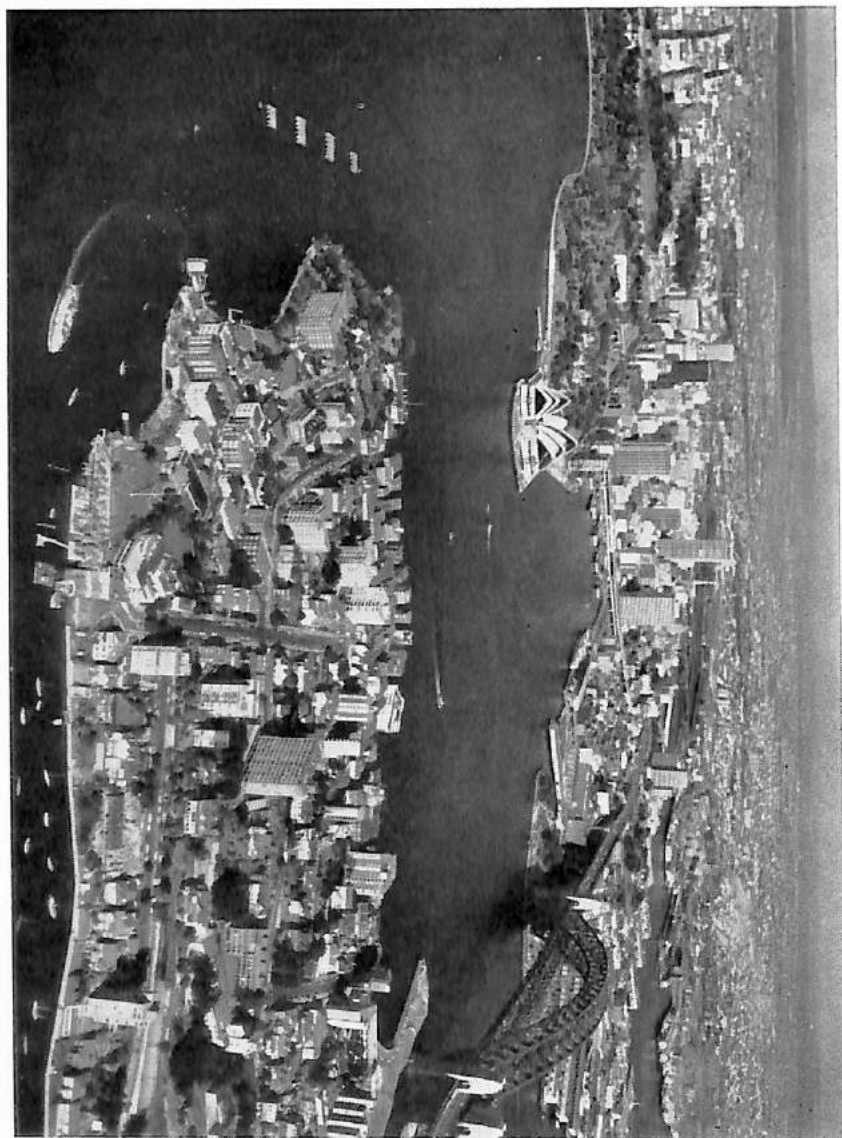
The farming and grazing community, not always descendants of such stock, had to contend with new conditions of climate, soil and environment which often called for improvisation and today world agriculture has benefited from inventions made to meet the immediate demands. Implements which resulted from these conditions include the shearing machine, stump-jump plough, header harvester, the combine, the rotary hoe and the auto-header, to mention some.

It is now 33 years since the bio-dynamic preparations as indicated by Rudolf Steiner were first developed and gradually adapted to conditions in this country. Through the ingenuity of practising farmers a suitable stirring machine was evolved to make possible the spraying of thousands of acres with bio-dynamic soil spray and preparations.

The foregoing achievements must be viewed in the light of the ratio of Australia's small population to that of other countries. The cause for such proportional results must be sought for in the country itself (see earlier reference to etheric and astral forces), inasmuch as it can produce individuals whose ancestors came only during the last two centuries from the northern hemisphere. Is it the will to win, 'to take a gamble,' to overcome obstacles, which is inherent in this sunburnt country?

Australia is geographically an eastern country – what to Europeans and Americans is the 'Far East' is to an Australian the 'Near North'. A contribution now being made to its near neighbours is through the Colombo Plan and other government sponsored schemes, whereby students from Asian and Pacific countries are aided to carry on their tertiary education in Australian universities and colleges. Today some 12,000 students are in this country.

It is important to note that this continent is now inhabited by people of European stock; only one in 100 is of non-European ancestry. Australia is a Christian outpost of western civilisation surrounded by an arc of non-Christian religious communities to the north. Within its shores are no ancient buildings, no



Sydney, showing part of its harbour; in the background the Royal Botanic Gardens, the Opera House, the Circular Quay, and the Harbour Bridge

castles or cathedrals from past centuries, no remnants of old cultures and civilisations; therefore, no background of human astrality is to be felt as in the environment of any Old World country.

Has this continent, by-passed by earlier civilisations, been preserved for the future like an individual whose inherent qualities are withheld in childhood, to blossom in later life?

It is submitted that the foregoing aspects of Australia confirm the concept that the earth is a living being sending diverse influences into different regions of the earth and working in harmony with complementary forces coming from the Cosmos.

THE NEW EXODUS

CROSBIE WILSON

AUSTRALIANS are said to be uncouth, to be lacking in social graces, to be off-hand in their attitude to others, to have neither tradition nor culture, and to have little or no respect for authority. They are also said to be one of the friendliest nations in the world. When viewed in the light of spiritual knowledge, these characteristics – which either delight or irritate the newcomer – are seen both to have a basis in past conditions and to point to an important part of the spiritual future of mankind in the process of development. We shall attempt to show this in brief outline by first comparing the founding of the Australian civilisation with that of earlier epochs.

On looking back to the great migrations of past ages, we find that each post-Atlantean epoch originated with peoples who moved outward from an older civilisation to found new centres of culture in distant lands. This was an expression of the necessity for man to expand his consciousness *outward* in order to become more aware of his physical environment. Present indications are that a new exodus is already taking place – this time in an inward direction, from a great many countries of the world to Australia, the fifth continent. This in-streaming of races from different parts of the earth may well be an external expression of the fact that man is beginning to turn spiritually *inward*, to become more consciously aware of his true inner self.

This influx of peoples has taken place in two separate streams. The first stream began nearly two hundred years ago, with the establishment of a British penal colony on the eastern shores of the country then known as New South Wales.

When the historic First Fleet sailed into Sydney Harbour in 1788, more than two thirds of its complement of over one thousand souls were convict men and women; the remainder were administrative officials and soldiers. These people formed the nucleus of the earliest civilisation in Australia.

After a few years there followed shiploads of free immigrants

from England, Scotland, Wales and Ireland. Many of these people came from poor-houses and orphanages; others, dissatisfied with the inequitable social conditions which produced either the very rich or the very poor, decided to leave their homeland and seek a new life in an almost unknown country on the other side of the world.

Certain distinctions may here be drawn between the journeys of past ages and that under present discussion. In the great post-Atlantean migrations the highest initiates operating under the guidance of the *Manu* went out to different parts of Europe and Asia, leading groups of people to found new centres of culture based on spiritual wisdom. Australian civilisation, on the other hand, was founded with criminals, the degenerate and the poor, and appeared completely lacking in those spiritual qualities which characterised the impulse taken by the above-mentioned initiates.

Unlike the preceding migrations, whose people had both knowledge of and control over the forces of the elements, the first settlers in Australia found themselves in a land both alien and hostile. Weird animals, strange vegetation, a harsh climate, an almost immeasurable vastness and a terrifying isolation – these were the lot of the pioneers who first explored and then settled in their new home. Apart from nomadic, unfriendly aboriginal tribes with strange rites and customs,¹ there was no other form of human life. Neither civilised culture nor tradition nor even history had preceded them. They occupied a brooding, silent land which was at once incredibly ancient and yet virginally new – untouched by the hand of civilised man since the dawn of time.

There is a curious parallel of circumstances between the beginning of the Israelitish culture and the founding of the Australian civilisation. To enable the Israelites to pursue a fresh course of spiritual progress, it was necessary for them to withdraw from areas where the accepted standards of cultural and social behaviour prevailed, and establish separate communities in new surroundings which permitted the freedom of development along their destined path. In the conditions of heat, barrenness and loneliness facing the first Australian

¹ The theme of this article does not include a discussion on the Australian aborigines.

migrants, may be recognised an environment which, as we shall see, had been spiritually prepared, so that under its influence man could perform a special task or mission.

Journeys undertaken to other lands frequently indicate a recapitulation of karma from a previous incarnation: a connecting of threads of that destiny which is to operate in the present life. However, since Australia had no past history or civilisation, the arrival of man in that primeval land could only portend the forming of an entirely new kind of karma for the future.

The early settlers had to contend not only with dust, drought, heat and flood, but also with a silent wilderness which surrounded them like an enemy, seemingly resentful of their presence. They could not subdue this wilderness by creating around them a second England, with its life of class and tradition and culture; instead, they found it necessary to harmonise with their new spiritual environment by a process of changing themselves, their attitudes, their ways of life.

As time went on, changes in the social structure to which they had been accustomed were born of necessity. Emancipated convicts and retired government and military personnel now mingled freely with the immigrant settlers in the community, and all classes accepted one another on a basis of complete equality. This heralded the growth of further social freedoms.

Loneliness, especially on the widely-scattered inland farms, caused man to welcome as a friend any stranger who came to his door, whether he might be an ex-convict turned horse-trader, the travelling postman on his rounds, an opal dealer, or a banker friend on holiday from the city. The dearth of women in the colony (at one time the ratio was one woman to seven men) frequently brought about a friendly relationship between men of entirely different antecedents and outlook – a disposition which gave rise to the term 'mateship'. Thus there came into being a new tradition of a genuine hospitality extended towards all men, irrespective of background, breeding, educational standard or station in life.

In distant areas, where the demanding voices of bureaucracy, religion and organised society were comparatively silent, a feeling of antipathy towards authority in general began gradually

to arise. This was only a natural repudiation of the constrictive social conditions from which the free migrants had severed themselves, and the cruel, authoritarian disciplines meted out to the convicts during their term of bondage. Also, the pioneers had perforce to become self-reliant rather than to look to some government or other administrative body for advice or control. Man had no alternative but to depend entirely upon himself: to make his own judgments and decisions, to use his initiative to master his environment – in short, to overcome his difficulties by using the forces inherent in his ego.

Rudolf Steiner has pointed out many times that the Sixth post-Atlantean Epoch of civilisation must develop the impulse for freedom of thought, when every man is his own free master, when he himself is his own authority. Clear indications have also been given that this freedom cannot be attained until we have cast off the fetters of tradition, nationalism, religious dogma, and racial and other forms of prejudice. In a lecture, 'How Anthroposophical Groups Prepare for the Sixth Epoch',¹ Dr Steiner says: 'There hovers before us as a high ideal a form of community which will so encompass the Sixth Epoch of culture that civilised human beings will quite naturally meet each other as brothers and sisters.'

Could this breaking with tradition in Australia, this friendly attitude towards others, this feeling of equality with everyone, this spurning of authority, this self-dependence, signify a preparation for the Sixth Epoch?

* * *

The second migratory stream began as a trickle at the end of the First World War and following the Second World War it increased to a flood. Large numbers of people arrived – and are still coming – not only from Great Britain, but from almost every part of the world, both East and West: from countries as far apart ethnically and politically as Holland, Sweden, Poland, Germany, Italy, Greece, Russia, China and Egypt. Large numbers of stateless and displaced persons have also been granted citizenship rights.

¹ Dusseldorf, 15th June 1915.

The majority of these people left their native lands to gain freedom: freedom from political, racial or religious persecution, freedom of speech, freedom from fear, freedom from want, freedom from illness. Some were attracted by the open spaces or by the abundance of sunshine; others left purely on impulse, without any apparent external pressures.

And what are the external conditions confronting the newcomer when he lands in Australia? He now stands on the oldest land mass on earth; the driest continent on earth; the only country in the world which has an entire continent to itself; a country isolated by sea from the rest of the world; a country where a man may travel in freedom for thousands of miles without crossing any national frontiers or having to produce a passport or any other document of identity. It is also a land of contrasts. The majority of the population live in modern cities on the fertile coastal fringe, while the vast hinterland – known as 'the Outback' – is predominated by a terrifying, empty waste of searing desert, providing an ever-present, silent backdrop to the bustling life of the cities.

To balance this duality the Australian people, too, have a paradoxical nature, where may be observed the characteristics of narrow-mindedness, British conservatism, and submissiveness on the one hand; on the other, the open friendliness, the rough independence and the opposition to all forms of authority.

This duality of types serves to maintain a balance, producing peaceful conditions where neither the one faction nor the other is allowed to take fanatical control or to exert undue pressure on any section of society.

However, the spiritual quality of this new environment is of a different order. In contrast to the previous post-Atlantean migrations, whose peoples were initially aware of the *spiritual conditions* associated with such journeyings, the characteristic of today's exodus is an awareness of the *physical conditions*. Nevertheless, it is here suggested that such mass movements of human beings are guided by spiritual influences of which man is totally unconscious; that there is a spiritual ordering behind the impulses which cause people to leave the country of their birth and settle in a far distant land.

In order that the evolution of mankind might proceed in

accordance with the decree of spiritual worlds, certain parts of the earth are specially prepared by spiritual Powers. An *auric configuration* is brought into being, first on an astral, then on an etheric level. Human beings who through the operation of karmic laws are led within the boundaries of this sacred area, have the task of working in harmony with its spiritual purpose.

We now conceive of such an auric configuration spread over the continent of Australia with its forces centred along the eastern coastline, where the greatest numbers of people may be found. And we further suggest that, despite the many reasons why the migrants forsake their homelands for this particular part of the world, the underlying cause is that they are drawn to this region through karmic necessity.

It is not without significance that almost all of the immigrants come from the northern hemisphere.

Dr Gunther Wachsmuth, in an article¹ entitled 'The Face of the Earth and the Destiny of Mankind', describes how the great post-Atlantean civilisations were centred around a special region in Europe, and another in Asia, where the etheric formative-forces of the earth come to focal points of great intensity. Other nations then spread out from these foci, and in the course of time the etheric vehicles of the individual human beings became strengthened through interaction with the vital earth forces. We may now assume that a migration from northern to southern regions is the precursor of an interaction between the strong etheric bodies of the migrants and the virgin, free astral forces which now surround them in Australia. For the individual, this will mark the beginning of a further period of spiritual development, influenced in part by his physical environment.

One of the first problems to beset many a migrant is that of language. He soon discovers that, no matter what his mother tongue, he must learn to speak English.

The fact that throughout Australia English is spoken without any noticeable inflection, is a source of wonder to those who are accustomed to a variety of accents and dialects which vary from one locality to another in their home countries. These dialects – and, indeed, all spoken languages – sprang from the

¹ Published in the quarterly review *Anthroposophy*, vol. 2, no. 2, 1927.

need for separate communities, both large and small, to express themselves verbally, in accordance with their particular path of evolutionary progress. Could this 'levelling' of language in Australia be the prelude to a new plane of communication which will bring about a greater harmony and understanding between nations?

During a course of lectures¹ on 'The Mission of the Folk-Souls', Rudolf Steiner explained that divine-spiritual beings bestowed upon the British people the gift of what is spoken of as either the consciousness-soul or the spiritual soul.

The spiritual soul may be described as the 'divine spark' which dwells within man: that part of us which recognises, and strives towards, eternal truth and goodness. Although linked with the sentient soul and the intellectual soul, its activity does not depend merely upon our personal thoughts, desires and impulses, but rather keeps these under control through the moral quality of its inner light. True morality can be found only by searching within one's own soul. Through working with his ego upon the spiritual soul, man may reach out to that which is good, that which is moral, that which is true; and through this inner light he draws morality into himself. When he is filled with the light of moral goodness, then may he shed that light upon others with whom he comes into contact, that those others may receive the impulse of that moral light for the betterment of themselves and the world.

Dr Steiner emphasised that some of the outer aspects of the union of the spiritual soul with the human ego may be observed in the British system of parliamentary procedures and constitutional laws; this system was used as the basis for Australian forms of government. It may be seen that the achievements of British rule in Australia over the past two centuries have resulted from the impulse given by this soul-force.

Development of the consciousness-soul of necessity causes an individual to feel himself cut off from his fellow-men – a feeling which is also engendered in many persons by Australia's isolated geographical position.

The newcomer must endure the loneliness of separation from his native country, from its familiar customs, laws and culture,

¹ Oslo, 1910. A description of the three souls of man may be found in Dr Steiner's book, *Theosophy*.

and perhaps for a time from his own family. Confronted by an attitude on the part of his Australian neighbours which appears to be of a cool indifference, he is virtually forced to make his own unaided efforts to orient himself to his new surroundings. Not only must he (in some cases) learn a new language; he must acquire new vocational skills and adapt himself to a new pattern of social conduct.

Thus, loneliness and external difficulties in life cause the individual to look inward for comfort and strength. Frequently, this reveals to the seeker the presence within his own soul of the forces of eternal goodness and truth. In realising such a presence, he brings into his consciousness a light which begins to lead him a further step forward in his own evolution.

Such experience serves to stimulate the development of freedom within the ego. When the migrant (or 'New Australian', as he is officially termed) finally settles down and identifies himself with his new environment and its people, he finds that he is accepted into a friendly, easy-going community, and accorded, as a matter of course, the dignity of *an individual human being*. The apparent aloofness he first encountered, now appears in its true light as an attitude of non-interference, of *freedom*, which allows him to develop according to his own spiritual needs. He now becomes part of a predominantly middle-class society where most of the veneers of social disparity and old tradition have been removed and the equality and intrinsic worth of the ordinary man are given their true value, unhampered by sham or pretence. Thus, attention is focussed upon the importance of ego meeting ego on a mutual level of freedom and understanding.

Those few migrants who cannot break free from their accustomed social conditions and adapt themselves to a different order of living standard, or who are unable to accept the changes and hardships of settling down in a country somewhat alien to their own, return home disappointed and disillusioned. However, even here we may see spiritual guidance behind the external impulses which cause them to return to their own countries. It may be that certain experiences in their individual karma must be undergone before they can make their new karma for the future; perhaps they cannot throw off the influence of their national folk-spirit; or their astral bodies may

be unable to harmonise with the auric configuration surrounding them in Australia.

The vast numbers of migrants who remain have found the sanctuary, the freedom, the way of life they sought. They have been through a process of self-assimilation, requiring a positive effort to identify themselves both materially and spiritually with their adopted country. In doing so they have lowered the barriers of difference in nationality, creed, custom and language, and face the future as an integral part of the Australian nation.

* * *

With the merging of two separate streams of civilisation – one stream essentially British in character,¹ the other of widely mixed origins – Australia has grown from the profoundly humble beginnings of a small colony to its present state of nationhood in the modern world. But are there any indications that point to a spiritual path to the future?

A common complaint, from local as well as overseas writers, is that Australians are unable to identify themselves with an accepted standard of tradition, of culture, of commercial or technical advancement, of political wisdom; that this country has not yet made a name for itself in one of the recognised fields of worldly achievement. For this reason, Australians are considered – by themselves and by other nations also – as belonging neither to the past nor to the present; that is, they cannot be labelled as a nation with a particular quality of established background against which they can be placed in order to be seen in perspective.

Australians can be identified only with the spiritual being of the land itself – this land with its unutterably aged geological formations, its prehistoric fauna, its primeval plant life, and the peculiarly unique nature-forces which are the guiding powers behind such manifestations.

The past, the background, of the Australian people is in-

¹ Those facets of character which are recognised as distinctively Australian are derived from British characteristics. This may be confirmed by a reading of *The British—Their Psychology and Destiny* (1958) by W. J. Stein.

dissolubly linked with 'the Bush', that ever-present but indefinable fringe of the hinterland which appears as a barrier that stands where the city ends and the country begins: a barrier unseen by physical perception, but representing a different level of that auric configuration which exerts an influence over the entire continent.

The lack of similarity in the outlook and progress of Australia as compared with other nations bespeaks a different path of endeavour and purpose. The ancient spiritual heritage with which Australia is endowed must be worked upon by human beings in the light of present-day knowledge in order to lay down a path to the future which may be followed by generations as yet unborn. The indications already given point to the beginnings of certain characteristics which will be an inherent part of man's being in future ages. Thus, Australia has a contribution to make to the evolutionary development of mankind: to strengthen the self-dependence and freedom of the ego; to foster the soul-force of brotherly love to all men; to increase the conscious awareness of the spiritual soul.

And how is this threefold task to be achieved? With an intrinsic Australian culture beginning to arise, and many other national cultures streaming in and mingling with it, what will be the cultural outlook for the future? Is Australia under the guidance of her own Folk Spirit? What will result from the influences from a hundred other folk spirits being brought together within the confines of a single country?

Rudolf Steiner draws our attention¹ to the existence of supersensible beings of a higher order than folk spirits. Whereas folk spirits belong to the past, with its *unfree* social conventions, traditions, customs and laws, the higher Beings give spiritual leadership and assistance in a region *where the bonds of the past have been shaken off*, and a new, active principle of *individual freedom* prevails.

If Australia is coming under the guidance of such a Being, then the questions we have posed could well be resolved little by little, as the unknown future unravels before us. Along with the struggle and effort made by individual men must come a widening understanding and acceptance of the moral values which lie in Anthroposophical teachings. Anthroposophy

¹ *The Influence of Spiritual Beings in Man*, Berlin, June 1908.

gives life to the seed which man sows for his future – a future in which we ourselves shall share in the ages to come. In Australia, no less than in other countries, may that seed be nurtured in the light of the Spirit, and be brought to its intended fruition!

LIST OF NON-ANTHROPOSOPHICAL PUBLICATIONS CONSULTED

- Australian Civilization* (a symposium), edited by Peter Coleman, 1962.
- Profile of Australia*, by Craig McGregor, 1967.
- The Lucky Country—Australia in the Sixties*, by Donald Horne, 1967.
- The Making of the Australians*, by A. E. Mander, 1958.
- Around Australia on Highway One*, by George Farwell, 1966.
- The Face of Australia*, by Charles F. Laceron, 1953.
- First Fleeters* (quarterly journal), 1969.
- The Modern Encyclopaedia of Australia & New Zealand*, Horwitz, 1954.
- Official Year Book of the Commonwealth of Australia*, 1968.

Tables overleaf

PERSONS GRANTED AUSTRALIAN CITIZENSHIP BY NATURALISATION
JANUARY 1945 TO JUNE 1967

Former nationality	Persons granted citizenship	Former nationality	Persons granted citizenship
Albanian	1,100	Lebanese	4,397
Austrian	8,180	Lithuanian	8,443
Belgian	528	Norwegian	1,175
Bulgarian	1,239	Polish	63,623
Chinese	4,613	Portuguese	422
Czechoslovak	11,185	Romanian	2,898
Danish	2,190	Russian	9,675
Dutch	64,414	Spanish	1,144
Estonian	5,924	Stateless	14,588
Finnish	2,047	Swedish	637
French	2,009	Swiss	1,665
German	41,397	Syrian	145
Greek	45,815	Turkish	286
Hungarian	28,669	Ukrainian	19,614
Indonesian	162	United Arab Republic	451
Israeli	3,770	United States American	1,180
Italian	123,942	Yugoslav	36,043
Japanese	650	Others	2,815
Latvian	17,682	Total	534,717

ARRIVALS UNDER ASSISTED MIGRATION SCHEMES: AUSTRALIA, JANUARY 1947 TO JUNE 1967

Assisted migration scheme	January 1947 to June 1962	1962-3	1963-4	1964-5	1965-6	1966-7	January 1947 to June 1967
Austrian	16,750	372	594	769	824	556	19,865
Belgian	738	414	318	155	201	236	2,062
General Assisted Passage ¹	18,314	1,874	3,327	3,605	4,924	2,619	34,663
German	67,847	1,967	2,987	2,870	3,266	2,932	81,869
Greek	31,557	2,051	2,633	3,507	2,673	2,888	45,309
Italian	40,448	227	195	158	281	287	41,596
Maltese	27,443	1,501	2,665	3,655	2,368	754	38,386
Netherlands	63,713	1,352	1,585	1,551	1,652	1,383	71,236
Refugee	206,241	1,375	2,040	1,609	2,177	1,805	215,247
Spanish	3,554	4,326	78	49	70	91	8,168
Special Passage Assistance Programme							
United Kingdom	427,938	41,700	54,630	70,688	70,754	4,603	4,603
Other schemes	26,682					70,570	736,280
Total	933,225	57,159	71,052	88,616	89,190	88,724	1,927,966

¹ Mostly Scandinavians, U.S. Americans, and British nationals from countries other than the United Kingdom.

COLOUR-FLOODED FORM: HELMUT VETTER'S PAINTINGS

HERMANN SCHÜTZ

THE art of today is dominated by a confusion of tongues. A seeing which is also knowing has become difficult; estrangement intrudes between the work of art and the observer. Attempts at intellectual interpretation do not avail; theories of art criticism float about like soap-bubbles and come to the same end. Art has become a field of experiment, often expressing the rational dogmas of a science which has lost and indeed denies any transcendental point of reference. For centuries, in fact for millennia, it was different. Art was the language of the spiritual, supersensible world, and what it proclaimed was understood. Right up to the threshold of modern times (in the historic sense, about up to the Renaissance) art was not the image of earthly reality, but a comprehensive vision of the creation. Man felt himself still connected with and in constant communication with the spiritual powers of the universe. Thus pictures were tidings and invocations. This standard was abandoned, the ciphers and symbols forgotten, as man detached himself from the world of divine beings. There remains only – and this is confirmed by modern psychology, remarkably – an intuitive understanding for the language of colours. In this there is a significant opportunity for painting today. For since the Word, the Logos, became Light, and Light is the entelechy of the colours (Goethe said 'Colours are the deeds and sufferings of light'), colour rightly grasped according to its essence can become a means for the knowledge of the spirit that is now needed.

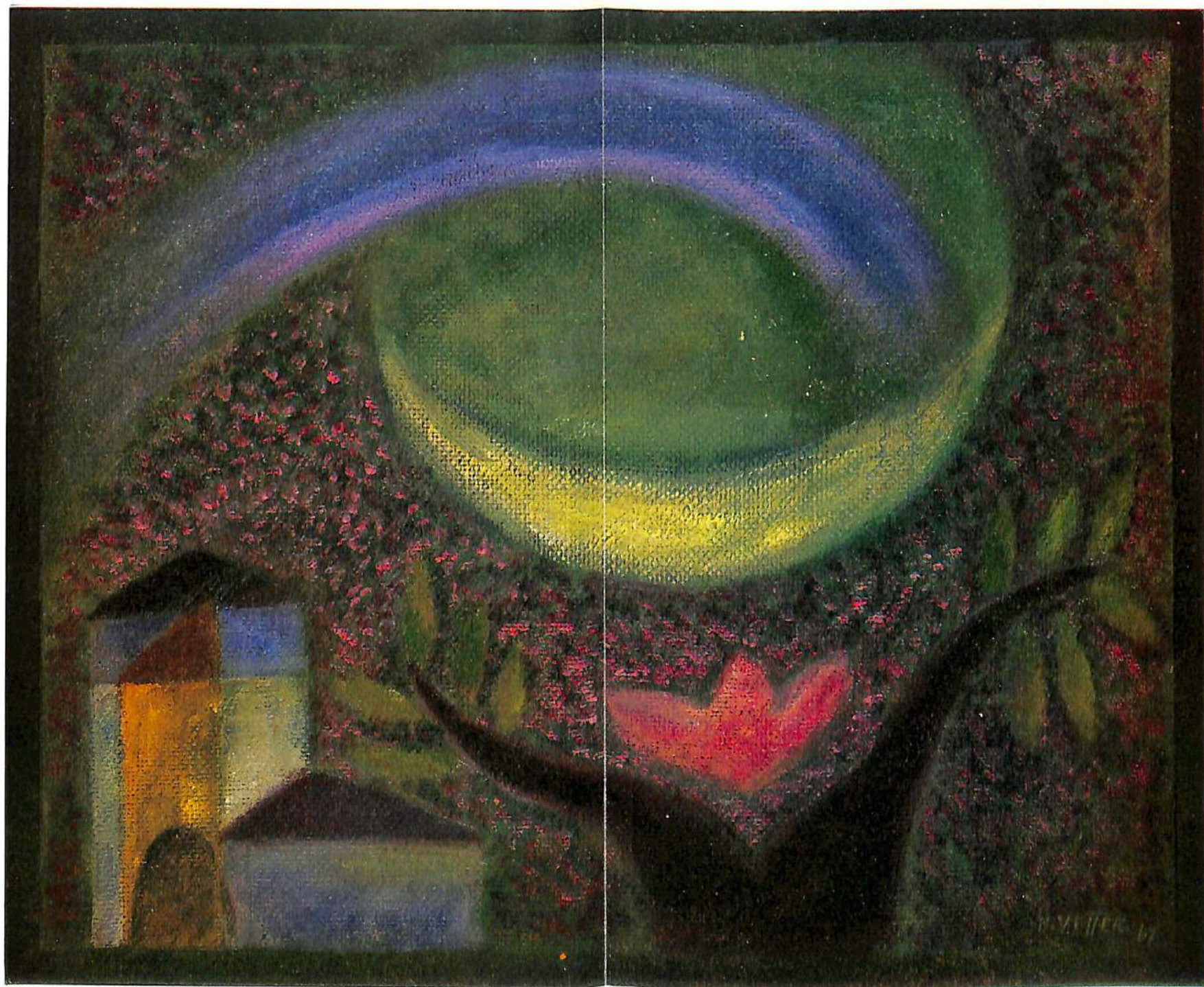
Through these considerations we can approach the paintings of Helmut Vetter, of which three are reproduced here. It may seem irrelevant to mention that today in Germany if you go into any large bookshop you will nearly always find, among the postcard reproductions of the work of masters who are well known and have long established their place in the history of art, reproductions of Helmut Vetter's paintings as well – though his name is hardly mentioned in art criticism and the publicity

about art. This is partly due to the fact that he does not follow any fashionable trend, and so does not seem 'up to date' – and also to the fact that he only paints when he is driven to an artistic utterance, when a pictorial conception has become mature in him. What is the reason for the sale of thousands of reproductions of his paintings – 45,000 copies for instance last year of a calendar with twelve pictures by him? The reason can only be that many people grasp intuitively the healing, enlivening quality of his painting. Vetter does not depict what is called today, through a fundamental misunderstanding, 'reality'. He grasps the essence of things, their true being. His own view is that in the course of centuries which toiled to develop science and the intellect, art has become disloyal to its own mission. It has tried to take hold of the realities which appeal to the eye. The capacity of art to look beyond the compass of the human eye, its gift to reach behind external things and liberate them from the weight of their earthly destiny, has been gradually buried. In our time of extremes, in which final decisions are demanded, we have to think afresh. The artist must learn to lose himself in the environment in a mood of pure meditation, and penetrate beyond the bastion of the physically visible, to share in the mighty drama of becoming and fulfilment played on the stage of the universe, beyond the limits of time – himself becoming part of it.

Spirit and matter are indeed profoundly intermixed in the paintings of Helmut Vetter, particularly those of the last four or five years. Everywhere matter is illuminated and penetrated by spirit. Thus the world of his pictures comes to those who can think with their hearts as a bringer of consolation – not of comfort in a naïve sense, but of a deeper, cosmic experience of the world. To achieve this as an artist, Helmut Vetter has devoted himself entirely to colour. The harmony of colours is to him the most precious thing in the process of creation. It is thus perhaps understandable that he reached his present characteristic use of external things like symbols in a mysterious code on a path that led through completely abstract painting. Only through colour does form arise with Vetter; it flows with colour, and is sustained by it. Here form really breathes through colour. When people stand before his pictures, they are often moved in an unusual way. Something archetypal is represented

in a way that is acceptable to modern human beings, unless they are entirely in the grasp of the forces of decadence and death at work in our time. Vetter does not indeed paint either from direct sense-perception or from reflective thought. His world of pictures springs from the spirit of Anthroposophy, which enables him to see through and beyond the world of things. For example, when he paints something plant-like, he puts it into a space, in which the relation of the plant to the sun is always to be felt. The sun as a theme holds him in its grip; many pictures are devoted to it. Constantly he tracks the sun on its course through time. He is a pioneer in his treatment of the sun as a painter. In earlier centuries the sun was always treated symbolically; only in the nineteenth century did painting begin to represent it in a naturalistic way. Vetter is concerned to show the sun as a being. In this, as in other representations of cosmic bodies, it becomes evident what Vetter regards as important: 'to let oneself be inspired by nature in the widest sense, in order to represent spiritually creative metamorphoses'. The second reproduction given here, 'In the Moonbow', gives an idea of this. The background consists of glittering, intangible substantiality. In this there floats the moon as a great disc, transforming itself, dominating the picture, above buildings and growing things. What grows, reveals colours that seem to emanate from the ground; the colours of the buildings reflect the moonbow. Goethe's and Rudolf Steiner's teachings about colour belong to the spiritual foundations of Vetter's painting. He paints only in tempera.

Helmut Vetter was born in 1923 at Aschaffenburg on the Main – the river which divides Germany into North and South in a more than geographical sense. He was the son of a pharmaceutical chemist. Through the wise and gentle guidance of his parental home, and particularly of his mother, he grew even in childhood and youth into anthroposophical thinking. Early in his twenties he went to Buenos Aires and studied architecture there. After eight years in South America, he returned to Europe, to study at the Kunstakademie in Vienna. He now lives in south-west Germany, near Stuttgart. Five illustrated books on Vetter's work have appeared in recent years. The most varied people find an access to his painting. Vetter, asked to explain this response, says: 'I attempt to take



Helmut Vetter, 'In the Moonhow'

in to the full the impulses which Rudolf Steiner gave for creative art, to develop them individually, and to express them in a contemporary way.' Countless human beings, who know nothing of anthroposophy, long for the spiritualisation of life, for the finding of meaning. The paintings of Helmut Vetter are stages of Imagination, which can lead to achievements in knowledge of the supersensible.

A NOTE ON ALBRECHT DÜRER 1471-1528

Art is implicit in nature.—A.D.

CATHERINE DE BRUYNE

DÜRER was born when the age of the 'onlooker consciousness' was in its earliest dawn and angels and monsters had not ceased to cohabit the world with men; but outer conditions for his developing genius were also there. He came to the chartered city of Nuremberg, famous for its woodcarving, to a father who was a goldsmith and a godfather who was an enterprising printer and bookseller. Three discoveries had recently been made: the making of paper from linen rags to replace the more costly parchment, a new printing ink, and movable type, whereby the production of illustrated books became commercially profitable. Much of his life and background is known from his journals and MSS, his own correspondence and that of others. London is fortunate in that the British Museum has a major collection of Dürer's drawings.

He left the goldsmith's craft at fifteen to be apprenticed to his 'second father', Michael Wohlgemuth the painter, and gained his first knowledge of wood engraving. Later, during the *Wanderjahre*, he went to Colmar hoping for instruction from Martin Schongauer, whose work he revered, only to find that the great engraver had died the year before. Thus he was guided to Basel, and to Strasbourg; and after a break of a few months during which his marriage took place, he made his first visit to Venice. He was twenty-four. Of her two schools of painting he was drawn to that of the Bellini family who took him under their wing. The very different work of Giovanni Bellini and of Mantegna, related to the two sides of his own being, set him upon his unique 'middle way'; and the withholding of an explanation by his friend Jacopo de' Barbari launched a life-long quest of archetypal beauty and hidden truth.

Jacopo showed me the figure of a man and a woman which he had drawn according to a canon of proportions; and now I would rather be shown what he meant than behold a new kingdom. . . . Jacopo, as I clearly saw, would

not explain to me the principles on which he went. Accordingly I set to work on my own idea and read Vitruvius. . . .

He studied human proportion (and that of the horse); geometry and perspective – to him the noblest of the solids was the dodecahedron; and the 'four temperaments' were a lasting absorption. He had an indefatigable eye for the marvel of nature and he recorded all, both outer and inner vision, his dreams and his visionary Gothic heritage, both in words and in forms of endless variety, often in strange propinquity.

On the way back from Venice he made rapid sketches with pen and brush (he was perhaps the first to do so) and free open water-colours, to which European landscape painting looks back. The last years of the century were not easy, though they established him in his work and brought the Elector's patronage. The cities might be centres of prosperity, craftsmanship and learning, but the land was wrung by famine, plague and anarchy. It was amid foreboding and prophecies of doom that Dürer and his humanist friends (including his life-long helper, the convivial scholar Pirkheimer) breathed the first wind of reform. The *Apocalypse* series of woodcuts, intended for a wide public and boldly issued without a commission, was his response to the time. It became a best-seller. There followed a series on the *Passion* – a source he ever and again returned to – and one on the *Life of the Virgin*, eased of the grandeur and terror of his first book, as the reproductions show. (His humour enters this series; who does not know the little elements sweeping the chips from Joseph's workbench?)

Before the second visit to Venice, in 1505, loss and responsibility had matured him. He was now received with honour as an eminent engraver but met envy from the younger painters, and we are told how he vindicated what he felt as their challenge by painting for the German colony there *The Feast of the Rose Garlands*. The *Signoria* of Venice offered him a residence and salary if he would remain, but he declined, although well aware that money was harder to earn in Nuremberg. The 'saddest event of his life' was that a visit to the aged Mantegna was forestalled by death, as had happened earlier with Schongauer. Before returning he went to Bologna to learn of a 'secret perspective'. It has been suggested that this was not connected with the Golden Ratio, with which he was already

familiar, but might refer to a system of planning pictures on ratios allied to the musical consonances.

At home, he turned again to painting and commissions arrived, for altarpieces and for portraits, but it was still necessary to earn support by engraving. He resumed work on copper, and well-known single prints come from this time, such as the *Nemesis*, with bridle and chalice in her hands, above an infinitely detailed miniature landscape. In 1511 he produced 'my three great books' – series of the earlier woodcuts – and the widely popular *Small Passion*. He experimented with iron plates instead of copper and with acid, and it was by a combination of tools that he achieved the silvery greys of his later copper engravings, for example *St Jerome in his Study* and the *Melencolia I*.

Limiting that work, a new phase opened, of decorative industry for the magnificent, but unprofitable, Maximilian. In hope of an interview with the new Emperor, Charles V, concerning unpaid dues, he made the year-long journey to the Low Countries where he met Erasmus. They shared anxiety at the course the Reformation was taking. And there, lured by a story of a stranded whale he must see, Dürer incurred the malady that troubled his last years. As at Venice so at Antwerp, he declined an offer of residence and salary. Ill-health now followed him, though at last he enjoyed greater respect from the Nuremberg councillors. He painted again on his favourite theme of the temperaments *The Four Apostles*, and gave it to his city.

Energy waned and despondency at times attacked him, yet he maintained a deep interest in the activities of Luther and the progress of his doctrines. Finally he turned to the making of books. For the first, *The Art of Measurement . . .*, he even had to form the technical language for the instruction he now felt it his moral duty to give; and his *Teaching about the Fortification of Towns . . .* has been called 'really an introduction to town planning'. But of the four volumes on *Human Proportion*, the unsolved problem, two had to be completed and seen through the press by Pirkheimer. Notes remain for a most comprehensive work on the education of a painter.

It has been said that Dürer is known through his engravings, that painting was his longing, but that it is his drawings that best reveal his excellence. He did not reach his aim; his final

judgment was that none but God knows what is the perfection of human beauty – and he to whom God may reveal it. His regret was that he could not see the work of the mighty masters yet unborn, 'for I know that I may be improved'. He died in Passion Week, 6th April 1528.

THE REPRODUCTIONS

St Michael Fighting the Dragon comes from the series of woodcuts of 'The Revelation of St John', first issued in book form in 1498. (Revelation 12.7-9) (p. 32)

St John Devours the Book. (Revelation 10.1-5, 8-10) (p. 70)

The Flight into Egypt belongs to the series on the *Life of the Virgin* made in the years between 1500 and 1505, and issued with added woodcuts as one of 'my three great books' in 1511. (Matthew 2) (p. 134)

FIRST MEMORY

MAURICE BRANCH

Just before the dawn,
 Mother paused and went back,
 Leaving me alone.

Then, suddenly,
 High noon; everything beaten
 By a hot, alien sun,
 To the angry, sobbing buzz
 Of bluebottles and bees,
 And a hot howling: (this from me,
 Though I hardly knew it).

Strange,
 To remember the wanting
 But not the wanted:
 To remember crying for mother
 And not recall her face,
 Voice, smell, nor anything of hers:
 Mother can dwindle to this –
 A word
 And a hot howling.

Then, from the blue,
 These words: 'You can't go back:
 I am your mother now.'
 A gentle voice, it tore from the sky
 The roaring gongs of summer
 And brought them tinkling about my ears,
 A shower of tin coins:
 Then silence.

Strange,
 Not to know the word
 But to know what it stood for:
 Not to call it a lie,
 But to know it in your bowels,
 In the taste of your spittle,
 In breath, blood, bone,
 Everything but brain –
 'This is a lie.'

Since then, the wind tastes of brass
 And the sun-gong sounds
 The Rule of Earth:
 'You are alone in your skin,
 As I am in the sky:
 Whatever you love,
 See you learn to leave it,
 And lend it your light
 From afar.'

Did she know this,
 Loving and leaving me
 Before it was light?

THE REJOICING EYE

DORIS DAVY

ON a clear summer afternoon I had climbed with two small boys, both under eight, up to Cissbury Ring in the Sussex Downs. As we reached the top I paused in a kind of rapture, my eyes sweeping the lovely circular panorama, more sky than earth. From beside me came an expectant small voice, slightly impatient: 'What can we do up here?' I realised, with amused shock, that scenic 'views' do not register with the very young.

Later, wondering when my own feeling for the earth began to include 'the rejoicing eye', I remembered another downland moment. I was, I think, about eight or nine years old, and was walking with my father on the Dorset Downs. I had just run – for no reason other than the sheer delight of running on that special, dry, springy turf – along the side of the ridge and thrown myself face downwards near the summit, chin propped on hands. I was looking through the grass across the rim as though through a miniature forest; beyond it the blue sky – nothing else. Quite suddenly I *saw* the earth and all its beauty, with a feeling different from, but somehow including, the unconscious awareness that had gone before.

Any treasure-box of special visual memories accumulated over the years has, I think, little relation to picture-postcard standards of famous sights and splendid scenes. I remember as a child sitting for a long time on a rock on a Cornish beach staring down into a clear pool and watching, entranced, the rhythmical movements of the floating brown seaweed anchored round the edge. I remember lying in the bracken in the Valley of Rocks near Lynton and imagining the bracken fronds as huge lacy trees against the sky. I remember walking down to a beach in Wales on a path skirting a sunny field of ripe wheat, and being strongly aware of the path's sandy soil which I deliberately 'scuffed up' on to my sandals.

Up to the age of about seventeen all my memories are English. We never went 'abroad' – at least, no further than Guernsey. The Yorkshire moors, the Dorset downs, the rocky coasts of Devon, Cornwall and Wales – these were my paradise-

images. But after that, came ten years spent in America and Asia among lakes and mountains, forests and jungles, all very different from the loved, quiet landscapes of my first youth. It is, I suppose, odd that anyone born and reared in England should never have seen the European continent – such familiar 'sights' as the Alps, the Mediterranean, the Black Forest – until long after becoming acquainted with the wild and lonely mountains of California, the dry and golden Chinese hinterland, the tangled tropical forests of Laos and Cambodia; and should have first set foot in France, for instance, when homeward bound from Hongkong. This kind of geographically-inverted pilgrimage could, perhaps, make the world seem even richer and more unexpectedly lovely than when one just gradually explores from a home-base; but I doubt whether any particular *type* of setting is necessarily more memorable or more 'beautiful' than any other. The beauty one remembers can be anywhere – diamond-clear falling water in the Engadine or in Yosemite; slanting light in the pine forests of the Sierra Nevada or in the lemon groves of Sicily; sun and shadow on grey-golden walls in Peking or on the ramparts of Les Baux.

Then there are all the 'little' beauties – things generally taken for granted in childhood but growing gradually more marvellous and absorbing. For instance, the incredible variety of intricate symmetrical designs in the plant-world's seed-containers – the pepper-shaker seed of the poppy, the feathery parachute of the dandelion, the polished acorn in its neat round cup.

The individual beauty of plants; the composite beauty of landscape – the one draws the eye inward with enchanting intricacies of design, symmetry, texture; the other effects a kind of escape or disembodiment. The escape feeling is probably familiar to anyone who has scaled a mountain peak or reached the top of a high pass and looked out at the new world on the other side; but the world-without-walls sensation belongs to many other less famous open landscapes – to the chalk downs, for instance, and some of the remote plateau country of the Auvergne and the Ardèche in France, where immense vistas of dwarf broom, no taller than heather, cover the rolling uplands with gold. Cape St Vincent, that empty, heathy, last south-westerly tip of Europe, is another 'disembodied' spot.

Wild animals, wild birds, in their own particular setting, have a special beauty one can never see in a picture or a zoo. On camping trips in the High Sierras of California we travelled without tents, putting down our sleeping-bags on springy pine-needles by some remote lake or leaping mountain stream. Opening my eyes in the early morning, I often saw an inquisitive little chipmunk, head downwards on a nearby tree trunk, fluffy squirrel-like tail curved over his back, bright eyes inspecting the sleeping humans. Or further off among the trees there might be a deer, its antlered head held high and alert, watching us warily. These seconds of bright stillness have a special magic. So, for me, do the movements of seagulls gliding effortlessly in musical curves above a lonely cliff.

The moon-astronauts were reported as saying that one of the things that most impressed them as they sailed home through space was the beauty of the earth. Luckily one does not need to go to the moon to become aware of it. Nor does one need to be young. I think children usually take wonders for granted, but time adds seeing to feeling, mystery to experience, and the shapes, colours, patterns and rhythms of the earth become increasingly miracles of delight.

An inevitable accompaniment of the world's natural beauty is of course the process of decay, the breaking down of material form from which new growth springs. When I was a child, the dead body of a bird or rabbit filled me with grief; a decomposing body with horror. I am now very much aware of the complete change in this feeling which followed my contact with the teachings of Steiner. No-one after making compost heaps can think of 'decay' in quite the same way again; no-one studying those teachings on plant and animal growth, the soil, the astronomical influences, and all the intricate relationships of man and his environment, can ever again be unaware of the miraculous beauty of that constant metamorphosis which underlies the beauty of the visible world.

NORTH AMERICA UNDER A LIGHT SKY

MARJORIE SPOCK

IF a citizen of the United States or Canada were asked to tell you why he loves his country he might find it hard to put his finger on the deeper reason. It is certainly not a narrow group-soul loyalty, for he still belongs to the folk spirit of his European or other ancestors. Nor is it so much the land itself, despite its beauty and variety, its lively humour-addicted population, its towering cities shining in the sun – though all these things move him. What really stirs him to the quick is the big sky that arches over his continent and the radiance of light that pours down from it on the air, filling the living space allotted to him with a freshness as of the first morning of creation.

The earth that lies like an ocean bed beneath this sea of sparkle emerged from the matrix of a building force: that of life ether – which stands at the extreme contractive pole of the four ethers.¹ Its difference from other big-sky portions of the globe is rooted in this etheric constitution, which has made it the epitome of dense, hard, cold-related matter. One feels that it does not absorb the light as does the Russian earth, but rather reflects it back again from an impermeable surface beneath which forces of darkness are at play. There is thus the sense of a starker contrast between light and dark than is to be experienced elsewhere, and of brightness from above being intensified from below by light's refraction.

Light seems to attune the heart to a mood of worship. With

¹ In his book, *Die Aetherischen Bildkräfte in Kosmos, Erde und Mensch* (Stuttgart, 1924), Dr G. Wachsmuth reports his research on the ethers, under Rudolf Steiner's guidance. He writes of seven etheric forces, four of which are the matrices of the material universe. He shows that 'life ether' brings forth the solid state; 'chemical ether' the fluid; 'light ether' air and light; 'warmth ether' heat. Life ether and chemical ether are paired as essentially contractive forces, light ether and warmth ether as essentially expansive. However, neither chemical ether nor light ether gives sole allegiance to its extremist partner. Instead, these two ethers interact with one another in a mediating, modifying role which brings the opposites together in a living, breathing whole. All rhythmic patterning in man and nature originates in this harmonising play.

In a further work, *Die Aetherische Welt in Wissenschaft, Kunst und Religion* (Dornach 1927), Dr Wachsmuth describes the etheric constitution of the various continents and oceans. Material relating to the ethers in the above text is taken entirely from his findings.

so much of it in their great outdoors, Americans are apt to desert indoor scenes of worship lit by candles for communion with and baptism by the macrocosmic light of nature. The desire to 'get out into the light' is what draws them to so much outdoor recreation. A frequent winner of the America's Cup Races who is a stockbroker on dry land was asked by an interviewer what had made him such a passionate devotee of sailing. He reflected a moment, then replied, 'There's a nice light out there on the water.' It could just as well have been any other American speaking as he headed at his first free moment for the great open spaces, there to rejuvenate himself in the sparkling atmosphere. Granted: a pagan mood that has more in common with the feeling of the ancient Greeks than with any later church-bred piety, but nonetheless a mood of worship. And if it were to be expressed in gesture (a thing Americans are far too self-conscious to engage in) it would have to pattern itself on the stance of the Red Indian, who went up to a high place to worship, spreading his arms wide and lifting his head to look straight into the sky above him, rather than on that of Russians of an earlier period who knelt to kiss their earth, made holy by its content of spiritual sunlight.

Perhaps it is just because Americans sense the threat of the uncanny darkness underfoot that they love light with such intensity and strive toward it. It is surely not just happenstance that the eagle was chosen as the emblem of the United States. And the impulse to build skyscrapers can scarcely be attributed to lack of surface space on this vast continent. No – to be born a North American is to want to climb up out of shadowed places toward the sky, to live in brightness. This is what prompts him to revolt against his life-ether-conditioned melancholy temperament and seek surcease from all that is serious and heavy in a constant play of scintillating humour.

And the big sky fills his head with big ideas. Every boy expects as a matter of course to grow up to be president, every man to make himself a fortune. And as often as not he does so, and loses it again, and cares not a whit. He can make another. It was, after all, just a game he was playing.

Could it be that he is as much threatened by the light as he is by darkness? that unless he is roused by tragic happenings to ponder more than most, take his development in hand and seek

inner illumination, he will remain a child in his bright world? retain all his life a child's vigour, self-will, sense of fun and adventure? a child's easy generosity and irresponsible, unthinking ruthlessness? Light, that primordial element created when the world was young, keeps its communicants drinking long at the fountain of eternal youth.

* * *

If one studies a map of the earth with an eye to the shape and placement of the continents, one is struck by a paradox that comes to view: where every other great land mass appears to be planted block-like and unyielding in its oceans, North America – supposedly the firmest and weightiest of all – looks as though it were made of malleable or even volatile material and were pinned down only in the north while swinging free elsewhere. There is a curving sweep to eastward except at the Arctic, and the whole continent seems to trail off to the south, growing ever more attenuated, like smoke on the wind or patches of seaweed on the water.

Considering North America as an etheric organism, this impression is not totally unfounded. Though the continent as a whole lies under the rulership of life ether, the most contractive of the four matter-related ether forces, it is set between oceans belonging to two other spheres of influence: the warmth ether realm of the Pacific and the chemical ether zone of the Atlantic. Across it, in undulating bands, play all four ethers, creating the unimaginable variety of life and climate to be found here. In the extreme north, life ether reigns unmodified over a firmly anchored, permanently frozen realm that sprawls across the Arctic Circle. At its other, semi-tropical extreme, several thousand miles to southward, volatile warmth ether overwhelms the continent's basic life ether element as a fiery nature overpowers a melancholic. Between these opposites, light and chemical ether forces play their relating, moderating roles.

Glaciers too have done and are still doing modifying labour on this granite land. The north-west coast and the Atlantic shoreline are deeply fretted by their passage. There the sea enters, and rivers stream down to it from the hills and mountains of the coastal foldbelts.

But this is only a small part of the story of waters and glaciers in North America. The more northerly sections of the continent reflect light from the surfaces of uncounted lakes and shallow tundra ponds hollowed out by glacial action. Looking down from a height on the broken landscape, one can often have the impression that there is more water than solid ground in the scene before one. The state of Maine alone is said to have several thousand bodies of water, large and small, and it is not the only one thus blest. Much of the North was explored by Jesuit missionaries and voyageurs in the fur trade, travelling by canoe and portaging over from one lake or river to another.

These watery surfaces act as a mirror for the light, heightening it to the point where it can seem a palpable golden element between earth and sky.

And by night, at certain seasons of the year, all the northern land is lit by another kind of brilliance: the aurora. From the northernmost parts of the United States to the Pole one can see it on many cloudless summer nights, flashing up ghostly green and white from a black arc tingling over the horizon. Sometimes it comes in all the colours of the rainbow. Viewed from a boat on such occasions, the whole world under and around and above the beholder seems all dancing, rushing, multicoloured flame, with moon and stars shining through the translucent curtain.

Winter too brings displays of northern lights, though snow cannot reflect them to as great advantage. But bare ice can, and does. And it presents another wonder: before snow falls, or when great winds have swept the surface clear, earth finds a voice and speaks to the sky as every frozen lake expands at dawn or contracts at twilight. Then, for a brief period, each such surface resounds like an orchestra of kettledrums to notes high and low, muted or ringing, as the ice sings a paean to the rising and the setting sun.

* * *

Those who know only the small, well-tended European forests can scarcely imagine the extent and wildness of the 'big woods' of North America. Forest engulfs all the North from coast to coast in a vast, almost unbroken sea of trees stretching

from the plains all the way to the edge of the Arctic tundra. Cities, towns and farmlands in the forest belt appear from above to be mere clearings in the dense cover. On the ground, one can step a few feet off a highway and be hopelessly lost; seasoned lumberjacks and hunters always travel the forest with a compass. And if one continues moving in the same direction, one can go hundreds of miles without crossing another road or sighting a human habitation. It would take weeks for a man to walk without stopping from the tundra to the forest's southern border.

Though there are some deciduous trees in sections of the forest, providing spots of lighter colour, the overwhelming mass is of spruce and other conifers, black-green against the brilliant blue or stormy grey of sky and water. A wilderness they are, and would appear melancholy if they did not prick up so eagerly into the light and exhale such a primordial freshness. On days of north-west winds their vital breath carries even into the fume-filled canyons of Manhattan.

Few human beings call the forest home. But this makes it the more a paradise for birds and animals. Gulls flock inland fishing its waterways. The wild exultations of the loon echo over forest-girded lakes where eagles plunge with sound of thunder. Out of the still air of forest depths rise three shy seraph voices, incomparably pure, tender, ringing, other-worldly: those of the wood thrush, the hermit thrush, and the white-throat sparrow.

Moose roam all the northern forest and feed on water lilies by the lake shores. Black bear, deer, wildcats, beaver and many other large and small fur bearers abound there. Western sections harbour in addition elk, grizzlies, mountain lions and the wild sheep and goats that love the heights.

The bitter cold of winter in the north makes this part of the continent less attractive to settlers. This is probably the only reason why cities are so few, the forest still so vast and virgin, the animal populations relatively undecimated. Red Indians and Eskimos who live in the forest and on the tundra are conservationists by deepest instinct, and left to their care the North would remain very much as nature made it. It is to be hoped that white men, who are being drawn in fast increasing numbers to its wealth of timber, oil and minerals, will be re-

strained from despoiling it by a public conscience that seems belatedly to be awakening.

* * *

From the edge of the forest southward through the middle of the continent, a broad sea once spread, occupying a roughly triangular space between high mountain ranges to the east and west. When it receded, it left the prairies and Great Plains of the United States and Canada, grasslands that stretched seemingly endlessly to the horizon. Here roamed the buffalo and antelope and the Indian tribes that hunted them. Here, in the early days of white migration, slow ox teams travelled westward drawing trains of covered wagons. Sometimes a 'prairie schooner' would be fitted with sails. In the great winds that blew across these open spaces, such a craft could easily out-distance red men riding at a gallop. Today the north and central sections of this basin are the bread basket of North America; waves of wheat and tasselled maize flow beneath a wind that so long ago rippled the surface of a salty ocean. Eastward, below the Great Lakes, another wide belt, here dairy country, extends with its smaller farms over into the hills and valleys of the East.

Cotton begins where corn country peters out. It marks the borders of the South proper, a region with a culture and a climate so different from those found to the north as to seem another land entirely. It is no wonder that North and South came to blows in a tragic civil war. Slavery was not the only issue that divided them. They still have difficulty feeling together over almost everything. Neither section even understands the other's 'English' without practice. The Southerner drawls, stretches out his vowels (every one of which turns in his mouth into a diphthong), and barely gives his consonants a nod, while the Northerner jerks out his words, hammers on the consonants and scants the vowels. And like his granite rocks and icy climate, the latter tends to be cool, contained, hard to get inside of and to know, whereas the Southerner, in keeping with the heat and fluid influences of his humid region, possesses a warm, liquid and expansive nature which flows readily into and identifies with what interests him. He is

sociable to a fault. He feels passionately, and is easily triggered into action. The Northerner leans to philosophical detachment, yet is a dogged pursuer of his goals.

Perhaps nothing so exemplifies the difference between Northerners and Southerners as their relation to the black man. Northerners were never dependent on slave labour. They were the first to develop mass revulsion against slavery, and carried their loathing into freeing action. But they did not take the Negro to their hearts when, after the Civil War, he began streaming northward into their cities; instead, they let him live isolated in black ghettos. Southerners, by and large, lived and still live personally closer to the blacks with whom life brings them into contact, accepting a good deal of responsibility for their welfare as individuals, seeing nothing incongruous in calling an old Negro 'Uncle' and being addressed by him in turn as 'Son' or 'Daughter'.

For all his reserve, the Northerner is traditionally cosmopolitan, while the Southerner has narrower, home interests. It was the Yankees who built tall clipper ships to sail on world-wide trading voyages, who followed the whale over every ocean, who left home to pioneer the West. The Southerner stayed largely where he was, raised his cotton, his sugar cane, his fruit and tobacco, and was perfectly content among friends and family.

Now that the whole world has become a melting pot, these old differences too are disappearing. It may even be that the still continuing 'War between the States' will come to an end at last, and that some day one will no longer be able to tell a Southerner from a Northerner.

* * *

One would expect the warmth and light ether region of the South-west to be hot and bright and arid, and it is: a land of deserts, barren mountains, spiky vegetation, and many creatures with stings. Everyone who has seen a cowboy film is familiar with it. For this is cattle, coyote and canyon country, the scene of the round-up and the hold-up and the dusty chase through what – were it not for the sagebrush and cactus and the jackrabbit – might be mistaken for a moonscape.

But no film could possibly do justice to the light and colour of this area. It is high country, lifted to clear skies. Mountains look down upon it everywhere from near and far, lending the air the freshness of their breath. Rain rarely falls, but when it does the deserts are transformed overnight into gardens of paradisaal bloom. It is a world made intensely dramatic by its contrasts. Opposites of every kind impinge on one another, timewise and spacewise. The infinitely young stands next to or follows on the infinitely old, as do heat and coolness, wetness and drought, the flat and the perpendicular, brilliance and shadow. Even the ground and the rock break the neutral greens of vegetation to glow fantastically in all the warm colours of the rainbow. The Grand Canyon is the most superb example of the awe-inspiring beauty and grandeur to be met with here.

Here, in addition to cowboys, ranchers, and 'people from away' irresistibly drawn to these bright open spaces, are found the shepherd tribes of Indians. And just as the French have imprinted their language and their ways indelibly on Eastern Canada, so, diagonally across the continent and down into Mexico, Spanish explorers made this a new-world Spain, and such it has remained into the present.

* * *

If we might call the South-west Spain-in-America, the Alpine area to the north of it is another Switzerland. Range upon towering range rises in a north-south line through the whole western third of the continent, right to the edge of the Arctic tundra. So many ranges are there, each extensive, that North Americans can live out their lives without ever having heard the names of most of them.

The presence of water in abundance makes for thickly forested slopes and verdant valleys, high meadows aglow with wildflowers, and a great multitude of animals. Towns are few and far between; those that have grown up here usually started out as mining centres – for it is a region rich in metals – or as trading posts servicing the repeated waves of fortune seekers. Here passed the covered wagon trains, scouting expeditions, troops, and the armies of the Gold Rush. Today their place is

taken by vacationists who stream to this mountain wilderness to ski or hike, fish or hunt or climb, join a horseback safari to ride remote upland trails, or merely to motor from one stupendous outlook to another. This they are doing in such numbers that even the Canadian North-west and Alaska threaten to be overrun. But the travellers who return to civilisation from these outings are subtly changed. A person who has stood under a giant sequoia, spruce or redwood, looked a grizzly in the eye and gazed upon a world of snow-capped mountains has been in country whose every feature is borrowed from a cosmic measure. He has quite simply added a new dimension to his being.

* * *

A journey around the shores of North America brings an astonishing variety of life to light. One would scarcely expect to find both arctic and tropical trees, birds and mammals on the same continent, yet they are to be found here.

The extreme North is populous with birds and mammals. Polar bears live on ice rafts, swim and hunt and sleep in the icy waters. Seals and other large sea creatures breed on the barren islands off the Arctic coast. Whales are common, while sea birds nest in numbers inconceivable along both northern sea-boards.

For most of the year, the Arctic tundra belt south of the eternal ice-fields is every bit as much a desert as the hot South-west, and it blossoms similarly in its season. But here the contractive ether forces hold vegetation low to the ground, whereas the expansive ethers far to southward encourage a reaching for the skies.

Eskimo settlements, which usually include a few white traders, teachers and missionaries, dot the treeless shores of the northern barrens. Then scrub forest appears, gradually giving way to taller growth. On the southward march of woodland, deciduous trees start to invade the conifers. The white man and the Indian feel more at home here. Villages and towns become more numerous. Their smoke rises, smudging the bright air.

Along most of the Pacific shoreline, towering mountains fall directly to the sea. The Atlantic coast is less dramatic. In the

North it is bordered by a high plateau which gradually drops away to lowlands. Sand beaches begin to creep in among rocky promontories. They become more frequent, and at last take over. Salt marshes appear. The peaks of the Appalachians retreat ever further inland. A mighty north-south continuation of the forest region crowns their heights and spills down both slopes, losing conifers and gaining hardwoods toward the South. Cities bordering the sea grow larger until New York is passed. The distances between them shorten, then lengthen out again. Trees begin to be draped in Spanish moss; palms enter the picture. Inland, densely wooded swamps inhabited by alligators occupy much of this moist country, while such exotic birds as the ibis and the egret become common. Wherever there is comparatively dry land, the great southeastern 'piney woods' create still another kind of wilderness. But these give way to the bayou country of the Mississippi Delta.

In contrast to this water-saturated East, the south-west coast appears as arid as the deserts inland. Except in the rainy season, the very ground cracks with dryness, and it is a *tour de force* to keep grass growing. Northward, however, Pacific fogs and winds blowing against ever taller, cooler mountains bring precipitation in such increasing quantities as finally to create a true rain forest, which even extends to part of the Alaskan coast.

* * *

There is no greater wonder to be seen in North America than its autumn. Just as in spring a tide of green and blossoming flows northward to the very edge of everlasting winter, so, in September, does there pour throughout the forest cover of the continent a southward-leaping sea of rainbow flame, ranging from almost blinding yellows through every shade of orange, pink, red, and resonant violets and purples. All that is freshest and brightest in the atmosphere seems to gather itself together in the face of winter, rise to a climax of intensity, then spend itself in a flood of colour unimaginably vivid. Sometimes the blackness of a conifer forest will be broken by massed intrusions of one colour: the yellow of aspen or white-birch leaves, the rose-pink of maples. Or a hillside appears like a garden of

mixed flowers with the dark conifers among them heightening their brightness. When all this colour is reflected in still water or looked at from under the forest canopy with sunlight streaming down through every leaf, one must be strong of heart to bear the impact of such beauty. And it is not alone beauty for the eye: the ear seems to hear the colour too. The forest hush, so suggestive of 'the still small voice of God' begins to sound with tiny flutings as, here and there, a leaf turns. The volume swells with the advancing season, to crest as though in a glorious ringing major chord that dies away into minor as it fades.

* * *

A change as far-reaching as the physical continent is taking place in North America today as the higher life of a new morality struggles to be born.

It is not only 'those under thirty' who are now viewing the white man's past and present role here with a sharply awakened sense of horror. A great many erstwhile comfortable older people have also been jolted out of their complacency by a rising tide of most disturbing realisations from which there can no longer be escape. Almost from the moment Europeans came ashore here, a brutal snatching at the land's wealth led to spreading devastation. Native populations were debauched. The Eskimo was allowed to keep his icy homeland only because the invaders did not want it. Indians were crowded into worthless reservations, Blacks denied recognition as a human species. The vast resources of the continent were exploited, nature polluted and laid waste. Today, as the consequent crises mount, an alarmed public is at last stepping in to call a halt to the abuse of men and nature.

In the past, many a governmental agency set up to protect the health and interests of ordinary citizens tended rather to form unholy alliances with the despoilers than to curb them. Now that is being dramatically reversed. The people who care – and their numbers are growing – are learning to band together in powerful groups to bring political and legal pressure where it counts. The courts have recognised the public's right to a clean environment, so that anyone can now sue offenders

who trespass with pollution on the common air or earth or water. Government is being forced into prosecuting instead of abetting abuse of nature by commercial interests. Stockholders are beginning to demand that polluting corporations mend their ways. There is a veritable crusade underway as people of all ages flock to the places where they can effectively make known their will to improve the lot of man on earth. The young have become part of every phase of it. Where there is still racial prejudice among older generations, children are asking to be allowed to handle integration problems and are doing so in exemplary fashion. Students are devoting time to clean-ups and restoration labour. Thousands upon thousands are turning their backs on cities to take up the demanding life of homesteaders in still untamed sections of the continent.

The year after Rudolf Steiner was born, there died near Boston a man whose voice has served more than any other's to rouse the conscience of America. This was Henry Thoreau, thinker and foremost writer, close friend of Emerson, naturalist, moral philosopher, Goethean scholar and observer. It was his famed essay, 'Civil Disobedience', that inspired Gandhi and became the bible of the passive resistance movement everywhere. He was the activist's ideal, cheerfully going to prison for his principles, always totally committed. He spoke with equal fire against his country's racist, imperialist and materialist leanings and for the dignity of man. His conception of the free, creative individual was directly in line with that developed to fullest flowering in Steiner's 'Philosophy of Freedom'.

The moral life that sprang so fertilely into being in Thoreau and was seeded by his writings has required a century to germinate in lesser men. Today it is springing up again in America. The better elements of youth are discovering in Thoreau the pure life of the human spirit which they seek so hungrily. It has become their light, guiding them to responsible, caring action toward man and nature – such a light as can match from within the light without and calmly confront Ahrimanic darkness.

It is still a long step from the light of Thoreau to the light of Anthroposophy. But the spiritual life lived and engendered by the 'man of Concord' is preparing this continent to take that step, as Goethe prepared Middle Europe.

In despair over the moral lethargy of his contemporaries, Thoreau exclaimed, 'How can we expect a harvest of thought who have not had a seed-time of character?' Today that character is under cultivation by youth eager for quickening. It gives the air of America today an atmosphere of teeming promise like the coming of spring after a long winter of the spirit.

NATURE-SPIRITS

F. H. JULIUS

TO begin with, this article was intended for teachers, who have the task of introducing Nature to children through fairy stories. But it is intended as well for all who because of their work, or for inner reasons, are trying to deepen their connection with living things. It was a teacher, beginning with the first class in a Rudolf Steiner School, who urged me to undertake it. This teacher felt that it is not enough to talk to the children in a vague, general way about gnomes and elves; but that in this subject, as in others, a definite foundation of knowledge is needed. A good answer to such a question would not only be helpful to many teachers, but to mothers with young children, farmers, gardeners, and those who have to do with the care of the sick and the use of medicaments.

On this subject I cannot regard myself as a final authority – this is not offered as the work of a Master, hardly of an apprentice, but of a pupil; it will often therefore have too personal a character. It should be read with some reserve, choosing out what can be made fruitful. Good use can sometimes be made of quite personal things, if they are told honestly and sincerely. Everything described here goes back ultimately to Rudolf Steiner, in two ways. On the one hand, I have collected, and briefly discussed, some of his most important accounts of this subject, as a help to further study and as a general orientation. On the other, I shall describe some of the things I have experienced myself when following up his indications, and the conclusions I have drawn.

It seems as if there is a renewed interest in this subject at the present time. And in such things as children's television, film cartoons and so on beings remotely of this kind appear more and more – but in what I must call a trashy way. We should try to replace this by something better.

* * *

Anyone who wishes to go into this subject properly will find it necessary to lay a firm foundation through serious study.

It is in three lectures from his course *Man as Symphony of the Creative Word*¹ that Rudolf Steiner spoke in the greatest detail, and most profoundly – so far as my knowledge goes – about the Elementals. It is important to notice the different points of view from which he describes these beings. Here he gives us a many sided and finely shaded picture. He begins by following the line of the plant's development through the four elements – earth, water, air, and fire. He lets us see how the nature-spirits live in these elements and are occupied with the forces at work around the plant. He calls these beings (in the sequence of those elements with which they are particularly concerned) Gnomes, Undines, Sylphs, and Fire-Spirits – rather than using for these last the traditional name 'Salamanders'.

In Dutch we are fortunate in having some specially good names for some of these beings, when we speak with children about them; for the Gnomes 'Aardmannetjes' or 'Kabouters', and also 'Kobolden' or 'Dwergjes'. For the Undines the 'Nimfen' appeals to me – the sound seems to be right – though I am not sure about it. (Compare the English 'Nymphs'.) Perhaps readers can confirm such impressions or recommend alternatives? The more that Anthroposophy takes effect for the whole of life, the more care we should give to the right choice of words! – Alternatively, for the Undines the words 'Nikker' and 'Nixen' might be possible, according to the dictionary account of these words. I would like to call the Sylphs (or Light-spirits) 'Elfjes' or 'Lichtelfen'.

Rudolf Steiner shows how the Gnomes in working on the plant handle the forces of the life-ether, the Undines use the chemical ether, the Sylphs the light-ether, and the Fire-spirits the warmth-ether. As well as their connection with the plants, their intimate relationships with animals are discussed in many different ways. He goes on to the changes in these beings through the course of the year, their relationship to the earth as a whole, and their significance for the Hierarchies. Then comes something very important; how these beings help in the formation and maintenance of our human organism, and in what ways they are around us day and night.

The three lectures from *Man as Symphony* . . . should be considered within a whole sequence of lectures given at about this

¹ Rudolf Steiner Press, London: new edition, 1970. See page 119ff.

time (autumn and early winter 1923) in Dornach, including *The Four Seasons and the Archangels* and *Mystery Centres*. It is very important too that Rudolf Steiner also gives us some mantric sayings,¹ through which we can deepen our understanding of this subject in meditation. Some of these sayings express what these beings feel about themselves, some are questions, or challenges to awaken, directed towards us.

If one tries, year after year, to deepen one's understanding of these lectures, approaching them in meditation, and with intensive imaginative activity, from many points of view, one can begin to build up an impressive picture of the life in their realm. This is very necessary for orientation. For their realm is a bewildering one; and it has to be remembered that there are very many kinds, many categories, among nature-spirits, making them as a whole difficult to survey.

* * *

Apart from study, how can we achieve a personal connection with these beings? This is not the same as learning to perceive them in true imaginative consciousness. It is quite possible to have a fruitful exchange with these beings without any, or hardly any, actual 'seeing' of them. Before considering some indications by Rudolf Steiner about this, I would like to touch on an instructive personal experience. (Its objective significance has been tested, and it happened more than thirty years ago.)

After I had studied biology, I felt for some time that I should find some quite fresh way, of a more inward kind, of approaching the metamorphoses that take place in plant growth – a way that would lead more deeply into life itself. At the same time a person of considerable experience was advised by a doctor, as part of the treatment of an illness, to practise metamorphosis in thought. We decided to give each other support by working at this together. Each day we took before our imagination a plant on which we had agreed, and passed through the whole cycle of its development – a snow-drop, for example, a wild rose, or a poppy. Of course we took plants we knew well, or those about which it was not difficult to discover missing details from

¹ *Man as Symphony* . . . , pp. 159ff.

nature, or from pictures and descriptions. These exercises produced quite soon a surprising impression; as if I met within me, but coming from nature, a wave of joy, like a festival. One day we had chosen the birch-tree. It began as a bare, small tree. Then we let the buds unfold. No sooner were the leaves fully outspread, hanging on their fine stems, than a mild breeze blew through the tree, and set them all in fluttering movement. This came as a surprise which was increased when I learned later that the other person had the same experience. I felt that nature itself was teaching us. Soon it seemed that on this path one could be led to surprisingly essential things, and towards a real goal. Something like a key was being offered to me through which countless treasures could be unlocked. I will sum up some of the lessons which followed. One should never look at things as *separate*; they can only be truly grasped in their whole interaction with the environment. The birch for instance has a special connection with the airy element. And in general one should watch the play of the wind with leaves and twigs, catkins and sometimes flowers, whole trees and shrubs; remarkable impressions of the different characters of plants can be gained in this way. But one can also learn quite clearly how playful the nature-spirits are. I can recommend everyone to try this. It can very much enrich one's picture of nature.

The light movement of leaves belongs particularly to the summer. One can look for the tree's response to the four elements at the other times of year. Autumn reveals in particular in the changed colours the effect of warmth, in winter one sees the withdrawal of the tree into *earthly* existence alone, with the sharply outlined construction of its form. In spring comes the tender work of the *watery* element in and around the shooting buds. To reach all these conclusions from the starting-point here indicated of course requires knowledge of a certain kind, and intuition – and a real will to investigate such things.

This was the beginning of what I would like to call a 'gnome university'. All that one had learned at the human university acquired new life, came into harmony with the order of nature, and was raised to a new level. Nature began to shine for us again with the splendour we felt in childhood and youth, which had largely vanished during the years of study.

What has been described goes in the same direction as what Rudolf Steiner indicates in *Knowledge of the Higher Worlds* as the forming of 'right conceptions'. The first step was done by us when we brought ideas into movement in the right way; and then nature confirmed the value of this activity, coming to meet us, and even correcting what we were doing by taking a concept out of its isolation.

When the inner activity of forming conceptions is brought into accord with the real happenings in the world, the veils which hide from us the realm of creative forces become thinner, and gradually transparent. Thus one is impelled to think afresh about the minerals and the animals as well, that their kingdoms may become transparent too. And on a direct line from mobile conceptions of plants one can come to the picturing of planetary movements, with far-reaching results.

Even such simple exercises have certain dangers, as I noticed later on. As one's conceptions acquire greater reality, they have an increasing effect on one's own organism. This can be very favourable; but it can be unfavourable too. When one is concerned with the growth of a plant, one may easily put too much emphasis on the processes of unfolding, of all that extends into space. Through this a kind of giddiness can be felt, as if one were being lifted out of the body. A balance is brought about by a greater attention to the process of contraction, where the plant is gathered together into the seed, with the material densification and hardening which belong to this.

* * *

An indication which can be used by anyone, and which also brings a rich harvest, if it is really followed up, is contained in Rudolf Steiner's lectures on *Spiritual Beings in the Heavenly Bodies and the Kingdoms of Nature*. He says here that impressions of the beings behind nature can be obtained if one develops a 'moral' feeling for one's environment. What he means by this he explains through very illuminating examples; he also gives indications specially directed towards different groups of nature-beings.

On a cloudless day, one can give oneself entirely to the impression received from the blue sky, excluding all other per-

ceptions, memories, and so on. If one does this with sufficient intensity, a moment comes when the colour-impression itself disappears, and is replaced by a sense of reverent, unending devotion. In this way, a sense-impression becomes a moral feeling. After some other examples, Rudolf Steiner says that in order to learn about the Gnomes, one should go down a mine (especially where metals are worked) and concentrate on the impressions to be found there, in just the same way as with the blue sky – and particularly upon the fine differences of warmth that can be felt.

An experience of the Undines can be approached in the same way if in very changeable, windy and misty weather one observes the effects of moisture in the atmosphere. Or one can watch the spray of waterfalls. (This cycle, while it begins by describing means of approaching the nature-spirits, and impressions thus gained, goes on to impart far-reaching information about their origin, their 'heredity'; it is thus very important for our subject.)

The Sylphs have a special task where living things ripen and decay. To have a clear impression of them one should concentrate on air that is not moist, but clear, drenched in sunlight. The Fire-spirits are to be met in general where life develops through germination.

If the inner attitude and activity of 'moral feeling' in this sense have been practised, keeping closely as befits beginners to the directions and examples given, a wide range of possibilities opens up. One can immerse oneself, for instance, with utter devotion in the colour of a flower, small though it is in relation to the sky. All natural phenomena should be faced in such a mood, as far as one can achieve it, or at least with an attentiveness and reverence which lead in this direction. Then nature is given the opportunity to speak to one. One should not reject anything of its revelation through over-seriousness, or out of too theoretical or traditional thoughts; one's whole activity should be transformed into a devoted receiving.

To complete what has been said, it should be mentioned that Rudolf Steiner has given as an example concentration upon a musical interval. In one's picture of nature must of course be included the sounds – the fir-tree's murmur, the rustling of the leaves, the brook's conversation, the call of the animals.

In *Knowledge of the Higher Worlds* there are very specific indications about listening to sounds, at first those made by animals.

In a Whitsun lecture given at Cologne on 7th June 1908, Rudolf Steiner directs our attention to places where two realms meet. Nature-beings seek such places, and appear there most clearly. Gnomes for instance can be observed where a vein of metal meets stone; Undines, where water trickles over a rock. The Sylphs can be sought at the moment when a bee sucks nectar out of a blossom. The Fire-Spirits appear especially when man has an intimate connection with animals – a shepherd, for instance, with his sheep.

Such indications are valuable, quite apart from the development of clairvoyance. We get to know nature more intimately, and practise a sort of encounter with the nature-spirits, if we look out everywhere for such frontiers, such borderlines. In the wind that moves the leaves we have already had a beautiful example of this. For people living by a shore, there are the waves which run up the strand and then flow back again. Looking at the foaming breakers, the play of nature-spirits can be discovered; very strong impressions are possible of their extraordinary, extravagant delight.

There are people who prefer to go out alone, seeking their most intimate experience of nature. Others receive their strongest impressions when they wander with someone else, if there is harmony between them. If there is a bad mood, or even indifference between them, it is as if a veil is covering everything. If the mood lightens, nature can open up again and sometimes even arrange special festivals for us. This happens most of all in the company of a small child. Over many years, such great moments have come even on excursions with groups – but only when the whole group is so mutually harmonious that it becomes like a single being.

* * *

In the third lecture of the course on *Mystery Centres*¹ Rudolf Steiner says how 'dialogues' with nature-spirits can be achieved. Where this is really attained, it has special importance for

¹ Published in English by the Rudolf Steiner Press

education; the power of fantasy is awakened, which can inspire the making of new fairy-tales. Something has of course to be said to the nature-beings that interests them; otherwise there can be no conversation. Now the Gnomes and the Undines are specially interested in children under seven years old. After this age man brings into his sleep at night something of himself which enters the world of these beings. The child under seven does not do this yet. It is therefore for Gnomes and Undines a being which still belongs to 'the beyond'. They are therefore mightily interested if one tells them something about small children. Through this, one does them a great favour. (For details see the lecture itself.)

I knew that I ought to follow this indication, but I never got down to doing it. I often heard of people trying to achieve this contact with nature-spirits for other than educational reasons – for instance, when they were searching for crystals – and having good results. Then years ago there was a small meeting of young people high up in the Lötschental, in south-west Switzerland, under the leadership of a friend. Rudolf Steiner's first mystery play¹ was being studied. Quite early in this comes the scene where the Spirit of the Elements demands a fairy story from Frau Balde. In the discussion of this, much came up that was connected with the telling of stories to children. Soon afterwards, an expedition was planned up into the region of snow and glaciers. I was very much looking forward to this. But most unfortunately I had to retire to bed with whipped cream poisoning. (Even the best cream can act as a poison if not taken homoeopathically.) On the day of the expedition I was only struggling to my feet. Exceedingly jealous, I saw them go off, while I expected a boring and lonely day. But then I got a stroke of inspiration. They go up – I shall go down! I had no people to walk with – well then, I would choose the nature-spirits, and perhaps they would be better company. 'If that fellow got enough contact with the nature-spirits for him to find crystals, they are sure to show me something too.' In a few seconds all my rancour and jealousy were transformed into a shining optimism. I opened the door and stood on the steps, calling to my mind the best memory pictures I had of small

¹ *The Portal of Initiation* (Rudolf Steiner Publications, Englewood, New Jersey).

children, inviting the gnomes and undines as if I were calling children to a meal. And, O wonder, I walked then for three hours, without taking any step which was not led. Without actually seeing much of them, I had the whole time a very definite feeling, as if two gnome-like beings were taking me with them by the hand. I noticed always through a gentle pressure or pull, impressions that were more moral than mechanical, what their intentions were. Everything depended on careful attentiveness on my side. However strongly and often I was guided, there was not the slightest compulsion. I had to think again and again how much we lose through not being attentive enough.

First we went up, and then across a sunlit meadow, zig-zagging from flower to flower. It was already far into the autumn, and I had not yet looked at any flower there. Thus to my great astonishment they did not show me crystals, but flowers. It seemed as if they had made a quick agreement: 'This one here thinks he knows something about plants. We shall let him look for once at what he never sees.' Then we went down to a stream between steep banks. I was put in front of a huge flat rock and made to look. There was a great cleft in the rock, and in it stood a tiny tree. With other small plants, it gave the impression of a miniature garden. When I had expressed inwardly that I had seen and admired it I was led further. This showed clearly that these beings very much appreciate interest in their tasks and concerns. In *Man as Symphony* . . . Rudolf Steiner speaks of mediation between plant roots and the mineral realm as one of the main tasks of the Gnomes. Where can this be better seen than in such a place, where rock is loosened and softened, to become accessible for plants? Later on, they often put me in front of some nearly bare stone, on which only a few little plants were growing, or where a patch of moss was beginning to claim its place. They like to point out where there is a breath of moss even on walls along streets in our towns. Another important task for the Gnomes is to awaken life in the seed and push the first shoots up into the light. So one can understand why later on they drew my attention not only to many stones but to bare places in woods, where perhaps a single plant was beginning to grow. And later on it became very significant to observe repeatedly

what I noticed on this first walk – how something can appear like a beautifully arranged garden.

Even someone who cannot achieve, or does not wish for, the kind of social dealings with nature-spirits touched on here, may observe the visible things here described and make surprising discoveries. And some contact with these beings is really coming about, directly one concerns oneself with their activities.

When we had finished with the rock I was led quickly to a place on the bank of the stream opposite a thickly grown island. The water was quite wide but I was directed to cross it. I resisted this – Steiner speaks of gnomes that play tricks! But I was persuaded, and with the help of a stepping-stone crossed dry-shod. (Similar things often happened later.) On the island I was led a devious path, and shown several instructive things. Delightedly they pointed out a tall plant with brilliant autumn colours, while everything else was still dull green. I asked myself – how can a gnome, who lives generally within solid things, be interested in my impression of the colour of a plant? But this helped me especially to understand that the world is a scene enacted *for us*. As with a play, we should not hope to find the essential reality *behind* the scenes (as science too often does) – behind theatrical scenery there is generally ugliness. Just as with a play the performance is the main thing, to which everything else is subordinate; nature itself is a performance that is only successful if we look at it in the right way. If we understand this, the whole world becomes different for us.

During the whole excursion I had looked ahead as little as possible, not to be distracted by questions of direction. And on the island I could not even see immediately ahead, it was such a tangle. At last I was led firmly towards the water, and began to wonder about reaching the further bank. But just where I reached the water there was a plank on which I could cross. This did not solve everything. The bank was a swamp – but I let myself be led by a zig-zag, without looking round anxiously for something better, to firm ground. Then there was a steep slope, to be negotiated by the ordinary public only on hands and feet. But I was brought like a guest of honour to a natural staircase, plain but secret, that I could ascend royally upright.

In the Whitsun lecture at Cologne (7th June 1908) Rudolf



Albrecht Dürer, 'The Flight into Egypt' (Matthew 2)

Steiner describes how in the past Gnomes used to help people with all sorts of things – mineworkers, for instance, in their search for metals. Then too they pointed out the way. What a light is thrown, by such possibilities, on the powers of orientation shown by animals. They have no barrier of intellect between their will and the nature-spirits. Later on I often encountered much worse bogs, which I would never have been able to cross without help. If I let myself be led, I found the most unlikely ways through. There are paths everywhere, that are visible when pointed out – but they never go in straight lines.

Again I was led to the bank of the stream – and there I had to stop for a long time. Several times already I had been held up, where there was nothing conspicuous to be seen. I understood this as a wish for more stories, and when I had complied the expedition went on. But there was nothing fresh to be seen here, and stories had no effect. I accepted imprisonment and waited for my destiny. Above the ridge of the mountain on the other side the light was becoming more intense, and the white flaming edge of the sun emerged from the dark rock. This produced a mood of incredible festivity in the water rushing and leaping over the stones. This was what I had to see. Everywhere gleaming sparks, interweaving, being mirrored, suddenly darkened. This was the climax of my expedition – which was, all of it, a festival. But how was this possible? It is a difficult job to be a guide – how could these beings be so good at it?

That day my gnome university was only just beginning. The indications were always of the kind I have described. The picture appeared magically in one's mind, or outside – the rest one had to do oneself. However simple the indications often were in themselves, they might point to far-reaching connections, even glimpses of the past and future of the earth.

Such an expedition brings about an extraordinary mood. One loses connection with time, and one's entire surroundings take on a fairy-tale quality. One is led into a strange kingdom. Yet on such paths I have never seen anything that could not be seen by anyone – though perhaps things, that nobody has ever seen. Here the ideal of a science is unveiled, which is in harmony with the tasks and intentions of the nature-spirits.

Such a science will no longer destroy fairy stories, but be a source of inspiration for them; for stories that are exact (as most of the old ones were), and can stand up to all the demands of a new, healed science.

Translated and abridged from a series of articles in the Mededelingen of the Anthroposophical Society in the Netherlands by Gisela and Adam Bittleston.

TRANSFORMATIONS OF THE LIGHT¹

WALTHER BÜHLER

GOETHE has called the colours deeds and sufferings of light: triumphant deeds, achieved in its dealings with matter, and sufferings undergone in the darkness of matter. There is hardly a greater contrast to be found in the whole of the cosmos than that between light, which spreads dynamically in the form of a sphere through every direction of space, with inconceivable speed, never resting – and the inertia of matter, which contracts statically into heavy, immobile, opaque masses of rock, hardened and self-contained. Imponderable and ponderable, centrifugal and centripetal tendencies confront one another. One illuminates space; the other contains the darkness. But since matter does not only throw back or reflect the light, as a rock does, but allows it to penetrate, as does a crystal, or even itself sparkles with colour, in an iridescent jewel, it shows a secret connection with light, which it reveals still more strongly in the transparent, mobile, liquid element. This connection is enhanced to the most intimate relation through the ability to evaporate, and in the transient mobility of the ideal transparent gaseous substance, which spreads out into all directions of space. The irreconcilable contrast between light and solid matter is transformed into a genuine polarity, between which the watery and gaseous mediate as ‘mercurial factors’, and so bring the inner warmth and creative power of light to manifestation.

The deeds and sufferings of light confront us not only in the colours, but in many other phenomena, such as twilight, lightning, and the aurora. Let us consider these phenomena, following the method practised by Goethe.

Goethe saw in the phenomena themselves what they had to teach, and in this way he approached an understanding of the ethereal formative forces. In his ‘anschauende Urteilskraft’² there began to develop the capacity of Imagination.³

¹ Translated by John Meeks, by permission, from *Goethe in unserer Zeit*, edited by Günther Wachsmuth (Hybernia-Verlag, Dornach and Basel).

² Approximately, ‘contemplative power of comprehension’.

³ In the sense of an exact method of knowledge.

'For occidental civilisation the way into the supersensible worlds is that of Imagination. This can be carried out . . . by attempting to devote oneself entirely to the external world of phenomena, letting this work upon one directly, to the exclusion of thought, and yet taking it in . . . undergoing a conscientious self-education in what I have described as Phenomenalism . . . using concepts to bring the phenomena into order, so as to be able to follow them through to the archetypal phenomena. . . . And if one further accustoms oneself to rest in contemplation longer and ever longer upon a picture, which is perfectly clear to one, going through this process repeatedly – then the inner power of the soul is strengthened, and one observes that one is experiencing something within oneself, of which one had before no inkling.'¹ (Rudolf Steiner)

The mediating role played by the atmosphere between the streaming sunlight and the dark globe of the earth may be exemplified through observing the phenomenon of *twilight*. Without the atmosphere which can take up the light and modify it by refraction, diffraction and reflection, the night would be instantaneously swept away by the dazzling light of day without any transition. A man driving a car along a country road still bathed in full daylight would plunge at once into complete darkness with the final disappearance of the sun under the horizon. Without the mercurial function of the atmosphere, our ideas of morning and evening would vanish, and we would be able to sit at noon in a room whose eastern windows were immersed in night: there we could view the black, star-filled heavens. Only the wonderful activity of the atmosphere, which disperses the light into regions which are not yet illuminated by the direct rays of the sun, makes it possible for light to shine forth *before* sunrise from every direction of the sky. The air breaks up and ramifies the rays of light so that they form a gigantic, dome-like structure, building the buttress and lattice-work of the shimmering blue vault around us.

This dome of light, constantly changing in its form, sends out so much diffuse illumination that at certain times of day a surface can receive from it just as much light as from the direct rays of the sun. It forms, as it were, a second sun, completely transformed, and spread out into the expanses of air. The

¹ Rudolf Steiner, *Grenzen der Naturerkenntnis*. (Not published in English.)

dazzling fulness of light radiating from a glowing, glimmering centre – the white sun-disc – is softened, and streams to us uniformly from the pure blue hemisphere around us. This mighty transformation of a central element into a spherical one is one of the most fundamental metamorphoses of light. All other forms of its manifestation mediate between these two poles.

At mid-day the fulness of the radiating forces reaches its highest intensity. Suddenly white cloud formations begin to gather. They break through the uniform expanse of blue, grow like mushrooms into the heights, and darken the sun. We are left in shadow. Soon the light-dome has quite vanished, and in its place, dark grey surging clouds press down upon us. Powerfully the central forces of the earth rise to meet the cosmos, and bring their centripetal properties to expression in the down-pour, which has succumbed to weight, and which may under certain conditions condense to solid lumps of hail.

In this condensation of the bright, sun-warmed summer air through the white, glistening cloud-mass, to the liquid drop and the hard kernel of ice, the earth tries to engrave the runes of its dark forces into the heavens.

But what has happened to the diffuse light, of which the blue sky was mainly built? It wrests itself free from the darkness with the whole strength of its sun-origin, tears through the cloud-cover, and breaks through the darkened atmosphere as a quivering brilliant flame. The lightning appears. Here light achieves an extreme contraction, becoming a single flash. Instead of radiating freely, independent of weight or the other laws of matter, it strikes from cloud to cloud, from cloud to earth, or from earth back to cloud. Light seems as though bound to the powers of the condensation of matter. The peaceful uniformity with which the dome of blue sky illuminates us is changed to a harsh, concentrated, abrupt flash, which tears us violently away from the darkness, only to plunge us back into it again in the next moment. In this respect lightning, and indeed the storm as a whole, may be seen as the archetypal image of an anti-mercurial working of the elements.

In lightning the phenomenon of light appears bound to powers that alienate it from its own nature, subject it to the forces of matter, and reveal it in a destructive form. Instead of

glimmering in the crystal and gem of the mountain, like the sunlight and blue sky, it rips vitrifying scars in the face of rock-cliffs; instead of drawing the sprouting green from the earth in a soft, enlivening stream, it bores into the sand-dunes and leaves, as the stamp of its precipitate assault, made with untamed power, 'lightning-tunnels' of fused sand.

Lightning is accompanied by thunder, one of the most powerful sound-phenomena which nature produces. In its rumbling and rolling we are able to follow the zig-zag path of the lightning, which often extends for miles, and feel the plastic form of the cloud-masses.

The ancients connected the thought of the harmony of the spheres with the streaming in of light from the sun, moon and stars. The thunder seems to admonish even the most unbelieving that light possesses tone-creating power: it penetrates to the physical ear, like the earthly counterpart of the harmony of the spheres.

Completely different in character from lightning is the 'northern lights' or aurora borealis, and the aurora australis, whose homes, as the names indicate, lie in the highest latitudes beyond the polar circle in the Arctic and Antarctic zones. A prerequisite to its observation is a dark, clear, starry night. It appears in the most manifold forms. Sometimes the heavens glow in one or more rather undefined regions, with a diffuse, tranquil luminosity which one can hardly differentiate from a bright cloud in the night sky. Suddenly rays shoot up with lightning swiftness, as broad as the full moon, and ranging in colour from white and green to red. They swing like search-lights to and fro, die out and flame up anew. They always shoot up from below, seeming to flee the earth, to strive outwards into the starry expanses.

Sometimes they begin in the form of a white or yellowish-green arc, level and poised always above the earth; this arc seems to give a stable foundation as a 'resting pole amidst the fleeting appearances'. The lower part of the arc is sharply defined, and encloses a particularly dark portion of sky. But in the next moment the arc, too, may be transformed: it may climb upwards, spread itself out, or disperse entirely. At the same time two or three new arcs may arise and stream away again. But even more impressive are the gigantic, freely-

hovering deep-red, blue or violet bands. These may, especially in the higher Arctic regions, group together to form the so-called 'draperies' which slowly undulate like mighty flags flapping in the wind. They appear like a key-board of light, spanned across the night sky, over which the cosmic hand of an invisible player moves to and fro, begetting light wherever it touches. It is as though nature wanted to compensate man for the perpetual darkness of the Arctic night.

The aurora achieves its greatest impressiveness with the appearance of the corona. The sky then resembles a variegated, burning dome of light, which is 'crowned' by the rays, which cross each other in the region of the zenith. What an unbelievable transformation, what a resolution and enhancement has the sheltering, encircling blue vault of day undergone. If, in the form of lightning, it appears so contracted under the clouds, it seems in the northern lights to be fleeing upwards, streaming and dispersing in the starry distances.

Lightning unfolds in our immediate proximity, and, together with the storm, takes place in the troposphere, the lowest layer of the atmosphere. It owes its existence to condensation in the atmosphere, the cumulus cloud. By contrast, the aurora leads us directly to the greatest heights of the stratosphere, whose lower boundary is in the region of forty-five miles and which extends as high as seven hundred miles. It occurs in a region where the sheaths of air that surround the earth are reduced to a near vacuum.

In spite of this remoteness of the aurora lights, they show a definite connection to the earth: they are bound to its magnetic field. The highest region of the 'arc' of light, which is at the same time the chief direction of the rays, points toward the magnetic meridian of the region in question. Parallel to the aurora run certain fluctuations and deviations of the magnetic needle, whose disturbances can show us the path to the cosmos, to the sun. The passage of sunspots through the middle portion of the sun is followed almost inevitably one or two days later by the appearance of the aurora as one element within a 'magnetic storm', as this group of phenomena was first described by Alexander von Humboldt.

The frequency of these storms is inversely proportional to that of electrical storms. We come upon an inner connection,

which shows the essential quality of lightning and the aurora (so diametrically opposed phenomenologically) as a genuine polarity.

While lightning, as part of a normal summer storm, owes its existence to a direct and, so far as possible, vertical concentration of the visible solar radiations, the aurora is connected rather with the concentration of an invisible solar radiation. This is diverted by the magnetic field of the earth from the day side of the earth, and wound into mighty spirals, which the magnetic north and south poles attract to the night side of the earth in the arctic regions.

The maximum period for lightning comes, as everyone knows, in the afternoon, as a result of the culmination of the sun. The appearance of the aurora falls in the night. The time of the maximum varies from one geographical location to the next. The periods of magnetic activity of the earth are reflected in the cycles of the frequency of the aurora. This is true of the daily cycle, which for both phenomena has its maximum during the night, as well as for the eleven-year cycle of the earth's magnetic activity which runs parallel to the cycle of the sun-spots.

The aurora, then, belongs to the night, especially midnight, as lightning belongs to day, especially mid-day. Winter and summer are the great night and the great day of the year. Correspondingly the region of widest distribution of the aurora lies in the Arctic zones, where the earth is stiffened into an 'eternal winter'. The isochasms, the lines of equal frequency of the aurora, embrace the poles and the magnetic poles of the earth in concentric circles and form their own N. aurora pole in north-western Greenland (69°W. longitude, 75·8°N. latitude). The line of greatest frequency touches Europe just on the North Cape, where one hundred displays of the aurora can be observed in the course of a year; in Germany only three displays of the aurora on the average are observed each year; in southern Italy about one in ten years. Only quite exceptional manifestations of the aurora set, so to speak, the whole globe alight, and can be observed – as for example the aurora of 25th September 1909 – even in Singapore (1°N. latitude) or Batavia (6°S. latitude). Practically speaking, then, the polar aurora is unknown to the tropics.

Here, on the other hand, lies the main habitat for the 40,000 thunderstorms which take place on the earth each day. The number of lightning flashes in a single storm can reach a figure of several thousand, and a frequency of one lightning flash per second. According to the calculation of C. F. Brooks, each second sees about 100 flashes of lightning over the whole earth, so that each day the earth, in its interplay with the sun, produces some 8,640,000 flashes. In contrast to the aurora pole, there is a mighty storm girdle in the tropical regions of the earth, whose intensity decreases in the direction of the poles. Since in the tropics practically the whole of the overall precipitation comes in the form of thunderstorms or heavy rain, the summer storms and lightning phenomena belong to the normal daily occurrences during the rainy season. In Eastern Europe there are virtually no winter thunderstorms. In the polar regions one hardly ever has the opportunity to see lightning; above the 75th northern parallel the phenomenon has apparently never been observed.

Lightning and the aurora, as we have seen, orientate themselves in an absolutely polar fashion in time and space, in the daily and yearly cycles, and over the earth as a whole. Wherever the aurora appears in optimum conditions, lightning must of necessity disappear, and *vice versa*.

Correspondingly, our 'sensible-moral'¹ feelings react in a totally different way to these two phenomena. The thunderstorm has always been felt as an expression for the wrath of God; the thunder and lightning inspire fear in our hearts; we grow pale, and seek shelter. The child seeks refuge in its mother's arms, and even the adult must first strengthen his consciousness from within and overcome his anxiety if he is to follow the phenomenon objectively.

By contrast, the glory of the aurora entices the Lapp and Eskimo out of their huts, in spite of icy cold; human feelings expand as though in answer to the play of colours. Its enchanting yet ghostly qualities awaken in us the yearning toward higher spheres of light. We feel as though magically attracted, and we hear the Lapp tell his children that the Godhead allows us from time to time to look once more into the lost paradise.

This contrast in our 'sensible-moral' feelings as we approach

¹ Goethe's 'sinnlich-sittlich'.

the polar phenomena of lightning and the aurora seems to demand something in between them. This can be found if we are able to lead the images of the two phenomena over into one another through an act of imagination. This can take the form of an exercise which strengthens the powers of observation and imagination.

We can bring the aurora closer to lightning by lessening its centrifugal character. We must reduce its flickering unrest and limit its soaring mobility. We hold back its darting rays, and condense them into the aurora arc. Conversely, we must lead over the short-lived centripetal lightning-flash into a more lasting form, soften the zig-zag contour, and make of it a reflection of the cosmic dome of the heavens. We must spread out the intense flash, broaden its serpentine path to a kind of drapery similar to that of the aurora, and subdue the harsh power of its light into a flood of colour which, since there are bluish, reddish and violet lightning flashes, for instance, is already there in promise. Once metamorphosed in this way, the lightning no longer fits into the chaotic environment of the storm. In order to bridge for it the way to the lost cosmos and to the archetype of all colour, we open the curtain of the dark cloud-cover – and at the same time bring nearer the tapestry of the aurora, which we have already imaginatively transformed. We lead it out of the nocturnal darkness into the day which breaks anew after the storm. In this way the two sisters of light – so fundamentally opposed in their pure form – are able to join hands. We call for the aid of the sun, whose countenance both have, until now, completely avoided, and, in streaming brilliance shines forth – as the archetype of all harmonious, mercurial forces – the *rainbow*.

It stands 'with both feet on the earth', and yet rises into a noble cosmic arch. Appearing as an impressive spherical section, having its centre point below the horizon, it unites in itself the centrifugal and centripetal tendencies. It is accompanied by the sound of gentle rain, in which the rolling of the thunder has receded and the silent stillness of the polar night comes to life. The background of the aurora was the cosmically-ordered starry night sky; that of lightning, the dark chaos of storm-whipped clouds. But the rainbow comes into existence where the retreating, dissolving wall of clouds makes way

gradually for the pure blue dome of light. It stands on the boundary between chaos and cosmos. It brings to expression the manifoldness of colour, which represents the most pregnant manifestation of the mercurial interweaving of the light of heaven with the darkness of earth. Not only does it appear in radiant glory and unearthly purity, but also in meaningful, rhythmic order.

The active side, in which the *light* is predominant, according to Goethe's theory of colour, leads upward to the cosmos, while the colours of darkness are turned towards the earth. The central green creates a union between the 'warm' and 'cold' bands of colour, and so establishes the threefold unity of the rainbow.

But how is the rainbow placed in the course of the daily rhythms? Does it retain its mediating role by stepping between midday and midnight, between north and south? The rainbow is in fact most beautifully formed at the moment of sunrise or sunset, when it stands in the west or the east. Only in these moments does it form a complete half-circle whose centre lies on the horizon opposite the sun. At these times it reaches its maximum size. Its height then measures 41° , and its breadth twice this. As the sun mounts higher the rainbow sinks, and when the sun has itself reached a height of 41° , the rainbow has fallen completely below the horizon. It disappears, then, having moved more and more northwards, towards midday; with the sinking sun it climbs up again along the north-eastern horizon. It can never be seen on the southern horizon.

On 21st March at noon in Paris, Karlsruhe or Regensburg (i.e. on the 49th parallel), the sun will stand 41° above the horizon. Therefore a rainbow can then be formed at any time of day, although at noon it would consist only of the narrowest band of colour on the northern horizon. Even in Basel, Stuttgart or Munich, because of the slightly higher position of the sun, a midday rainbow at the beginning of spring would be impossible. The further south we go, the longer becomes the period of time during which the rainbow cannot arise. At the equator on 21st March this has increased to over six hours – more than half the day. The more steeply the sun rises, the more quickly the possibility of a rainbow appearing vanishes.

On the equator, where the sun rises vertically, it is already standing 41° over the horizon at 8.44 a.m. at the equinox.

Since the sun continues to ascend in our latitudes until mid-summer, the period of time around midday during which no rainbow can be formed becomes longer and longer for us as well. In winter the sun stands lower indeed, but the typical winter snow and snow-cloud formation prevents the appearance of rainbows in another way. In the Arctic, where the sun stands low in the sky for the whole of the summer, it can transform snow into rain only very rarely, so that here, too, the rainbow can be seen very seldom.

Not only does the rainbow, as a child of morning and evening, occupy an intermediate position in the course of the day, but also in the course of the year and in relation to the earth as a whole. The optimum region for its appearance falls spatially where spring and autumn (which do not exist in the eternal summer of the tropics and the eternal winter of the Arctic) are created ever anew in the rhythmic interplay between heaven and earth – in the temperate zone. This is the special region of the rainbow, which mediates between the tropical girdle of the lightning and the aurora pole of the Arctic.

From a phenomenological point of view, then, the aurora, lightning and the rainbow may be thought of as a threefold archetype that lies behind all the manifold metamorphoses of light. The rainbow preserves in its form, as well as in the time and manner of its appearance, a relationship to the sunlight and the blue sky. It stands in a mercurial central position, from which lightning and aurora depart to seek their homes in two opposed directions: in the turbulent region of darkness beneath the storm-clouds, and in the cold starry night.

Man and the Rainbow

As the rainbow finds its home in the temperate zones, it exhibits a special relationship to man, whose destiny it is to carry out his development particularly in these regions through the course of the different cultural epochs. This special relationship to man finds its expression in a quite surprising way.

If the observer of the rainbow imaginatively lengthens the ray of sunlight that strikes the back of his head, in other words, if he follows the shadow of his own head, his gaze will be led to

the invisible centre of the rainbow-circle. This centre lies – as the point immediately opposite the sun – for the most part beneath the horizon. The rainbow throws, as it were, a coloured conic mantle, whose apex is represented by the observer. The manner in which the rainbow comes to manifestation, then, is not only dependent on the relationship between sun and rain-storm, but also on the specific intermediate position of man himself between cosmos and earth.

If the rainbow persists long enough it alters its position, rising or sinking according to the movement of the sun; but a second movement sets in if man himself changes his position! If the observer walks, let us say, fifty yards to the left, then the foot of the rainbow, and with it the rainbow as a whole, will wander to the left too. A second observer, who moves to the original position of the first, will see the rainbow still in its old position. In other words, the rainbow moves with the observer, and reveals that enigmatic quality which Goethe so aptly described as 'the rainbow's changing constancy'. Each individual sees a different band of colour, one which in fact he alone can see. A being who possessed the power simultaneously to slip behind the eyes of the ten thousand people in a city who see a rainbow, would see ten thousand rainbows at once. In a single moment of consciousness he would experience how, spread over the whole region where the imponderable stream of light flowing from the sun crosses with the ponderable stream of rain-drops, a flowing sea of sevenfold colour is formed.

Every human being, in accordance with the constitution of his senses, and through the way in which he is placed between heaven and earth, separates a single rainbow out of this universal sea of colour; a rainbow whose individual form applies to him alone. This is only possible because this 'sea' is not merely a churning chaos, but a well-ordered tapestry composed of flooding colours which interpenetrate each other according to definite laws. The rainbow is thus a form shaped by man, in which he brings the objective colour-content of a light-sphere to manifestation and consciousness.

Such an account would not apply to lightning or the aurora. They have become independent, not only of the sun, but of man as well. Lightning does not concern itself in the least with man's position in the cosmos; it moves of its own accord, in-

dependently of the sun's course. It follows laws over which men have no control: it can strike a tree, a nearby cloud, or even a man. In a similar fashion the yellowish green arc or rays of the aurora lead an existence quite independent of man. They occupy a very definite position in space, so that we can fly beneath them in an aeroplane. This would be quite impossible with a rainbow: if we attempted this it would flee before us, or vanish completely. It behaves in this respect like the blue sky, whose apparent point of contact with the horizon can never be reached, even by the most determined traveller.

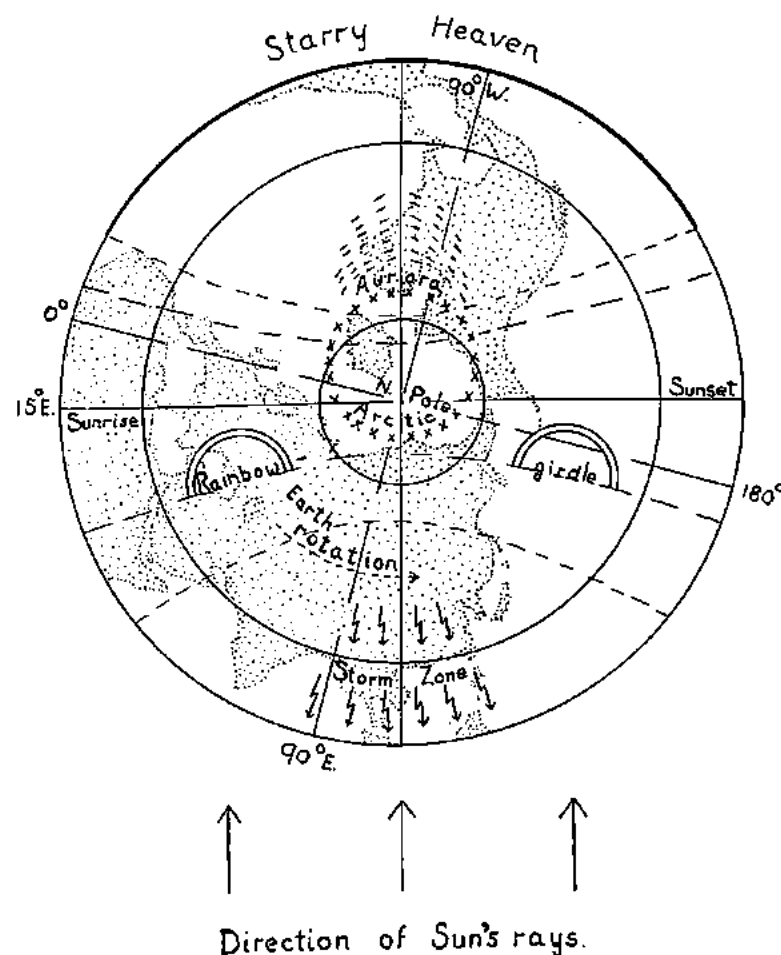
This is connected with the fact that the lightning-flash arises from the heated air-mass, just as the aurora shines from air-particles that have been excited to the point of glowing. In these two cases the light is bound to a material bearer and the changes which this undergoes, whereas the stream of raindrops merely transforms the sunlight, carries it and gives it forth selflessly: it is itself in no way changed. Lightning and aurora are incarnated and localised in the material world. The colours of the rainbow are also objectively present in space, but are only able to take on a definite form through the help of man. In them a relatively imperceptible element is called to visibility in the sense-world through human activity.

When lightning comes into close contact with man, its effect is destructive. The aurora, to be sure, does no harm, yet it takes its course in unapproachable heights, quite unconcerned with us. The harmonising nature of the rainbow-colours, however, is so constituted that it calls in man to play an active role in its mediating function between the sun and the elements - providing, of course, that man is willing to enter into such a relationship. If he is, the rainbow unites itself with him, and yet does not compel him in any way. The bands of colour then accompany him step by step, and yet never approach too near to him. *The rainbow leaves man free.*

In this way it becomes apparent why the still majesty of its harmonious form, which reveals the sevenfold splendour of colour in balanced rhythms, plays on our feelings with such a special beneficent power. A man who cannot open his heart to the rainbow is in danger of becoming seriously ill in his soul-life; his very relation as a human being to the cosmos is insecure from its foundation; his equilibrium is endangered.

The Colours of Twilight and the Rainbow-Zone of the Earth

'Nothing is more characteristic of nature, than that she should bring to realisation in the smallest unit that which she conceived for the whole.' This sentence from Goethe's writings on metamorphosis applies equally well to the transformations of light. Even in the tiniest shimmering drop of dew, we meet again with the whole spectrum of rainbow-colours. Here, too, it approaches us in the morning, and reflects and transforms the



The northern hemisphere at the spring equinox, dawn at 15°E., indicating regions of aurora, rainbow, and thunderstorm maxima. (Diagrammatic: adapted from Goethe in *unserer Zeit*.)

rays of the morning sun as they penetrate into the darkness. The dewdrop radiates light on every side like a miniature sun. With the sun directly behind us, or looking straight towards it, or at right angles to the direction of the light, we see only a more or less bright sparkle or gleam. But looked at diagonally forward from the side, the dewdrop suddenly glows like a ruby, and if we now move our head slowly further we see successively all the colours of the rainbow. Also at the same angle from the other side we see the same play of colours, and it is retained still if we move our head in a semi-circle, always maintaining the same angle to the ray of light that strikes it. We find ourselves in a relationship which is the reverse of that which we have towards the rainbow. There *we* were the apex of a conic sheath of colour; here the drop as a centre rays forth such a sevenfold colour-form. It does not move with us as the rainbow did.

The dewdrop which is, as it were, unlocked by the sun, offers itself to it in a flower-like corona of colour, which we can only experience by moving around the circumference of the 'petals'. The dewdrop teaches us how rainfall, which is like dew falling from the clouds, when illuminated by the sun, causes millions of spheres of colour of that kind to interpenetrate in accordance with definite laws, to build up the 'sea of colour' described above.

It is in the nature of Goetheanistic observation to seek in the smallest part the idea of the whole, but at the same time to recognise the active principle in an enhanced form in the whole. Let us venture once more the step from the smallest drop of dew, through the first enhancement, as we encounter it in the stream of raindrops, to the great whole, the earth itself, of which all else is but a part. In fact, the earth is a great, cosmic, dark drop, which moves in the light-stream of the sun. The all-embracing primal polarity of the cosmos – matter and light – is reflected in her illuminated day-side and her dark night-side. On the boundary of light and darkness, of day and night, a semicircle stretches from pole to pole on either side of the earth, which delineates the zones of sunrise and sunset in those parts of the earth which it covers. Here, where light and darkness meet, we stand before the great archetypal phenomenon, which rules over the entire interplay of this polarity – twilight.

In the morning and evening twilight all those colours are

present which we encountered in the rainbow. In the vanishing blue of the sky the red sun glows in the midst of a gold-yellow and orange band; this passes over into blue through a delicate emerald green. If we disregard for the time being all the colours that can arise through the play of clouds and other changing meteorological elements, then there emerges in the twilight of a clear, cloudless sky, a definite sequence of colours.

In the east the ash-grey shadow of the earth rises with the setting of the sun, enshrouded by shades of violet which pass over into the beautiful pale magenta of the so-called 'anti-twilight'. This passes over us almost unnoticeably and is intensified at a height of 25° over the western horizon when the sun has reached a depression of 3° below the horizon (six sun-diameters). Its intensity gradually increases before it vanishes, when the sun has reached a depression of twelve diameters. In the meantime a second, more delicate sphere of magenta has risen up in the east, which displays itself most strongly in the western sky at 9° depression of the sun. About three-quarters of an hour after sunset the so-called 'first twilight' sinks below the western horizon, thus ending what we might term the 'conventional twilight'. When the sun has reached a depression of 11° and the afterglow has vanished, we see the landscape in the pale, almost colourless light of the 'second twilight', whose milky white light sinks below the horizon at 17° depression of the sun. With this the stars come into clear view; the whole so-called 'astronomical twilight' is ended; the starry sky is revealed, and it releases the last after-glow of daylight in the form of the bluish 'post-twilight' at 27° depression of the sun.

In successive, rhythmically divided phases of increasing and decreasing intensity, the mercurial activity of the earth-atmosphere mediates between day and night. Through this activity it brings into being morning and evening as independent times of day, having their own unique qualities.

Let us turn our attention once more to the whole earth. A band of evening twilight about 1,400 miles broad embraces the earth from Arctic to Antarctic. On the other side of the earth it becomes the colour-band of dawn. Just as, in the human eye the iris (German 'Regenbogenhaut', literally 'rainbow skin') mediates between the dark pupil and the surround-

ing white skin (sclerotic), a mighty 'iris' embraces the earth between its light and dark side.

The tropical regions cross this twilight girdle virtually at right angles, so that the twilight is shorter here than in any other part of the earth. It lasts from only one hour twelve minutes to a maximum of one hour nineteen minutes. Night descends very rapidly for the sun goes down vertically and descends quickly below the horizon. The higher the latitude, the longer do the twilight periods last. In our latitudes we cross the twilight bands diagonally, for the most part, along with the rotating earth. The shortest astronomical twilight for us (50°N.) is thirty-four minutes longer than the maximum for the tropics. During the bright summer nights the twilight reaches a duration of over three hours. In the polar regions, on the other hand, where the sun rises and sets but once a year, we find that the rhythmic interplay of the twilight ceases, and is expressed in this single annual 'morning' and 'evening'. In the weeks before the spring equinox and after 21st September – when the sun rises in the Fishes and sinks slowly below the Arctic horizon in the Virgin – the heavens glow indeed in all colours.

The basic, well-formed, rhythmic interplay of morning and evening twilight occurs in its most complete form, as we would expect, in the middle latitudes, where we find also the most favourable conditions for the formation of rainbows. The very conditions which encourage or impede rainbow-formation influence the phenomenological appearance of the twilight colours in the same way, indicating an intimate relationship between the two phenomena.

* * *

The archetypal trinity of aurora, lightning and rainbow develops before our eyes into a three-fold organisation of light, which embraces the whole earth in its organic structure. Just as the rainbow, as a single phenomenon, mediates between lightning and the aurora, so do the twilight-band and rainbow-girdle unite the polarity of the aurora zone and the equatorial storm-zone to a great three-membered unity. Rhythmically mediating, they lead the day and night sides of the earth over

into one another. Between the polarity of the aurora and lightning, bound respectively to midnight and midday, to winter and summer, to pole and equator, steps the balancing, harmonising activity of colour with its relationship to the forces of morning and evening, of spring and autumn. It reaches its highest manifestation in the phenomena of twilight, for here there emerges as though out of a higher sphere of colour-activity, that colour which alone – disregarding black and white – is revealed neither by the sparkling dewdrop nor by the earth's rainbow girdle: magenta. It appears if we invert the rainbow, dissolving it in the centre and bringing together its two terminal colours: the red that shines out to the cosmos and the violet that is inclined downwards, to the earth.

Since the part is always included in the order of the whole, we can also say: the rainbow colours slumber in the womb of the universal, undivided colour-element of the magenta, which constitutes the great earth-iris; in the morning these colours awaken and appear incarnated in many individual forms over the earth's surface. From the lofty element of the purple the rainbow receives its strength in the early hours on the threshold of the morning-circle and comes, like a guardian, to meet the midday thunderstorms. It gives back this strength in the evening when the reddening sun calls the twilight-colours into being, and glows as a red arch¹ in the macrocosmic sphere of the earth-iris.

While on the moon, devoid of air and water, matter and sunlight strike against one another with unmitigated directness, the earth is able, as we have seen, to bring about in the meeting of light and darkness the revelation of a manifold fulness of form in light and colour. She has freed herself of the loneliness of the silent starry night, which persists on the moon even in the light of day, and awakens out of the twilight in the lofty dream of the magenta colour to an independent life of her own. Before the light of the morning sun she brings into being the blue of the day-lit sky, the green of her carpet of vegetation, she shimmers in her morning dew and blossoms in the coloured rainbow.

Rudolf Steiner has said on one occasion that no number of single observations and experiments can ever lead to a grasp of

¹ When the setting sun glows red, the rainbow too displays only red.

nature in her totality, 'if the ability does not arise in man to recognise in the outer world of nature, processes similar to those which can be observed in the human being, as for example the liver-process, the heart-process and so on'. Rudolf Steiner then indicates how such a comprehensive view will arise if the separate phenomena are seen in their essential relation to the times of the day or of the year, which 'reveal themselves as a time-organism, which contains in itself a sum of nature-processes'. In this way it is possible to lead man beyond his 'abstract relationship with his natural surroundings...'. For in the organisms of the rhythms of the day and of the year he finds something comparable to his own being. We believe that the foregoing account, carried out with the help of Goetheanistic methods of observation, has brought forward a proof for this conception. It is implicit too in Goethe's whole artistic conception of the world. Faust turns with yearning to the rising sun, to the fulness of cosmic light—but 'Alas, already blinded, I turn away, the pain my vision rending. Behind me therefore let the sun be blazing.'

So cries the earthly man, whose condition is not yet ripe to take hold of the light in its full intensity. Must he therefore fall into the darkness and chaos of the elements? Must he, in taking possession of them, squander the 'light of heaven - he calls it reason -' in abstractions and speculations remote from life; or misuse it in the technical mastery of matter, for the satisfaction of his egoism and to goad on the inner storm of his passions? Goethe, who places his trust in the inner light, gives an answer which can show us the way:

Allein, wie herrlich diesem Sturm entspriessend
Wölbt sich des bunten Bogens Wechseldauer,
Bald rein gezeichnet, bald in Luft zerfliessend,
Umher verbreitend duftig kühle Schauer.
Der spiegelt ab das menschliche Bestreben,
Ihm sinne nach und du begreifst genauer:
Am farbigen Abglanz haben wir das Leben.¹

¹ And yet how nobly from this plash and pelting
The changing permanence of the rainbow flowers,
Now clearly drawn, now into vapour melting,
Spreading around it cool and fragrant showers.
This bow will serve to image man's endeavour:
Think on it and you'll grasp what lot is ours;
Reflected colour forms our life for ever.

(Translated by Louis MacNeice)

BOOK REVIEWS

BOOKS BY RUDOLF STEINER

Man as Symphony of the Creative Word (Rudolf Steiner Press, £1.40)

At the Gates of Spiritual Science (Rudolf Steiner Press, £1.05)

The Spiritual Hierarchies and their Reflection in the Physical World
(Anthroposophic Press, £1.60)

Art in the Light of Mystery Wisdom (Rudolf Steiner Press, £1.05)

Calendar of the Soul Illustrations by Valerie Jacobs (Rudolf Steiner Press, £1.60)

FOR this issue of *The Golden Blade*, the appearance of *Man as Symphony of the Creative Word*, in a new translation by Miss Judith Compton-Burnett, is especially relevant. In these twelve lectures, given in Dornach from 19th October to 11th November 1923, Rudolf Steiner gave what is perhaps the most rich and magnificent of all his descriptions of the living earth as a whole, bringing before us the hidden relationships between man and animal, birds and fishes, earth, sea and air, and the elemental beings. It was the year that followed the burning of the First Goetheanum; Rudolf Steiner had made many journeys, and in August had spoken in Ilkley and Penmaenmawr. At the beginning of September the Anthroposophical Society in Great Britain was founded in London; and after visits to Stuttgart and Dornach he gave in Vienna the lectures with the untranslatable title: *Die Anthroposophie und das menschliche Gemüt*. In these lectures, extending over Michaelmas, a special mood of immediacy, a heralding of the revelations to come, seems to appear. Back in Dornach, from 5th to 13th October, he gave the five tremendous lectures on *The Four Seasons and the Archangels*. Next week, *Man as Symphony...* began. There followed a visit to the Hague. Back in Dornach, he began the lectures on Mystery Centres, which prepare directly for the course on the history of the world given during the Christmas Foundation Meeting. This whole sequence has great unity of mood; warmly and directly, we are led towards that vision of the earth and of humanity which man can share with the Michael-Spirit, the giver of true purpose and understanding for our time. In all that is said are to be felt the effects of the passing over of the First Goetheanum through fire into the realm of the elements; and the preparation for the renewal of the ancient Mysteries by Rudolf Steiner at the Christmas that followed. And it is always to be felt that in describing man's relationship to the

animals and to the elemental beings – relationships which exist, however little we are conscious of them – something is being indicated, on which the health of human society depends. To put it bluntly, we cannot achieve harmony with one another if we are cruelly misusing the animals and the elemental beings. A great door to the future is here opened.

At the Gates of Spiritual Science contains fourteen lectures given in Stuttgart seventeen years earlier, from 22nd August to 4th September 1906. (This is a translation revised by E.H.G. and C.D.) Here we are at a much earlier stage of Rudolf Steiner's work, when it would have been extremely difficult to imagine what practical forms it would take later on. Reading it, we have also to bear in mind that the text depends on notes which do not necessarily give Rudolf Steiner's precise words. But the course is of great value, treating of subjects which he was to develop much further later on – for example education of children – and also of matters which he hardly ever described later on – for example, the layers of the interior of the earth.

In the fifth lecture there is a very concentrated, but most significant, description of man's work after death with the spiritual individualities which are active as group souls of animals, plants and minerals. While man has his ego on the physical plane these egos are on other planes which the human soul gradually reaches after death. While here on earth man has a far-reaching influence on animals and plants, through the development of external civilisation, he has an influence upon them in quite a different way between death and a new birth. 'The dead are active in the transformation of flora and fauna, and even in changing the physical form of the solid earth.' The individualities of the minerals are in the highest spiritual realm.

When we look at an animal, quite particularly, it is important that we should not regard it as a separate thing; we should feel it as connected, as if by invisible threads, to the wise spirit guiding all members of its kind. Man's relationship to these beings is by no means simple, but develops through the ages in complex and significant ways which are to some extent reflected in poetry and myth, as Dr Karl König has indicated in his masterly book *Bruder Tier*.

On many other subjects Rudolf Steiner has in this course striking things to say, which require much patience and open-mindedness if they are to be properly digested. At the end he sums up three methods of spiritual development; they are called 'the Eastern, the Christian and the Rosicrucian'.

The cycle of lectures on *The Spiritual Hierarchies and their Reflection*

in the Physical World (which has been translated by R. M. Querido) were given in Düsseldorf in April 1909. These lectures are concerned throughout with the nine ranks of spiritual beings described by Dionysius the Areopagite in *The Celestial Hierarchies*. These beings are related by Rudolf Steiner to the Zodiac, the planets and to the history of the earth as a whole. (To this subject Rudolf Steiner was to return particularly three years later, when he gave the course on *Spiritual Beings in the Heavenly Bodies and the Kingdoms of Nature* at Helsinki. The two cycles can well be read together.) When he gave these lectures, Rudolf Steiner was deeply concerned with the relation between eastern and western occultism. He was still speaking within the Theosophical Society, but its international leaders showed no willingness to establish a real relationship with what he had to say about Christianity. He emphasised again and again that this implied no lack of appreciation for the wisdom of India, for example, that Christ is not just a teacher of wisdom. 'Look at the founders of religion of ancient times. They are the great teachers of mankind; after a certain period of development they become guides of humanity and their teachings work on human beings with an overwhelming power. But now consider the Christ; does He actually work through His teachings? In fact, he who thinks that His main contribution lies in His teaching does not really understand Him. The Christ did not work in the first instance through His teaching but through what He did, and the greatest deed of the Christ was the deed that ended with His death.'

This distinction is of tremendous importance for the understanding of what Rudolf Steiner has to say about the Resurrection and the Second Coming. From 1910 to 1914 in particular he spoke again and again of an experience which would come gradually through the twentieth century to more and more human beings of the presence of Christ, not incarnated in an earthly body, but in a spiritual form belonging to the world immediately neighbouring upon our physical world. It would be necessary, he said again and again, that a right understanding of this experience should be prepared. Christ would reveal Himself to men in their need; but it would be possible to prepare both hearts and minds for the breaking in of such events. (A full description of this by the late Dr Alfred Heidenreich has been published by the Rudolf Steiner Press under the title *The Risen Christ and the Etheric Christ*.) It may seem surprising that a way of preparation on which Rudolf Steiner laid particular emphasis is through a deepened experience of the course of the seasons of the year. Thus for Easter 1912 he published his *Calendar*, which included with much else the verses that have appeared in a number of editions as *Calendar of the Soul*.

The new edition from the Rudolf Steiner Press is the most comprehensive help for their understanding that has appeared. It includes the original German, the English translation by Dr Ernst Lehrs, black and white illustrations by Miss Valerie Jacobs and a commentary on the verse for each week by Mrs Eleanor Merry. Thus there is much both for those who have known these verses for years, and for those who are making a first approach to them. The drawings are in a technique recommended by Rudolf Steiner – 'diagonal shading out of light and dark'. Through this technique outlines can appear which are not so finished and static as in ordinary line drawing. It can indicate without defining. A similar method has been used for the stained glass windows in the Goetheanum. Miss Jacobs gives an account of how she came to do these drawings, quoting to begin with the words from Goethe's *Faust* 'Him I love who attempts the impossible.' At the outset she had no thought of publication, but worked for years, trying to achieve a rendering of the verse for each week in the form of a picture. Presented with such a work of years, the reader should not expect these pictures to yield their full content to him straight away; and indeed the themes of the verses are not of a kind that could be illustrated in an ordinary sense. But he may take them, with the commentaries by Mrs Merry, as a challenge to bring his own imaginative understanding into movement.

Art in the Light of Mystery Wisdom is a collection of eight lectures by Rudolf Steiner, given at different times, with an introduction by Marie Steiner, translated into English by Mrs Johanna Collis. Two were given at Dornach at the end of 1914, two others at Dornach in 1920 and 1922. The fifth is the famous lecture on Truth, Beauty and Goodness, given in January 1923 at Dornach, soon after the first Goetheanum had been burnt down. The next two lectures, 'The Human Being's Experience of Tone', have a special character in that they were given (also in 1923) to teachers of the Waldorf School and the School of Eurythmy at Stuttgart. The last lecture was again given in Dornach very shortly afterwards.

Though the first and the last of these lectures are separated by more than eight years, years of very great development in the work of Rudolf Steiner, all of them are intimately linked in theme, and perhaps to some extent in mood and method. They show how genuine artistic creation must be rooted in the spiritual facts of the universe and in the nature of man. In particular they lead deep into the mysteries of music, an art in which Rudolf Steiner was not himself productive, as he was in so many arts—but for which he promised so great a future. This collection can be recommended to all who are themselves engaged in the arts, and also to those who

are prepared to work hard to make their appreciation of them greater and more selfless.

A.B.

THREATENED ANIMALS

Man and Wildlife, by C. W. Guggisberg (Evans Bros., £3.50)

MUCH that has been written in recent months about conservation has the quite simple appeal to man in general, 'Take care what sort of a world you are making for yourself!' It is still taken completely for granted that the earth is there for man to use as he pleases, and that the problem is only whether he will do this with wise foresight or rashly and destructively. But sometimes in what is written about animals another note begins to appear. Is it not perhaps *their* earth too? Has man an unconditional right to exist, and they none at all?

Dr Guggisberg's book is not intended just to convey information, though he has collected an extraordinary mass of relevant facts. It is intended frankly as an appeal on behalf of the wild animals and birds of the world. One might think that an appeal for the preservation of rare species needed no justification today. Yet sometimes it appears as if he feels it necessary to prove even to himself that he is not being irrational. 'What has been shaped by the hands of man can, if necessary, be shaped again; what has been created by nature will never be replaced, once it has been wantonly destroyed. An animal that has become extinct is lost for ever.' In some detail he makes a comparison between animals and the greatest works of human art. But it is evident that his experience has led him to believe that there are many who do not care in the least about the wild animals of the world apart from the economic value of the products to be obtained from them. And he is bitterly resigned to the expectation that in some matters they will have their will – to the point that many species are exterminated, or reduced to such small numbers that it is not worth while for anyone to exploit them commercially.

Animals can disappear for a variety of reasons. They can be directly over-hunted by men, not only for products useful commercially like furs or oil, but also because they are regarded as pests or simply for sport. Their habitats can be destroyed, particularly if these are forests, marshes or hedges, through the developments of human agriculture. They may be preyed upon, or defeated in competition for food, by alien species introduced by man; this has frequently happened on islands, small or great, where the dangers to

which animals and birds were exposed may for a long period have been very limited. Further, in very recent times, living things may suffer through the pollution of air and water.

Dr Guggisberg gives lists, continent by continent, and ocean by ocean, of species and sub-species that are extinct and of mammals and birds that are now so reduced in numbers as to be in danger of extinction. This list is not entirely a tale of disaster. Sometimes when the numbers of some creature known to exist have become very low indeed, measures to protect it have been taken, and the beginnings of recovery observed. In the same World Survey Dr Guggisberg lists by countries the chief national parks and wild-life sanctuaries, often indicating their particular value for the preservation and observation of wild life. It is impressive to see how the movement to create and maintain national parks has spread all over the world, transcending political and ideological differences, and surviving through great social and technological change. This movement seems to have begun in the United States, with the formation of the Yellowstone National Park in 1872. Within the nineteenth century, Canada, Australia and New Zealand followed the example of the United States. Dr Guggisberg describes how at first areas of exceptional natural beauty were chosen, with the interests of human visitors very much in mind. Gradually there has been an increasing emphasis on the preservation of every kind of wild life, and rules for visitors have increased in stringency in many nature reserves throughout the world. (The National Parks in the United States had nearly eighty million visitors in 1966.)

In the last decade of the nineteenth century game reserves were declared in South Africa, and led eventually to the formation of the great Kruger National Park. There are now more than a hundred and fifty national parks, game reserves, and sanctuaries in Africa. The guardianship of such reserves is often a very arduous and sometimes a very dangerous task; Dr Guggisberg pays a tribute to the enthusiastic work done in some of the recently independent African countries.

In much of South America communications have been until recently so difficult that man was no great danger to wild life. 'Within the last few decades destruction has, however, been enormously speeded up, and today the situation is very grave indeed. The urgency of conservation has hardly been realised, and there are large areas without proper national parks. Where such reserves have been established, they are often very inadequately guarded. There exists little or no legislation to curb uncontrolled hunting and exploitation of animal resources is therefore still in its crudest and most devastating form. The pet trade, for instance, is rapidly

developing into a major menace for many South American monkeys and birds.'

Nevertheless a number of very large and important national parks are planned, particularly in Brazil. 'The Xingu National Park in Matto Grosso . . . may well become one of the world's most famous nature reserves.'

Of southern and south-eastern Asia, Dr Guggisberg says, 'It was unfortunate that the population explosion and the large-scale introduction of western technology into eastern lands should have coincided with the decline, in many countries even with a breakdown, of order and discipline. There has been a tremendous destruction of wildlife and the fauna of Southern Asia, once so rich and varied, is today being wiped out with horrifying speed. Nowhere in the world are there so many endangered species, and a considerable number of them have already been reduced to such a low level that their future can only be viewed with the utmost concern.' Nevertheless even in countries with appalling social and economic problems serious attempts at animal conservation are being made, and there have been some definite successes.

In Europe the destruction of wild life has a very long history. The enthusiasm of the medieval royalty and nobility for hunting preserved a good deal of forest that might otherwise have disappeared. Now nearly every country, even those which are very small and predominantly agricultural, has National Parks or Reserves. There are many extensive reserves and sanctuaries in Russia.

It is of course not enough to rely, for the preservation of animals, upon reserves. By itself, this would be a policy of segregation, leaving the rest of the world increasingly destitute of wild creatures. Have we not so to shape our environment that man and animal and bird can all find their lives in it agreeable? This is not so utterly remote as it may sound. Where atmospheric pollution has been kept down, many modern cities are being found to be a favourable habitat by a remarkable variety of birds. Indeed, the agricultural environment of the same cities may be *less* favourable. And where hunting is prevented or strictly limited many new relationships between man and animal prove possible. But man has developed a few domestic animals in a fantastically one-sided way. Dr Guggisberg gives the present world population of cattle, not counting the domestic Asiatic buffaloes, as eight hundred million head. (Thirty per cent in the Americas.) There are about nine hundred and fifty million sheep, four hundred and fifty million goats, three hundred million pigs, and three thousand million domestic fowls—'the most abundant bird on earth'. A considerable part of these contribute to the over-eating which is one of the greatest health dangers of

western developed countries. Almost everywhere their one-sided development has disturbed ecological balance with far-reaching consequences for the rest of animal and plant life and the condition of the soil. 'Over-grazing, which in many parts of the world has been a problem for centuries, is becoming more widespread and more serious.' At the same time, forests are cut down for paper – for which it is very much to be hoped alternative sources will be found.

Dr Guggisberg regards the great religions of the world as having had a harmful effect upon man's relationship to the animals. He believes that ancient man, depending mainly upon hunting for his food, had a deep reverence for animals, and a sense of kinship with them. He gives a rapid sketch of the development of hunting in primeval times, and its continuance when it had ceased to be a prime source of food. He regards both Buddhism and Christianity as all too anthropocentric. In such matters, in the attempt to make his book comprehensive, he seems at times to fall into rather sweeping and superficial generalisations. He ascribes his own relationship to animals to a great-grandfather who had been a forester and game-warden on a princely estate – and further back, to man's ancient hunting instinct. And yet he could not now kill any 'game beast' for pleasure or 'for scientific reasons either'.

A.B.

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