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Child and Man

MICHAELMAS 1954

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Speaking of Education

Books

Exhibition of Children's Work - - - - ROY WILKINSON

Draw your own conclusions

"By their Fruits ye shall Know Them"

IT is one of the unfortunate but unavoidable consequences of holding strong convictions and following an unusual interpretation of life that sooner or later one is judged as an exponent of that particular view, and not for one's more general attributes. When one becomes known as a student of Rudolf Steiner's work, one is labelled an 'anthroposophist', with all that the term entails in the speaker's mind of praise or blame, wisdom or folly, commonsense or fanaticism.

This habit of pigeonholing one's fellows into neat categories is so ingrained in our day that it is impossible to protest against it; one must meekly bear the label with patience, and hope that one's common humanity will ensure that it does not appear writ too large.

But when it is assumed that, because one is an 'anthroposophist', one therefore desires to proselytise all one's fellows, the misconception becomes serious. And when, further, it is assumed that schools founded by anthroposophists seek to spread the views of Dr. Steiner by indoctrinating children, then the whole educational motive of the Rudolf Steiner schools is woefully misunderstood. Recently a lady from abroad visited one of our schools. She was able to attend some lessons and talk to some of the children. At the end of her stay she showed great surprise over one fact. She was astonished that when the children left the school they were not firm adherents of the philosophy and outlook on which the school had been founded. "Why", she exclaimed, "when these children leave, few if any of them have any idea of the 'Anthroposophy' which Dr. Steiner presented to the world, much less are they themselves adherents of it. Surely the aim of an 'anthroposophical school' is to produce young anthroposophists!"

This misconception is to be met with from time to time. It stems no doubt from the experience of other schools which are founded out of certain strong spiritual convictions. The church schools in this country, for example, consider it part of their duty to make their pupils into good churchmen; the Roman Catholic Schools are also concerned with producing young men and women who hold similar convictions to themselves; there are even progressive schools, which seek to give their pupils 'the freedom of outlook', which they consider desirable and which is a faithful copy of their own kind of free thinking. In view of these facts it is understandable enough that the Rudolf Steiner School, which is also based on strong spiritual convictions, should be thought of as wishing to inculcate Rudolf Steiner's ideas in its pupils.

Parents who have children in Rudolf Steiner Schools will recognise that this is not the case. Indeed probably the majority of parents of children at our schools do not know very much themselves about the 'Anthroposophy', which stands behind the teaching and organisation of the education. They are perfectly content to leave the upbringing

of their children in the hands of people, whom they trust; and because they judge the school to be a good one, they ask for no further explanation of its background.

The Rudolf Steiner School does not ask that the parents should become intimately acquainted with the Anthroposophy of its founder, just as it does not want its pupils to become indoctrinated with any one viewpoint. If the parent does become interested, and if the child in later life wishes to come closer to the ideals of the Anthroposophical Movement, then that is a cause for joy; and all the more so as it is a matter of free choice and free decision.

The Rudolf Steiner Educational Movement aims to provide a good education for Europe and the West, and thereby make a powerful contribution to the social problems of our time. *It is not concerned, nor will it ever be directly concerned, with spreading the ideas and world outlook inherent in Anthroposophy.* Those working within the Movement are convinced that such schools have a vital, a unique and an indispensable contribution to make, just because they arise out of Anthroposophy; but the concern of the teachers in the Movement is with providing a very necessary education, and not with spreading the Anthroposophical outlook to which they owe so much.

The children who leave our schools are on the whole less prejudiced than many. They have had a very wide education, with the minimum of specialisation; they have had a wide variety of viewpoints presented to them; dogmatism has been avoided; and while their own judgments have been left free, the careful nourishment of their feeling life has made them alert, interested and enthusiastic to face, judge and solve the perplexing paradoxes and problems of our day. Just because no particular viewpoint has been presented as *the* only possible one, the careful attention given not only to their intellect but also to their feeling and their willing makes it easier for them to come to a healthy judgment later, for then they will judge with the whole man and not only with part.

Thus it is absurd to think that the Rudolf Steiner School sends out its pupils into life as firm adherents of any particular outlook or doctrine. It seeks to send them out as well fitted as possible to make an original and independent judgment. The judgments they make and the ideas they bring to birth will be the fruits by which the Rudolf Steiner Educational Movement will be known. The recognition of these fruits will not depend on a knowledge or understanding of how they were grown. While such an understanding is invited, it is not a necessary condition for an appreciation of the work of our education.

THE EDITOR.

Science and Technology

H. Heitler

(As announced in our previous issue, Dr. H. Heitler of Bristol University is at present engaged in the study of cosmic radiation, and more particularly in the solution of technical problems arising in this research. As a scientist he is intimately connected with what is taking place in this sphere; and as a student for many years of the work of Rudolf Steiner he brings to his scientific experience a viewpoint which penetrates deeply into the soul-life of the scientific observer, and the significance of his observations. ED.)

SCIENCE is in general understood as an intellectual activity concerned with the various aspects of the world and man in so far as such are accessible to the human mental powers. The scientist endeavours to find the laws of nature, to understand the underlying principles in various phenomena and to come to some generalisation; looking for the common factor in the chaos of the bewildering multitude of our sense impressions or scientific observations and finding satisfaction when such a common factor emerges. For example, it is a matter of observation that coalgas, oil and wood burn when ignited. Although one is a gas, one a liquid and one a solid all are combustible. When on investigation it is found that in all these cases of combustion the combining of the carbon with the oxygen of the air takes place, the general scientific principle then emerges that substances containing carbon burn if oxygen of the air – or from other sources – has access to them.

Here is a comprehensive scientific principle applicable to practically all forms of combustion. But the principle alone can never build an actual oven or furnace. When we want to make a fire we must employ something fundamentally different. Our physical organisation, in other words our will, must take part. We have to get bricks, we have to set them in a proper form, we have to fetch wood and finally light it, and only then have we made a fire. The *technique* of burning involves the activity of our physical organisation, whereas the *science* of combustion requires the activity of our thinking. It is true, of course, that the technician does not act blindly, but is the more successful the more he observes in his furnace construction the corresponding scientific principles; but it is equally true that his scientific knowledge alone is of little avail if he cannot use his hands properly.

The word technology in itself means knowledge of execution – the skill of doing. It has always to do with the shaping, moulding, working forming of material substances. From this it might seem that the ancient skill of craftsmanship, evidence of which archaeology is constantly bringing to light, should fall under the category of technology. But this conclusion would overlook the important difference, that the soul force which flowed into the will of the artisan

of the past was not thinking, but *feeling*. It was in his *feeling* that the craftsman experienced the image of what he wanted to create with his hands.

Contemporary with our modern civilisation however, came the development of technology, a development dependent upon the intimate intercourse of thinking and will in the human being. When we consider the three human souls qualities, thinking, feeling and willing; thinking and willing form naturally two opposite poles. In thinking we separate ourselves from the world. We think about an object and we are immediately aware that we and the object are two separate entities. Nothing must go over from one into the other. Indeed, it is one of the fundamental requirements of thinking that the thinker should not interfere in any way with the object of his thoughts. Objectivity, the strictest reticence, is absolutely essential; and it is therefore perfectly correctly assumed that it is quite immaterial to the object whether a human being thinks about it or not. With regards to the will, the exact opposite is the case. Not the slightest will activity can take place without having an immediate effect in the surrounding world. We cannot take a step without altering the balance between ourselves and the ground, we cannot take a breath of air without changing its chemical balance. Through the will the human being is part and parcel of the world, and influences it directly and inevitably.

With the birth of technology – that is, the will mainly directed through the thinking – the human being and the world have entered into a new relationship. A great deal is known about thinking. No other activity has been subjected to such intense study throughout the ages since Aristotle established the principles of logic. But little is known about the human will. In fact, the most essential parts of it disappear entirely into the darkness of the subconscious. What we can observe consciously in our mind when we for instance lift an arm is the intention to do so; but intention alone will never result in any movement. Another element enters which evades our conscious grasp altogether. Only when this unknown has acted can we observe the performed movement. The vital link – the act of will as such – is unobservable.

In a technology which is fundamentally the forming and shaping of material objects we shall have to look for the will-element and from what part of the human soul it emerges as impulse for action. With the evolution of mankind as a whole, new soul forces gradually unfold themselves, and we can therefore expect that these are reflected in the thinking and actions of the time. History shows also that the three soul forces in man do not always develop together, and that the predominance of the one or the other, gives the period of civilisation its characteristic feature.

Let us now consider our modern technical age which came into being with the invention of the steam engine and which, with the creation of innumerable machines since then, has been able to transform more earth substance into technical aids than any other age.

We may well ask whence this ability originated, and what new impulse began to reveal itself in the will-organisation of the human being.

The end of the 18th century saw an already highly developed general science. More than two centuries earlier Kepler, Galileo and others had presented mankind with a new picture of the heavens. Newton had established the laws of gravity for the earth, eventually extending their validity into the universe. He had also evolved principles of optics which are fundamental to this day. He and Leibnitz, quite independent of each other, had invented a new calculus dealing with the infinitely small and large. The mathematical edifice grew rapidly after Newton's days and reached by the end of the 18th century a standard comparing well with that demanded from a modern university graduate in mathematics. The 18th century had all the mathematical and mechanical knowledge necessary *e.g.*, to develop water power, and *could have* transformed the ancient water wheel into a more efficient water turbine. This, however, did not happen. When the desire for a more concentrated source of power of a mechanical kind arose, the *steam* engine was invented. Now, nothing was known at that time about the behaviour of steam; nothing in the way of a theory of heat existed from which the steam engine could have been the immediate logical offspring. There is the story that Watt saw the lid of a kettle being lifted by the steam of the boiling water, and it is supposed that this observation gave him the idea of the steam engine. But he did not use the steam pressure as would have been the logical conclusion from his observation. Instead, he used the negative pressure, the vacuum which is created by the condensing steam.

The laws of thermodynamics which express the relation between heat and mechanical energy were discovered about 80 years later by Julius Robert Mayer. He was a doctor; and he observed that the blood of people living in the tropics was of a lighter colour than that of those living in temperate climates. He concluded that in the hotter countries, owing to the constant blood temperature, less inner combustion is necessary to produce the same amount of energy. The laws of thermodynamics which Mayer deduced from this observation have now world wide significance and are considered to govern all processes of heat.

Now the outstanding facts to consider here are that, at the beginning of our technical era, heat for the first time in human history was used to provide mechanical energy, and that the science of thermodynamics took its origin from a peculiarity of the human organism. Only when we are aware of the new relationship between the thought-permeated will and technical achievements will these facts become more than a curiosity. They point indeed to a new stage of soul development in the human being.

What then is this new quality which began to appear less than 200 years ago? Mankind had already been living for about 300 years under the impact of the growing ego-consciousness. The new outlook

into the world, the Newton-Kepler universe, was becoming common property. In the new scientific concepts the universe was emptied of living forces and was becoming rapidly a mechanism of huge dimensions. In the field of philosophy Kant had thrown down the challenge of the categorical imperative thus leading to the denial of freedom in the realm of ideas. To a large extent the mechanisation of man himself went parallel with that of nature and the cosmos. The heart became a pump; the lungs a means of exchanging oxygen and carbon dioxide. The digestive organs are pictured as a chemical laboratory; and the nervous system with the brain and other centres, a telephone exchange. It is as if a kind of phantom man, a ghostly spectre, had been put over the living human being. But all this would not have been possible if the human thinking had not become independent of cosmic guidance. It is an astounding paradox that Kant and most of the following philosophers would not have been able to deny freedom if they had not been in possession of a thinking, freed from previous bondage.

This freedom has so far opened up and conquered a mathematical-mechanical world and our concepts are perfectly adequate for this particular region. It is not surprising, therefore, that practically the whole of life is being fitted into this world conception. We speak for instance of the "mechanism" of democracy, of the "machinery" of reconciliation; and there is no end to the intrusion of statistics into our every day life.

When we now try and follow this ego-development, not towards the outward world as it shows itself in thinking, but along the inner path into the will, then we meet it again in the blood, and in particular in the warmth of the blood. Dr. Rudolf Steiner had pointed out in various connections that this is indeed an indication of the ego-nature of the human being. Only in him is the blood temperature constant to such a degree that it makes him independent of his surrounding environment. Although, of course, nothing of the nature of a proof can be attached to such an observation; it may, nevertheless, appear feasible if we try and put before our mind's eye a picture of man as a whole. We can see how he has become independent and separated from the world, not only through the thought-permeated senses which make him into an observer, but also through his blood which makes each individuality into a self-contained centre of constant warmth, independent of the seasons of the year and of the region of the earth he happens to inhabit. Only a being endowed with an ego, that is, a spiritual entity, can be imagined to occupy such a unique position.

It is the ego which expresses itself through the observer in the mechanical-logical world picture, and it is the same ego which linked the constancy of the blood temperature and the consequent differences in the metabolic rate with the universal laws of thermodynamics. The one path is going through the senses, the other through the metabolism. It was at this juncture that the ego, in its constantly

progressing evolution, could find, for the first time in human history, external expression through the thought-permeated will in the form of the steam engine ; and, in the discovery of universal laws through the conditions of the blood, that the industrial revolution started and technology was added to science.

When we now look once more over the intricate interweaving of the forces which formed and moulded our scientific and technical age, we can discern a pattern which involves Man and Nature both in their twofold aspects : Man as thinking and willing being, Nature as provider of material substances and forces like heat. In thinking, man understands material-mechanical nature, in his will, he lives in the element of heat. But it was Watt, the energetic technician, who gave physical-material expression to the mechanical conceptions through his *action*, whereas Mayer, the thinker, was inspired from the realm of the dynamic, the will, and brought it into *conceptual form* in the mechanical heat theory. It can thus be observed that polaric inspirations : will and thinking, find their meeting place in Man, and then cross over into polaric manifestations : science and technology.

It can be seen in the above example how intricately and intimately man is involved in the evolution of the outward civilisation that indeed soul and world development go hand in hand, and that in particular in our technical age, will and thinking are involved. Another aspect of the will extends, however, into the moral forces. Today, the question stands urgently before our mind whether man or machine will be master in future, clearly a moral issue. The answer will depend on the recognition of those interconnections which have been touched upon tentatively here.

MARY BESSIE PEARSON

It is with deep regret that we announce the death of Mary Bessie Pearson, a Nursery teacher at Michael Lodge School. Mrs. Pearson died on Midsummer's Day after only a few days' illness, at the age of 37.

Some two and a half years ago the school was expanding rapidly at the lower end, and it became necessary to divide the Nursery into a junior and senior group. Mrs. Pearson was a personal school-girl friend of the then Nursery teacher, and after a little consideration and study she joined the staff in September, 1952 to take the four-year olds. She was an energetic and cheerful soul, devoted to the welfare of the children. All the children in the school were very fond of her.

Mrs. Pearson was an excellent teacher, a co-operative colleague, and a great loss is felt by all who knew her.

The Teaching of Mathematics

Hans Gebert

WHY do we teach mathematics? This question was recently posed in the columns of the *Mathematical Gazette*, which is the organ of the mathematics teachers in Great Britain. It is indeed a question which must be uppermost in the minds of all teachers, for what we teach and how we teach it can only be decided in the light of the reply to this question.

In the article referred to, the point was made that mathematics is becoming an essential tool for more and more people. This is indeed so. In many schools the pupils interested in science, but lacking in mathematical ability, are encouraged to study biology, because this subject does not require mathematics. This policy is a dangerous one, because mathematics is now almost as indispensable to the research worker in the various biological fields as it is to the chemist and the physicist. The same can be said about economics and the social sciences. If we take a larger view however, even this widening of the application of mathematics can only affect a comparatively small proportion of the pupils who pass through our elementary and secondary schools. Even today it is doubtful whether a very strong case can be made out, on grounds of immediate practical utility alone, for the teaching of much more than the basic arithmetic of integers, fractions, decimals and percentages and of the mensuration of the simplest geometrical figures in any but the examination streams of the Grammar Schools. Nor indeed would many people attempt to do so. When it comes to deciding the content of the mathematics syllabus the ever widening application of mathematics must however not be overlooked. The syllabus will have to be planned with the more modern applications of mathematics in view.

It becomes ever more difficult also to give an account of the current developments in science without using at least some mathematical ideas. The person with only a rudimentary mathematical education is therefore in danger of being more and more cut off from the main advances of our civilisation. He may be condemned to live in a world, which he is not equipped to understand, a world in which much seems like magic, and in which he has often to be guided by uncomprehended authority. Work which is designed merely to cover one of the syllabuses for the ordinary level mathematics examination of the General Certificate of Education comes, in the writer's opinion, under the heading of 'rudimentary mathematical education'. For a person who has only reached this level, science would have to assume the role which the Church played for the common man in the middle ages.

Although these considerations have already a wider application than those of utility, it may be doubted whether many teachers would regard them as the main reasons for teaching mathematics. When

asked by a pupil why he has to do sums, the teacher would probably reply, "Because it is good for you", or, "Because it is a good training for your mind". Before we can discuss a mathematics curriculum or the way in which the subject should be presented at the various ages, we must have a clear idea whether the teacher's reply is in fact true, and if so, why, and under what conditions it is true. To do this it will be necessary to look more closely at mathematics itself and at the mental and psychological development of the child.

An examination of the application of mathematics and of its relationship to science can teach us much about the nature of the subject. Shortly before his death the celebrated physicist Sir Arthur Eddington published a book about the philosophical basis of physics.* He comes to the conclusion that physics can only discover the structure of the physical universe, in so far as this can be embodied in mathematical equations. What the equations describe, the contents of the structure, he maintains has not been and cannot be discovered by the methods which physics uses at present. It is as if on investigating a building we could only discover its dimensions and the size and arrangement of the fundamental units, but not the material of which it is made.

At first sight such a statement may seem to be in violent contradiction to the actual facts. In recent years we have often been made aware only too acutely that the applications of our physical knowledge have nothing of a merely theoretical nature about them. We need only consider the rapidity with which the face of the civilised world has changed in the last decades, to obtain tangible proof of the power of the methods which Eddington believed had such severe limitations. And yet a posthumously published work by the same author,** which is highly mathematical, goes far to substantiate the claims in the author's earlier book. In any case the opinions of so eminent an exponent of modern physics deserve to be taken seriously.

Before drawing any conclusions let us turn to another realm in which mathematics has advanced by leaps and bounds in recent years. I am referring to statistics. In some more popular treatises the chapter dealing with probability and statistics is entitled 'Chance'. What could on first sight be further apart than strict, logical mathematics and fortuitous chance, in which by definition there is no law, no rhyme nor reason? And yet the application of mathematics to apparently quite unordered events has been eminently successful. The balance sheets of insurance companies and the finances of Monte Carlo bear witness to this fact. Closer acquaintance with probability calculus makes the paradox all the more profound. Mathematics is in fact only applicable if there is no definite causal connection between the events with which it deals. The obvious success of statistical mathematics seems however to suggest that there

is structure even in apparently fortuitous happenings. Although the outcome of each single event may be quite unpredictable in the ordinary way, an assembly of a large number of such events has structure which is amenable to mathematical treatment.

Mathematics, as we know it, does of course in the first instance arise as a free creation of the human mind. Geometry text books have been written without a single diagram and in recent years algebras and geometries have been created which are not derived from sense perception by abstraction. Some of these have already found application in science, others may still do so. Some in fact have been created to meet the needs of modern physics. And yet the examples quoted above may lead one to the conviction that the ideas so developed are in and behind the real world surrounding us. How could a science which apparently confines itself to the discovery of the mathematical structure of the universe set objective processes in train in nature if that structure were not an important and integral part of nature itself? The mathematical ideas reveal themselves in this way as part, perhaps the lowest part, of the intelligence and wisdom which lies behind the intelligence of the universe.

This conception is of course not a new one. Plato, who experienced ideas as fashioning, forming agencies in the world, rated mathematics so highly that he regarded its study as the necessary preliminary to an understanding of philosophy. Novalis, one of the most universal minds of the Romantic movement, said that when man was driven from paradise, God gave him number in its two forms of arithmetic and music as a reminder of his state before the fall. The discussion of the relation of mathematics to reality also figures in modern dissertations on philosophy and many modern mathematicians would hotly deny the claims here made for their subject.

If one recognises mathematical ideas and mathematical structure as existing independently of any human minds and as a part of the intelligence which orders the universe, the question, "Why do we teach mathematics?" is seen in a new light. Indeed the recognition can become the starting point for a revaluation of the tasks of education as a whole.

Two further questions present themselves. The first one is, How did these ideas come into existence, or, Who thinks these thoughts when human minds do not? The second one is, How is it that human minds can attain to mathematical ideas at all? The first question would lead us rather far from our immediate subject and will therefore not be considered further in this article. The second question on the other hand is most relevant and an answer must be attempted. The fact that one man can on the whole understand another's ideas is usually taken as evidence for the essential similarity of the structures of different human minds. In fact our practice as certifying as abnormal anyone whose ideas cannot be readily comprehended by the majority of educated people is a practical application of this test. The same form of argument must lead us

*The Philosophy of Physical Science.

**Fundamental Theory.

to the conviction that a mind which can grasp some of the ideas of the intelligence underlying the world must share some at least of the attributes of that intelligence. The exact relationship cannot of course be ascertained from the evidence and from the arguments presented above. In fact the mind of man at its present state of development can usually not penetrate further than to a general conviction of the existence of a universal mind and of its own kinship to it. Dr. Steiner has developed a teaching about the nature of man, which enables the student to penetrate further than this point. We are now going to quote from his work and would refer the reader to the editorial in the last number of CHILD AND MAN, where a justification for such a procedure has been set out.

Dr. Steiner outlines the nature of man somewhat as follows. In the main, man, as we know him at present, consists of two parts: a soul-spiritual part, which contains his eternal being, and a body which is supplied by the parents and is sustained by the natural world. The soul-spiritual part originates in the same region in which the powers which created and which maintain the universe are to be found and it is akin to those powers. Once this is accepted it is of course no longer surprising that the human mind is able to partake of some at least of the ideas behind nature.

During the embryonic development, the soul-spiritual part of man is linked to the body which it has to inhabit on the earth. It is however one of the great distinctions between man and animal that the former requires a much longer time after birth before he becomes a fully developed member of his species. The fact that full development is not reached until about twenty-one years after birth is recognised by many civilised peoples. This is the time which the soul-spirit part of man needs to take possession of the body fashioned for him and to find his way into human society on the earth. During a large part of this period the child and the young man or woman is guided by parents and educators and it should be the most solemn task of these adults to ensure that the process of incarnation proceeds in an orderly manner and that the result is a well balanced adult.

The process of incarnation may become abnormal in two ways. The soul-spiritual part may become too deeply immersed in the physical organism. It then tends to become subordinate to the needs and urges of that organism and is thus dominated by what should really be its instrument. Much that goes nowadays especially in more 'progressive' circles by the names of freedom and emancipation from outmoded convention is really nothing but slavery to the physical body. The second danger is no less real, although it often has less obvious results than the first. The incarnating soul-spirit may refuse to enter this world fully. In this case we get dreamers and ineffectual people.

Looking at education from the vantage point which we have now gained, we can no longer examine the various subjects only as to

their usefulness in later life or even for their value in understanding the world. We must ask ourselves what their effect is likely to be on the process of incarnation.

Our discussion of mathematics shows that this subject rightly taught should have a very beneficial effect on the developing child. Its content derives from the origin of man's soul-spiritual nature; it can be found at work in the world around us and it orders and is applied to many of man's everyday activities. The subject should therefore have a harmonising influence in the process of incarnation, since it keeps the spirit of man in touch with his origin, and at the same time, by pointing to the interrelationship of physical objects and guiding their manipulation, draws his attention continually to the physical world. Thus through the study of mathematics the incarnating spirit of man is helped to avoid the two dangers mentioned above.

These considerations however also give a guide, at least in a general way, to how mathematics should be taught. If it is to harmonise, no aspect of the subject must be stressed at the expense of another. It would therefore be quite wrong to stress the practical application under the false impression that only in this way can the interest of less gifted pupils be kept alive. It has been the writer's experience that even very weak mathematicians can be interested in theoretical questions provided they are of real importance, and only of course if they are not expected to do the usual complicated problems found in text books. Examples of such theoretical questions will be given later. It is equally wrong to separate one's best pupils and to lead them by a tour de force into the higher reaches of the subject, leaving behind the more mundane application and not sparing the time to point out the appearance of arithmetic and geometrical law in nature, wherever the opportunity arises. There are essentially three aspects to our subject:—

1. The intrinsic theoretical content.
2. The appearance of mathematical law in nature.
3. The application of mathematics to commerce and technology.

All three must be given their due weight. A brilliant mathematician, who has no idea what laws underlie the formation of a musical scale and of harmony and who has never contemplated the geometrical forms found in shells, unicellular organisms, crystals and plants will have suffered in his education even if he turns out to be a successful research worker in his restricted field.

In a concluding article in the next number of CHILD AND MAN I shall deal in more detail with the curriculum in mathematics in a Rudolf Steiner school and how this is adapted to the needs of the developing child.

[to be continued].

History in Class V

(Ten-year olds)

Roy Wilkinson

THE ancient civilisations cover such a vast period and contain such a wealth of material that the teacher may easily get lost in them and despair of ever coming to a conclusion. It is a tremendous task to digest so much material and to form the concentrated essence which it is desirable to present to the child. Having found it, it is real gold and silver and precious stones.

By ancient civilisations we mean those of India, Persia and Assyria-Babylon-Chaldea-Egypt. Dr. Steiner dates these as beginning approximately 7000, 5000, 3000 B.C. respectively. These are three clearly marked epochs in human evolution. The four last mentioned should be considered together.

When a child has suffered a sad experience, it is comforted by a story which parallels this experience, if it is put in an objective way. If a child is boastful, it can be corrected by stories giving a parallel picture but leading to absurdity. If a child is nervous, it can be helped by an imaginative story showing how someone overcame his fear.

Adventure stories appeal because the child feels itself identified with the adventurers; and is not life the great adventure to the child?

The stories from ancient civilisations give an historical picture of man in his development into the material world. This parallels the child's own path of descent into the world of matter. In telling such stories therefore, one is really giving the child a picture of his own evolution. With his own subconscious experience thus portrayed objectively he feels a greater harmony with the world and gains a better understanding of it. A stabilising effect is created in the soul as the child realises (not consciously, of course) that others have trodden the same path.

The first task is to arouse in the children some idea of the mighty and mysterious continent of India. It so happened when we were taking this period that the conquest of Everest was very much in the news. This gave a very topical opening. India is shaped like a triangle, with the sea on two sides and the mighty snow-capped peaks of the Himalayas on the third. There followed a description of the country with its jungles, forests, swamps, plains, mighty rivers, wild animals, fertile ground, temples and people.

But stories will express more to children than factual descriptions, so a number of old legends were told in which the soul life of the ancient peoples is well characterised. Throughout the stories is manifest a very close connection with the spiritual and a desire to turn from earthly things. This is well expressed in the following verse:

Every moment the voice of love comes from left and right,
But here on earth is darkness, grant us eternal light.
We have lived in heaven, the angels were our friends,
Thither let us go, for there our suffering ends.

One tells the story of Manu and the floods, and of the seven holy Rishis who filled people's hearts with love and reverence for the great God. There is the wonderful story of Rama who came to earth to overthrow an evil spirit. There are the stories of the miraculous deeds of Krishna, hammering home spiritual and moral truths. There are marvellous pictures for awakening a child to the realisation of the spiritual, as, for instance, the story of the happenings after a very decisive battle in Indian history. It is told that great light seemed to come down from the heavens. Indra was going to comfort the sorrowing. Krishna told them to remember that the spirit of man lives for ever. It was then seen that the dead from both sides arose as friends, were met by Indra and taken into his heaven. A culminating story of this period is that of the Buddha.

Quite a different character is experienced in the following Persian epoch. The land itself is altogether different. Persia is a high plateau, shut in by mountains and intersected by deep valleys. Only with effort can crops be cultivated. The children now learn of the great Zarathustra or Zoroaster. He was the leader who taught of the continual struggle between the forces of light, Ahura Mazdao, and the forces of darkness, Ahriman. He taught his people the necessity for cultivating the earth and showing love towards it. In ancient Persia took place the struggle between the Turanians (Ahriman worshippers) and Iranians, the followers of Ahura Mazdao, led by Zarathustra. Eventually, the Iranians conquered and their leader's life-work was complete. He retired to the mountain where he had first sought the God of Light. There follows a tremendously illuminating picture. As the time came for Zarathustra to die, a rainbow bridge stretched from the mountain to heaven, and on it was a radiant figure of light to welcome him. As he crossed he was vouchsafed a view of things to come, and saw that his work had been successful.

The next civilisation to be described is that of Assyria-Babylon-Chaldea-Egypt. Here again the physical scene is very different. On the one hand is the land of the two rivers Euphrates and Tigris, which flow through Assyria, Babylon and Chaldea. On the other, the one river, the Nile, and Egypt. Here are flat countries, slow flowing rivers and wide expanses of sky, with stars clearly visible through the crystal air. Significant stories are those of Etana and Gilgamesh. Etana was taken on the back of an eagle through the seven heavenly regions in order to learn the secrets of birth. Gilgamesh passed through the portals of the sunset and completed a long and hazardous journey to find the secrets of death. The essential point of this civilisation is that now mankind felt the loss of direct contact with the spiritual world, yet still retained a feeling of its existence.

Through the study, therefore, of the divine works revealed, men sought to understand the creator. This was what brought about the intensive study of Astronomy and Mathematics.

In mentioning these countries of course, the children had much to link up with from their year in Class III, where they had been told the stories from the Old Testament. A great diversion, although also very much to the point, was to describe cuneiform writing and hieroglyphics, and to let the children practise them.

It is illuminating and interesting beyond words to bring such stories and matters as those mentioned above to the enquiring minds of the children. This is food; real, digestible, unadulterated food for their souls. A calm and a quiet descend over the class when dealing with such things. The paintings or drawings in which children reproduce certain themes, show that the subject has gone right home. They look different after such a period. They are content, and give little sighs of satisfaction. Such lessons are school, church and doctor combined.

A Painting Lesson

J. G. Smith

A teacher in a Rudolf Steiner School is often asked, "Why do you teach painting to all the children in your school? It may be a good thing for a few of the more gifted ones, but would it not be better for the others to use their time in a more profitable way?" Such a question requires a deeper answer than is at first expected, for we do not teach painting so that the children may all become artists, but seek through the regular practice of painting to develop in the growing child certain qualities of soul. Rudolf Steiner indicates again and again the necessity of artistic work for the complete development of man's being, so that his thinking and will may be harmonised through feeling. The world of today suffers greatly from the lack of a well-developed feeling life. This is not to be confused with sentimentality or emotionalism, but is the kind of deepened feeling which allows one to enter lovingly into another's soul-life and to see his point of view.

As this probably sounds mere theorising, I should like to describe a painting lesson which I saw recently. It was taken with a large class of about fifty eleven-year-olds. Some of the children came early to help prepare for the lesson which began with vigorous recitation. This teacher believes that clear speech has a great influence on the painting; the teacher need not be an artist but must be able to speak well and clearly. After the materials were given out and the

papers fixed to the boards, the teacher discussed what was to be painted. In accordance with Rudolf Steiner's suggestion that the painting lesson should sum up the week's work in a satisfying experience, this class was reminded of what they had been learning in their study of birds. The teacher made a sketch in chalk, with varying shades and differentiation of blue for the sky, indicating the movements and currents of the air which the birds love to follow. The sunlight plays an important part in the life of the birds - one has only to think of the dawn chorus on spring mornings - so some space must be given for a shining yellow. The children were asked to look at their paintings and see where the yellow could best appear in relation to the blue. Next the element of warmth was discussed and some red added to the picture, perhaps sunrise or sunset. Then came what was for me the most breathtaking moment. The teacher said, "Now we have prepared a suitable atmosphere for the birds. Look and see where they are coming!" One child after another came out and indicated possibilities. There they were, hidden in the colour, and it needed only a light touch to reveal them. The sketch was removed and the children were allowed to begin their own pictures.

As I watched them and saw how they looked objectively at their paintings trying to discover what the colours could reveal to them - especially when one transparent layer lay over another - I was convinced that these children were receiving a real training for life, that in the painting lessons we have a means of strengthening this life of feeling, this sensitive awareness to another's needs and wishes. The teacher went round giving advice and often practical help so that the finished picture was neither entirely what the child wanted nor merely what the teacher wanted, but a subtle combination of both.

So the lesson came to an end, the two hours having slipped by as though only a few minutes, and the children helped to clear up, happily contented with their morning's work.

Then suddenly there flashed up in my mind's eye a painting lesson I remembered as an exact opposite to this one, where the children were doing "free painting", i.e., splashing and dabbling in thick poster colour and following their own whims and fancies. Here is a contrast indeed! And it is with some apprehension that one asks what sort of training did this give. We have all probably suffered at one time or another from the person who wants to impress us with his own ideas, with no consideration of our feelings or wishes, but with his overbearing will seeks to bend all who come within his reach. Although the method is free, the colour becomes fettered and imprisoned on the paper. In direct contrast, the strict and definite method of the water colour technique succeeds in setting free the colour and, at the same time, frees our own souls; for when we can enter into a living experience of colour such as these children learnt in their bird pictures, then we are lifted up out of our narrow earthly limits to the very doors of heaven.

Questions and Answers : 9

How do old scholars from Rudolf Steiner Schools compare with their contemporaries?

The question is an old acquaintance. It is asked by most visitors who have a real interest in education. But familiarity with it does not breed an easy answer.

What Rudolf Steiner gave as an impulse to education does not form a method by means of which certain "types" are produced. Rather is it a knowledge and an insight which can adapt itself both to general and particular conditions of life. A Steiner school, therefore, will take into account the potentialities and the environment of its pupils. But in the first place it will aim to create balanced and harmonious people. Thus, while the kind of tasks the pupils take up may vary from school to school, one can perhaps say that old scholars in general seem particularly able to adapt themselves to practical situations and problems as they arise.

Peter, for instance, wanted to study architecture. He entered for a national scholarship and was the only one who, on his own initiative, brought a working model to his interview. He received the scholarship. Now he makes special efforts to see a great variety of people and buildings. He also plays an active part in the College Dramatic Society and, like many other Edinburgh School old scholars, he attends singing groups. In public he is always brimful of energy. Peter follows world events with interest and concern. His enthusiasm sees many possibilities that must remain unfulfilled. He feels he knows too little about many subjects. Once he confessed to me how little he had read for pleasure in earlier years. When I saw him a little later he was reading modern American poetry. Then he disappeared from the social scene – a habit of his when he settles down to intense work.

Peter's zest and manner of entering into things might be a little exhausting if it were not accompanied by humility and a selfless quality which makes his enthusiasm and initiative a social one.

Mary is very different. She is never at her best in any examination. Mary travelled abroad, changed her work several times on her return, and is a constant surprise to her old friends. While she was always a warm-hearted person few would have expected the sense of purpose and the variety of interests she now has. Perhaps it is natural that a schooling which seeks to bring out the spirit of its pupils can cause a rather late inner development in a "slower" child.

Then there is Walter, a gifted boy who was equally at home in language studies and mathematics. He is now a very eager student and for a person of his intelligence is unusually free from intellectual aggressiveness. A beautiful landscape still fills him with wonder and he enjoys going "hostelling" with others. Walter is a good mixer – but he will also take a copy of Faust in his rucksack for the

half hour before the lights go out. He is reliable and likeable because of his open-minded attitude to people.

Each of these three goes his own inner path – and not one dictated by the school. The school only tried to realise that which lay within them.

That is all very well, someone might think. These are chosen examples but what of the rest? So let us look at an analysis of 50 pupils who have left the Edinburgh School.

Ten of these are at universities. Surprisingly enough only one is working for an Arts Degree while the majority are studying for a Science or Medical Degree. Another twelve are occupied in physiotherapy, occupational therapy, teaching the blind and the deaf, and nursing. Seven are serving in Her Majesty's Forces (three as officers). The rest of the list is very varied; it contains two secretaries, two chiropodists, a motor mechanic, and a kennel maid, as well as students of agriculture, art, music, eurhythmy, draughtsmanship, accountancy, and seed testing.

But perhaps the best answer to the question are the growing numbers of old scholars themselves rather than the professions they follow. It is gratifying for us, as teachers, that time and again new parents come to us through meeting them.

W. G.

ANNOUNCEMENT.

We are pleased to announce that **Dr. GEORG UNGER** of Zurich is preparing an article for us on the relation of the elementary arithmetical processes to the sphere of mathematical thought. Dr. Unger is well-known for his work in mathematics, his wide experience as a teacher, and his deep understanding of the basic principles in Rudolf Steiner's scientific work. As reported in a previous issue he took part in the recent conference of the Rudolf Steiner Educational Association, and it is his intention in this article to develop further the points he mentioned there.

FASHION NOTE.

Whenever the name of Rudolf Steiner is mentioned in the daily papers, a press-cutting agency sends us a cutting of the item. A few weeks ago we opened their familiar envelope, and unfolded a column from a provincial paper headed—"The Latest Hair Styles"; and containing several photographs of lovely feminine heads exhibiting the very latest in tonsorial artistry. After having already received a cutting of a photograph of Marilyn Monroe, and a description of her studies of Rudolf Steiner's books together with Dr. Edith Sitwell, we were ready for anything. A glance at the text, however, soon explained things. It appears there is a famous hairdresser of the same surname, and as only that was used, hence the mistake. Without underestimating the skill, however, which goes to make a woman's hair her crowning glory, we felt obliged to point out that **RUDOLF Steiner**, while he was a man of the most catholic interests, was far more interested in what went on *inside* our heads—men's as well as women's—than how they were decorated outside.

LETTERS TO THE EDITOR

Sir, In your Midsummer issue of this year, under the heading "Five or Twelve" you published some ideas about the senses. These ideas appear to be the outcome of the last teachers' conference.

Hearing is mentioned as a lower sense after having at first been correctly mentioned amongst the higher senses. This is merely a regrettable slip.

Then you say that children today imitate the movements of machines and thereby they become overstimulated in their sense of movement. Obviously, it is the opposite; purely mechanical repetitive movements are done without conscious use of the sense of movement. Unruliness or fidgety movements are not due to the overstimulation of the whole sensory system; they are due to the failure of the sense of movement and the sense of sight to inform the conscious mind in time about the movement of the limbs. The sense of movement is not active but inactive in children; the limbs however, are active and it is the task of education to activate the sense of movement in order to create the awareness of movement that leads to its control. The sense of movement is not helped by regular rhythms but rather completely effaced. It is helped in eurythmy by asymmetrical movements and changing rhythm, as, for instance, in the hexameter or in the well known exercise, 1; 1, 2; 1, 2, 3; 1, 2, 3, 4; etc. It is in the change of rhythm that the deficiency of the sense of movement in a pupil becomes immediately apparent.

The writer of your article seems to be entirely unaware that whereas movement is a function of the muscles, the sense of movement produces merely the awareness of the movement during its performance.

It is most unfortunate that inexact and immature anthroposophical views are frequently (using the words of Miss Bennell on p. 23 of the same issue) "dropping like dew upon many hearts that are open to receive it". According to Rudolf Steiner "the thinking must work with far greater intensity in apprehending organic phenomena than in grasping the law of nature" (Theory of Knowledge). The thoughts that you have published about the senses are not the result of such 'greater intensity' but rather evidence of a vague and emotional thinking, below the generally achieved standards of ordinary science.

I do not expect that you will print this letter, although I shall be pleased if you do; but as you promise to develop the subject in future issues, my letter might be an inducement to do this in a way which is to the credit of Rudolf Steiner.

Salmon's Cross,
Lonesome Lane,
Reigate, Surrey.

Dr. F. de Havas.

(Contrary to Dr. F. de Havas' expectations we are pleased to publish his letter. In accordance with usual practice we have asked the author of the article concerned for his comments. ED.)

"The statements Dr. Havas refers to were part of my report of the conference at which Herr Aepli gave four lectures on the Twelve Senses."

Dr Havas' gratuitous indictment of them as 'evidence of a vague and emotional thinking, below the generally achieved standards of ordinary science' is, of course, an opinion to which he is certainly entitled. But the mere statement of it neither makes him the only arbiter of those 'generally achieved standards', nor allows him to escape the application of them to his own pronouncements.

He says, for instance, "the sense of movement produces merely the awareness of movement during its performance". He also says, "the sense of movement is not active but inactive in children". Now, children certainly move; but to imply that they are unaware of their own movement owing to the inactivity of the sense of movement - or, in plainer English, to say they move but don't know they're moving - is in my opinion, not only to fall short of those 'generally achieved standards' himself, but a flat refusal to exercise the thirteenth - or, Common - sense".)

Cheap and Venomous Journalism

Sir, I was rather surprised that you published the review of "Understanding One's Fellow Men" by A.H., which appeared in a recent issue of Child and Man. This was surely in the worse style of cheap and venomous journalism.

I thought "Understanding One's Fellow Men" a very good development of the idea of the temperaments and that many of your readers would find it most helpful.

One cannot help feeling that the author of the review had some side of his own personality, which he refuses to recognise, revealed to him by "Understanding One's Fellow Men" and that this produced the blind emotional reaction which appeared in the review.

You are at liberty to publish this letter in Child and Man.

51, Longfield Lane,
Ilkeston, Derbys.

Dr. T. Gladstone.

(What Dr. Gladstone has said about "Understanding One's Fellow Men", and the 'cheap and venomous' nature of our review are opinions, which—while not necessarily agreeing with them—we are glad to publish. What he has said he "cannot help feeling" about the personality of our reviewer is, however, another matter which we would rather not pursue, preferring to confine our own comments to books—not people—ED.)

Old Scholars and Parents

Sir, With regard to the last editorial, please may I say how much I have always appreciated Child and Man. As for the suggestions you invite, how about an occasional contribution from an old scholar on his or her work in the world; and could a parent occasionally supply an article on a theme you think relevant—perhaps, even to include babyhood? The title 'Child and Man' is so all-embracing.

The Cottage,
Southfields Mill,
Woodchester, Stroud, Glos.

(Mrs.) G. N. Hayn.

(By all means. We want Child and Man to be as representative as possible. Only thus can it help to get the education better known,—which is what we publish it for. We will certainly consider such articles; but don't forget there is always this "Letters to the Editor" feature, too, which—we have on good journalistic authority—is one of the most popular features of any paper. As for articles on babyhood—well, while we have no objection, and agree that they come within our scope, we haven't quite got over some of the things that were said to us for publishing that 'Mother and Child' series recently.—ED.)

The Best Word on 'Proof'

Gentlemen, I wish that I knew which Editor is the author of "The Editor Does Not Regret" in Vol. IV, No. 1 as this is for him.

This editorial is without exception the best word I have found on this great problem of "proof"—a problem well-known to all of us who would speak of the educational concepts of Rudolf Steiner, and of Anthroposophy itself. I believe that it could be of enormous help to everyone who finds himself on the receiving end of questions about all phases of Dr. Steiner's work, and wish to suggest that reprints be made available. Or, it might be possible to enlarge the editorial somewhat, to include one or two well-known examples of statements which could be proved only well after they were made. I should like to see one of these reprints tucked into all Rudolf Steiner books sold (at least here in the United States).

If any part of this letter would be suitable to publish in *Child and Man*—it's "all right" with me. Your new cover is dignified and attractive, I think. The whole magazine excellent! With sincere thanks for that helpful editorial and best wishes to all who make *Child and Man* what it is.

Route 1—Box 56a,
Spring Valley, New York.

(Mrs.) Nancy Bartlett Laughlin.

(While 'WE' are grateful to Mrs. Laughlin for her letter, 'WE' are also sorry to disillusion her. Neither 'I' nor 'he' wrote that editorial; but 'we'. It was, in all senses of the word 'literally'—a joint effort.—ED.)

Speaking of Education

(Contributions to this feature are welcome. In all cases please quote the source, and wherever possible send the actual cutting).

"'I'm not going to be a teacher', a possible recruit is alleged to have replied, 'because the teacher is afraid of the headmaster, who is afraid of the Education Officer, who is afraid of the Education Committee, who are afraid of the parents, who are afraid of their children, who are afraid of no one.'"

"Train Up A Child"—E. W. Crabble.

* * *

"There were three subjects for composition . . . best, however, for sheer delight was the brief effort one pupil submitted where the paper asked for a conversation piece:

'It has been a busy day', said the Rector, sinking into his chair. 'It still is', replied his wife'.

Times Educational Supplement.

* * *

"Mr. Oliver Whitfield, headmaster of Usworth, Co. Durham, secondary modern school, said yesterday that he has caned all the 200 boys in the school because drawings appeared twice in a week in a newly decorated porch.

After the first drawing appeared the boys were warned that if no one owned up all would be caned. Mr. Whitfield said: 'I rarely use the cane.'"

News Chronicle.

* * *

"The stations at Innsbruck and Graz (Austria) are shortly to be supplied with waiting rooms for schoolchildren where they will be able to do their homework under supervision. A small library and a number of games will also be at their disposal".

Bulletin of International Bureau of Education.

* * *

" The examiners in biology had wanted the candidates to be set to identify a louse. That meant for the examination as a whole about 1000 lice. Yet search as the searchers would not an English louse could be found. The plans of the J.M.B. (Joint Matriculation Board) and been thwarted by D.D.T."

Times Educational Supplement.

BOOKS

MAN OR ANIMAL?

When Bishop Wilberforce, at a meeting of the British Association in 1866, "begged to know" of that formidable champion of Darwinism, Huxley, whether it was "through his grandfather or grandmother that he claimed his descent from a monkey?" a struggle broke out between the official representatives of the spiritual and the scientific explanations as to the origin of man on earth, which lingers to this day. Rudolf Steiner was a boy of five at that time and he grew up in the heat of that conflict (which was by no means confined to England), and himself became a protagonist on the side of the Evolutionists. But with what a difference! Where others saw simply the operation of a natural law in man's descent from an original, simple living organism to one of increasing complexity, he saw the gradual incarnation of the human spirit through various forms until it reached its height in a being who could develop moral activity in freedom. "Haeckel's genealogical tree, from protozoa up to man as an organic being, ought to be capable of being worked out without a breach of natural law, and without a gap in its uniform evolution, up to the individual as a moral being in a definite sense Ethical Individualism, then, is the crown of the edifice that Darwin and Haeckel have striven for the Natural Science. It is Spiritualized Evolutionism applied to the moral life". (Philosophy of Spiritual Activity, R. Steiner). The animals he regarded as forms, living forms that have since pursued a collateral evolution of their own, which man has discarded during his own evolution as an individual moral being. While holding in highest esteem all that Science had achieved, he was none the less convinced that "The materialistic understanding of that which Darwin discovered leads to the adoption of conceptions based upon the kinship between man and the animals which deny the spirit where it appears in its highest form in an earthly existence—in man. Goethe's conception leads to the perception of a spiritual creation in the animal form which has simply not yet arrived at the stage at which the spirit as such can live. That which lives in man as spirit creates in the animal form at a preliminary stage; and it metamorphoses this form in the case of man in such a way that it can then appear, not only as creative, but also in its own living presence". (The Story of My Life: R. Steiner).

It is not surprising then, that when he came to establish his method of education he attached the greatest importance to the way in which the study of the animals was approached. In a book we have recently received ("TIERFORM MENSCHENGEIST: Erste Tier- und Menschenkunde in der Padagogik Rudolf Steiners:" by Dr. Gerbert Grohmann Verlag Freies Geistesleben, Stuttgart; DM 3.80) the author shows just how far-reaching that importance is.

While Dr. Grohmann emphasises the fact that "Rudolf Steiner's view of mankind is not a simple one, and no one can expect to fathom its whole significance in their first introduction", he none the less makes it quite clear that it envisages "a theory of evolution which sees in man the first—not the last—of all created things . . . animal kingdom, plant kingdom, and also the mineral kingdom all stem from man".

In making the first introduction to a study of the animal kingdom, one is not just concerned with giving the child—young as he is—interesting and entertaining information about the different creatures. One is laying the foundation for the child's later adjustment as a moral being in the world of his fellow men and women; and at the same time leading him over from the instinctive identification with the surroundings of early childhood, to the objective judgment-forming activity of adolescence.

For instance, in speaking of what is already well-known to students of Dr. Steiner's work, the significance of the human hand, Dr. Grohmann points out how essential it is to let the child see that, unlike the animal who uses his limbs to support and move his body, or has them pre-conditioned by Nature to one definite end as a specialized kind of tool, man can use his hands in free active service for others in any capacity which his spirit devises. The human

hand is not as good a tool for one particular purpose as the limb of an animal, just because it is this "instrument of the spirit" ("Die Menschenhand ist ein Werkzeug des Geistes"). By letting the children see this through the consideration of manifold examples one lays a foundation, free from sentimentality, for the free human development of moral activity.

But *how* this is to be done is equally important. Dr. Grohmann points out how the child at this age (9—10) is still not quite out of the instinctive feeling of oneness with his surroundings of his infancy, when one could talk to him about animals in fable and story, nor has he yet acquired the objective judgment-activity of later years. The teachers task at this time is gently to awaken that judgment activity; and everything depends upon the tone, the mood, in which one does it. It is not just a question of *telling* the child things but the animal should be so described that the judgment – for instance, that the limbs and the head of the mouse exist to serve the body – should arise naturally and *independently* in the child *through the artistic description*. But he wisely emphasises, however, that while Dr. Steiner expected of the teacher an artistic, pictorial description of these things, he must in no way depart from or contradict ordinary facts of biological research with which, of course, he would also have made himself familiar.

The publishers claim – and rightly in our judgment – that this is a book not only for teachers in Rudolf Steiner schools, but for all those who have anything to do with children, and who are aware of the problems involved in knowledge of man in relation to the animal world. Unfortunately for many of our English readers it is in German, of course; though this will not deter those who are already acquainted with the value of other work from Dr. Grohmann's pen. We think it would be an excellent book for study and discussion in a Parent-Teachers' group – given of course that at least one member was familiar with the language. It should ultimately be translated, of course but if all else fails – one can always learn German. The book is worth it.

WHAT IS A CHRISTIAN EDUCATION?

It is refreshing and stimulating to read a book about religious education by a man who has the deepest personal convictions about his subject, and a wide experience of its practice. Just such a book is, **TRAIN UP A CHILD: The Purpose and Practice of Christian Education** The Paternoster Press, and just such an author is E. W. Crabb, Headmaster of the Stanburn School, Middlesex. He has no misgivings about the problem, "... the deepest needs of our natures can be met only on the spiritual level;" and no uncertainty about what the problem implies, "The Christian emphasis in education reveals the fact that man is not a highly developed animal, but a fallen creature of God who desperately needs the redemption which has been made possible by the work of Christ. An education grounded in this conception can alone claim the title of 'Christian Education'." On this basis he sets out to show from the needs of the child and the nature of the contemporary educational 'set-up' that only by the practice of public worship, family prayers and the regular reading of the Bible, can such an education be promoted. But this is no fervent pleading for a return to the more formal piety of a bygone age. While Mr. Crabb has no illusions about the fact that Christianity must be *taught*, and taught well, he does not ignore the more subtle factors involved: "The good teacher of mathematics who is also a sincere Christian imparts more spiritual teaching than a boring but sincere teacher of religion, even though the former seldom directly speaks of his faith. The teacher of art who reduces everything in his own life to *f. s. d.* teaches by implication, a more complete materialism than the most fervent apostle of communism". This is a book full of sound sense. We wish we could quote more of it. Many of its sentences are aphorisms of life-wisdom which recommend themselves by their very sincerity to all who have tried to deal with the problem he expounds. We can be grateful for men like Mr. Crabb who have the courage to say such things to a bewildered age. We have only one question and we put it with no less concern than his for man's need for the Christ-experience:

Dare we in such an age as this run the risk of over-simplifying the problem? Granted that "faith is not belief without evidence, but is rather belief on the very best of evidence, the word of Almighty God" what answer do we give to the sincere enquirer who asks, "What do you really mean by the 'word of Almighty God'?"

WHICH COMES FIRST?

At the end of a course of lectures on education given at Ilkley in 1923, Rudolf Steiner went to Deptford to see the school founded there by Margaret McMillan (who had opened the Ilkley course with a lecture of her own on "Education through Imagination") and he spoke in highest terms of what she was doing and how the beneficent influence of her spirit irradiated the whole place. In "MARGARET McMILLAN, PROPHET AND PIONEER" (second Margaret McMillan Lecture, by Emma Stevinson, O.B.E., University of London Press, 1/6d.), Miss Stevinson tells us something of what this work involved: of Margaret's efforts to rescue young children from the dreadful home conditions of that time; of her founding a 'Night Camp' in a Deptford graveyard; of the death of Margaret's sister Rachel in 1917, and the rebirth of their activities in the Rachel McMillan Training Centre and Open Air Nursery School; and finally the founding of the Training College (opened by Queen Mary in May, 1930) of which Miss Stevinson was herself the Principal.

We must not, however, forget that while much that Margaret McMillan fought for has been achieved, that for which she particularly strove – the proper recognition of the right nurture of young children – has not yet received sufficient emphasis in educational development. Great progress has been made in training the "top five per cent" for the specialist work which our modern life demands. We build them magnificent schools; equip them with laboratories and workshops; lay out extensive playing fields. But is it seriously considered that the needs of younger children are just as important? Is it seriously believed that the nursery teacher "both spiritually and in other ways has the same intrinsic value" (to use words of Rudolf Steiner on this point) as, say, the University lecturer? In stating quite simply that only "1.2 percent of the children between two and five years of age can be accommodated in the existing nursery schools and classes", Miss Stevinson leaves no doubt about what she thinks; and she closes her short but impressive survey with Margaret McMillan's own warning as to the futility of any educational programme, however grandiose, that becomes 'top' heavy.

* * * * *

We have also received some very good books for children

HISTORY AS STORY.

For those who like their History in the form in which it was made, that is, in the deeds, conversation, feelings, prejudices, even of those who made it, here is a book ("THE MAD MILLER OF WAREHAM" by Joyce Pearson; J. M. Dent and Sons Ltd.; 8/6d.) they can read and enjoy before passing it on to those for whom it was intended – boys and girls of eleven and upwards. But it is not a history 'book'; it is a rattling good story about a boy tumbler and his 'mad' uncle, the miller of Wareham, who get involved in plots to supplant King John and put his nephew Prince Arthur on the throne. It traces the boy's adventures between England and France among all kinds of people: kings and jesters; monks and rascals; barons and wayfarers. It does not avoid the tragic – or even, sometimes, the horrible – but touches on both in a way and to an extent calculated to help a growing child to understand – as he must – these things, too. But the prevailing mood of the story is one combining humour, adventure and mystery. The subtle way in which Miss Reason interweaves historically exact details of the social life of the time without letting her story suffer, is a combination of art and scholarship which any teacher of experience will admire,

and any child just not notice - which is just as it should be, because he'll take in both that way.

This is an excellent book to put in the school library, or to keep on hand for reading to children during a spare half hour, or better still - if you know a child who has a feeling for the historical - to give away as a present. Only - read it yourself first; you'll enjoy it, too.

ANOTHER KIND OF STORY.

Another book of a totally different type, and for a different age - 6 and upwards - is "FIRST YEAR UP" by D. W. Hackman (J. M. Dent and Sons Ltd; 8/6d.) It is a variant of the ever-popular school story, but involving the experiences of two girls during their first year at a Training College for teachers. It is distinguished both by its interest as a story and its fidelity to training college routine and children among which the embryo teachers do their teaching practice, are faithfully and sympathetically drawn.

An excellent book to put in the hands of a school-leaver who is thinking of taking up teaching. They will enjoy it as a story appealing to their more mature taste; and they will learn far more about the inside of a teachers' training college - short of going to one themselves - than they could in any other way. Indeed, so well is it done, that we pass on the suggestion to Messrs. Dent (if they haven't already considered it): Could not this sort of thing be extended? Instead of those prosy official brochures on careers that are put into adolescents' hands to help them decide on their future, why not a whole series of such stories about other careers? Let's have one, for instance, on an Air Hostess, say, or a Receptionist. With something for the boys, too, of course: an electrician, or a Merchant Navy apprentice. There is no reason in the world why a young person should not be just as accurately informed about a possible career through an interesting story, as through an official description.

AND JUST TWO GOOD STORIES.

When one has to do with a child who is quick, intelligent and a voracious reader, one cannot be too grateful for publishers and authors who keep up the available supply of good, human, straightforward, healthy stories for children, which neither give us cause for alarm as to their content or English, nor leave the child feeling he is being "written down to". Two such stories are: "ADMIRAL'S WALK" by Kitty Parnes, and "NO PLACE FOR PONIES" by Primrose Cumming (both published by J. M. Dent and Sons Ltd, at 8/6d. and 9/6d. respectively).

A. H.

Teacher (meeting a child long after he should have been on his way home):

Why are you so late going home?

Child: We've been kept in.

Teacher: Were you all kept in?

Child: Yes, and the children who weren't naughty were kept in too.

Teacher: And which group were you in?

Child: I think I was about the middle.

Fine summer weather calls the children very strongly out of doors. A teacher who had once taken her young class for a walk in connection with a Nature study lesson was asked to repeat the performance. "But it's French today", she explained.

"Then let's go for a French walk!"

Exhibition of Children's Work in Rudolf Steiner Schools, Dornach, 1954

Roy Wilkinson

During the summer conferences at the Goetheanum in Dornach, Switzerland, an exhibition was held embracing the work of forty-two different schools in different parts of the world. Work was displayed from Germany, Switzerland, Sweden, England, France, U.S.A., and Holland. It was the first time that such an attempt was made, and the result was very imposing, even overwhelming.

To the Goetheanum, the world centre of Rudolf Steiner's work, come thousands of people every year of different nationalities. Their common interest is in the understanding of man as explained through the spiritual science of Rudolf Steiner. During several weeks of the summer, the place hums with activities: lectures in German, French, and English, Eurythmy performances, concerts, plays, and, of course, the performance of Rudolf Steiner's own plays. There are so many activities that it is difficult to keep track of them all. This year, in addition to everything else, was the schools' exhibition of work.

The greater part of the exhibition was put together as if it were the work of one school, so that one could follow the development from class to class but several schools had sections showing their own work. In addition, there were several displays showing: the development of individual children; the same theme through various classes; expressions of temperament—and other matters of particular interest.

The first impression was one of tremendous energy and splendour. In the paintings one could see the joy of the children as well as their development. The paintings of the early years were colour exercises, whereby the children learn to experience colour as an expression by itself. By tracing the work through the classes one could see how the experience of colour gradually merged with the illustration of a theme. Towards the age of thirteen or fourteen when adolescence begins and the intellect develops, children lose their feeling for colour and the teacher then introduces black and white technique, using charcoal. This strong contrast has also a health-giving value at this age, and there were some extremely good examples of work.

Coming as the human being does from the spiritual world into the physical, it is our task in education to help the individual to connect his soul-spiritual forces with the body. In following the sequence of paintings and drawings, one could see clearly the steps on this path. First, the exercises in pure colour; then, at the age of nine, the farming, gardening and housebuilding periods; at the age of ten comes the study of animals in connection with man, and the beginnings of geography; at eleven comes plant-study; at twelve, physics, chemistry, geometry, mechanics, leading later to more specialised studies such as astronomy, mineralogy and surveying.

Another extremely interesting series of pictures to study, was that related to the story-telling in different classes. The sequence of stories follows the evolution of humanity, which the child recapitulates in his own growth. Certain stories, therefore, correspond with certain ages. From seven to eleven the sequence is: Fairy tales, fables and legends, Old Testament stories, Nordic mythology, Greek mythology—after which one approaches History proper. In beautiful successions of pictures one could see how these stories had gripped the children, and in what extraordinary measure they were able to reproduce them.

The notebooks for the different subjects were a joy to behold; they were done with such care and devotion. The collection of handwork was also impressive: knitting, crochet work, fancy stitching, dolls, animals, mats, bags of all sizes and descriptions. Some of it one could only describe as exquisite. From the higher classes came wooden spoons, darning eggs, trays, dibbers, carved

figures, moveable toys and an array of puppets. There were also examples of book-binding, weaving and carpet making.

A replica of the Stuttgart Nursery class was also on view, complete with the charming teacher whose endless patience with the never-ending stream of visitors was outstanding.

It would be invidious to mention special exhibits. The whole collection showed an extremely high standard of work; but, more than that, it demonstrated in an unmistakable manner the healthy fundamentals on which the Rudolf Steiner method is based. To collect, sort and erect all this must have been the work of Titans, and great credit is due to all concerned.

A continual stream of visitors made its way through the exhibition, while above the constant murmur of their comments, the louder voices of the guides could be heard offering explanations in four languages.

The desire has been strongly expressed that at least a nucleus of the exhibition should be retained or re-assembled for future public showing in various parts of the world.* May this wish be fulfilled, for in this way of educating an answer may be found to some of the world's most pressing problems; and more people should know of it.

Draw your Own Conclusions

Thirty five years ago in August of 1919, Rudolf Steiner, while lecturing to the teachers of the Waldorf School, Stuttgart, made the following remarks about certain tendencies in the psychological testing and examination of school-children:

"Now it has been determined by research that there are such types of memory. The scientific result has now been obtained. We can ask: 'What has been discovered scientifically in exact psychology about the types of memory?' And we learn: firstly, there is a type of memory which assimilates easily or laboriously; secondly, a type which reproduces easily or laboriously; thirdly, there is a true or exact memory; fourthly, a comprehensive memory, that is, there are people who can remember great passages of prose in contrast to those who can only remember short ones; fifthly, a retentive memory, which has perhaps remembered things from years ago, in contrast to the kind which forgets quickly.

"This scientific method of observation scrupulously and very conscientiously maltreats innumerable victims, and sets to work most ingeniously to obtain results, in order that education, too, after having tested the children in experimental psychology, may know what various types of memory are to be differentiated. But, with all due respect for such a science, I should like to make the following objection. Anyone endowed with a little sound common sense must know that there are people who commit things to memory easily or with difficulty; there are also those who easily or laboriously recall things once known, and again there are people who can recount things truly and accurately, in contrast to those who muddle everything they try to tell. There are people with an extensive memory, who can remember a long story, in contrast to those who can only remember a short one; and there are also people who can remember a thing for a long time, even years, and people who have forgotten everything in a week! It is part, in fact, of the fairly ancient wisdom of sound common sense, but it is discovered again in a science which inspires us with respect, because the methods which it applies are so ingenious."

The other day we read the following by Roy Nash, Education Correspondent for the News Chronicle, in an article entitled, "Stop this mumbo jumbo about children" (30 June, 1954). We could not resist setting the two together, and leaving them to speak for themselves:

"A wild example of mumbo-jumberry has just reached me in the journal of a very distinguished education institute. It prints a survey made on popular

and unpopular children. A fairly good human subject, you might think, calling for some really human treatment. But what happens? There is a long diatribe on the types of test used to probe this delicate matter of who-in-the-class-likes-Johnny-and-who-doesn't. We are told, for instance, of the use of Doll's Vineland social maturity scale. (You know the one) And that the "mean social quotient for popular girls was 105.1." But there was apparently not much change to be got out of Rozenzweig's picture frustration test for that "did not differentiate between the popular and unpopular children". In a third test "the mean percentage of the popular girls was 76.0 and of the unpopular girls was 67.1."

"However, it turns out that mean quotients and percentages were not the only outcome of this exhaustive enquiry. The following definitions were arrived at:

"The popular child: works quietly, is not talkative, is active in games, daring . . . never loses his temper . . . *is liked by everybody* . . .

"The unpopular child: is restless, talkative, not daring, not good-looking, *not liked* . . .

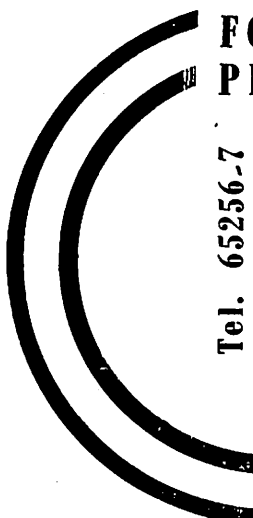
"Now all that came out of a series of elaborate tests and is presented as a heavy piece of research. I dare suggest that any teacher - or any child - could have told the investigator, without resorting to percentages, that people who are liked are *popular* and those who are not are *unpopular*.

"Must we bedevil education with this urge to state the obvious so uselessly."

* * *

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*Since receiving this article the Editor of Child and Man has already received such a proposal, and negotiations are already being made).

STILL AVAILABLE

ARTICLES ON EDUCATION do not easily 'date'. Containing as they do, the fruit of many years of experience and study, they remain fresh and apt for a long time. We have been looking through some of the articles that have appeared in "Child and Man" during the last few years, and have prepared the following list for the benefit of more recent subscribers. Back numbers containing these articles are still available, and may be obtained for 1/- each from Secretary. The figures in brackets after the title of the article refer to the Volume and Number in which they are to be found, and they need only be quoted when ordering.

GENERAL ARTICLES.

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| The Story of Caspar Hauser (1/1) | Margaret Bennell |
| Education in Hostel Life (1/6) | Helen Fox. |
| Discipline in a Rudolf Steiner School (1/6) | Eileen Hutchins |
| Rudolf Steiner's Educational Work in England (111/4) | E. G. Wilson and H. Fox. |
| Books as Rich Gifts (111/7) | G. H. Sargeant. |
| Eight Years with the same Class Teacher (11/6) | L. F. Edmunds |

ARTICLES ON SPECIAL ASPECTS OF EDUCATION.

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| Feeling and Will | L. F. Edmunds. |
| The Education of the Will (1/7) | |
| Feeling in the Growing Child (111/3) | |
| Study of Man, four articles (1/2, 3, 4 and 5) | A. C. Harwood |
| The Four Festivals | H. L. Hetherington and J. Darrell |
| Christmas (111/3) Easter (111/4) Midsummer(111/5) Michaelmas(111/6) | |
| The Ages of Childhood | |
| The Nine Year Old Child (111/5) | A. E. McAllen |
| The Twelve Year Old Child (111/6) | Eileen Hutchins. |
| Science at the Age of Fourteen (111/7) | K. M. Jones |
| Eighteen—The School Leaving Age (111/8) | L. F. Edmunds |

ARTICLES ON THE CURRICULUM.

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| A New Approach to GYMNASTICS (1/1) | Olive Whicher |
| GREEK HISTORY (1/1 and 2) | R. Lissau |
| CLAY MODELLING (1/3) | E. Elwell |
| EURYTHMY in a Rudolf Steiner School (1/3) | Elizabeth C. Jacobs |
| GERMAN lessons with the younger children (1/4) | Bronja Huttner |
| SCIENCE teaching in a Rudolf Steiner School (1/7) | Ernst Lehrs |
| Number work and ARITHMETIC in the first two classes (1/7) | |
| | A. Renwick Sheen |
| The first approach to PHYSICS (11/1) | L. F. Edmunds |
| Teaching Adolescents SHADING-DRAWING (11/1) | Valerie Jacobs |
| PAINTING and DRAWING (11/3) | Eileen Hutchins |
| The teaching of RELIGION (11/4) | L. F. Edmunds |
| Introducing CHEMISTRY to fifteen year olds (11/7) | H. Friedeberg |
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| David and Goliath—a play for nine year olds (1/8) | J. Darrell |
| Rumpelstiltskin—a play for six year olds (11/1) | Joyce Russell |
| A German Fairy Tale for 10 year olds; with songs and music (11/1) | Bronja Huttner |

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| The Wise Men's Well—a Christmas play (111/7) | Dr. P. S. Moffat |
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| The Youngest Servant—a fairy tale (1/2) | B. Mansfield |
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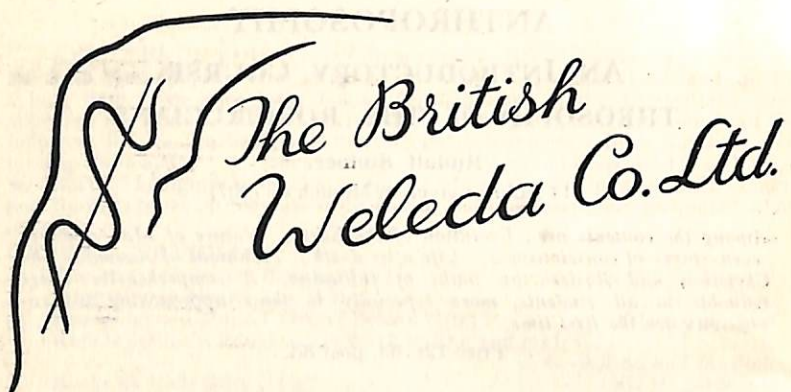
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