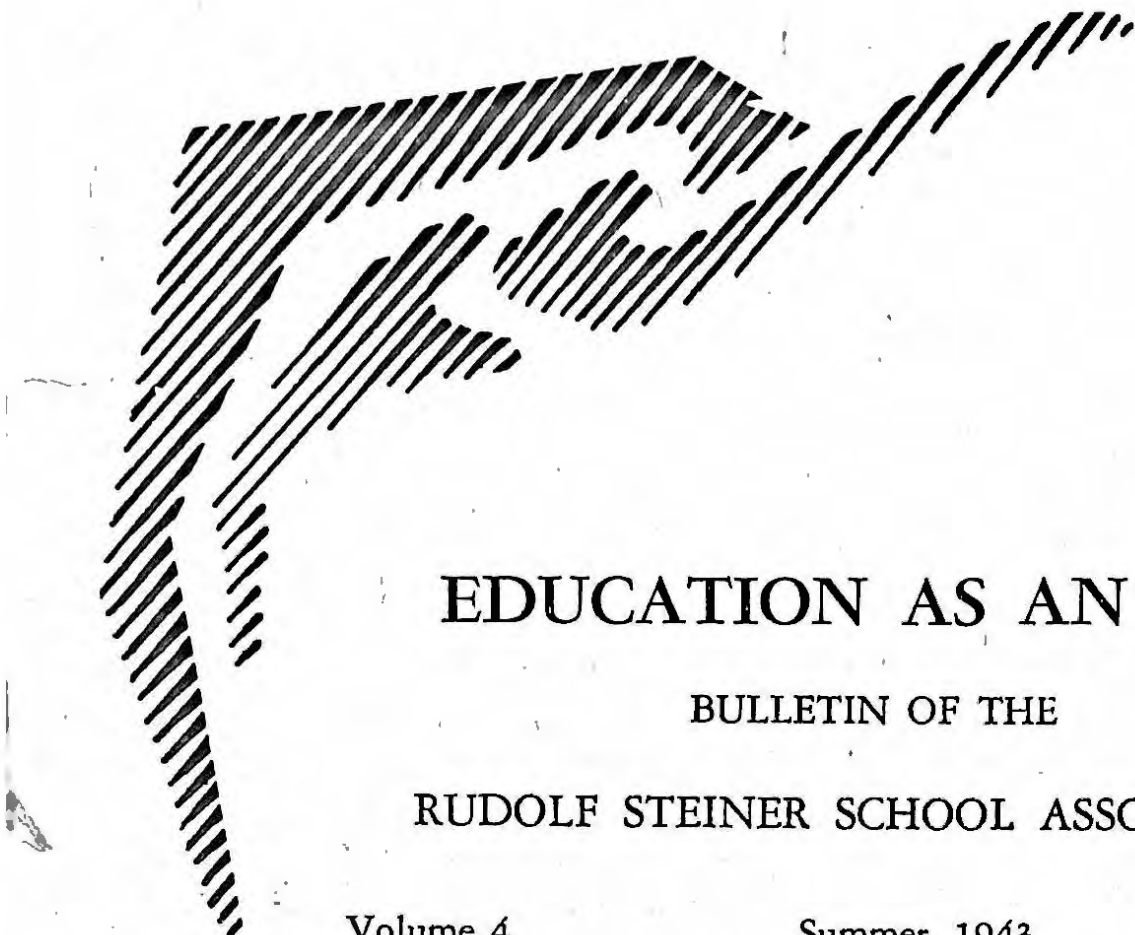




EDUCATION AS AN ART

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RUDOLF STEINER SCHOOL ASSOCIATION

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P O E M

BY A CHILD OF THE SIXTH GRADE
RUDOLF STEINER SCHOOL

*Right in the heart of Nature is where I would like to be
So I could see all round me the green and shady tree.
I'd like to see the nimble deer from distant hill or dale
And watch the baby rabbit hop along the secret trail.*

*To watch the sleek black panther crouch already for a spring
And hear the tawny lion's roar that makes the forest ring,
Would give me such a feeling, that I'd truly like to be
Like one of God's creation, someone useful, wise and free.*

THE STUDY OF PHYSIOLOGY IN THE SEVENTH AND EIGHTH GRADES.

The pedagogy of Rudolf Steiner discriminates very exactly between the various phases of the child's development and special emphasis is therefore laid upon the important change which takes place between the ages of twelve and fourteen. Before the twelfth year the human body is that of the genuine child. Its growth, strength and vitality are the expression of a harmony of vital forces, as well as of temperament. Neither the bony structure nor the muscular system are preponderant in such a way as to disturb the equilibrium of the vital forces, based upon the child's temperament.

Around the age of twelve these conditions change radically. The muscles and the bones of the body become so predominant within the whole complex of the growth and vitality of the child's body that the previous harmony, beauty and gracefulness gradually disappear. All of a sudden the child's temperament and character seem to be overwhelmed by the growth and strength of the muscular and bony systems to such an extent that they lose the ordinary

self-control and harmony which they possessed more or less naturally and charmingly during the previous stage of life. The age of twelve leads the child to the abyss of unrest, inner struggle and disharmony which characterize the age of puberty. This is the time when the growth of boys and girls becomes so rapid that their sleeves never seem to fit, when they seem not only to outgrow their clothes, but also to distort their former childish features. As the limbs become stronger and the muscles more vital, the nervous system also becomes more sensitive. There is a more rapid and frequent change between blushing and turning pale. The child becomes more self-conscious of his own body and its functions.

It is at this age that Rudolf Steiner recommended that the pupil be taught about the divine work of art of our physical body and its functions and rhythms. An introduction into the knowledge of the human being thus corresponds with the inner crises and self-consciousness which the child's soul experiences within the life of his body at about the age of twelve. Here, in the study of the human being, is concluded the whole cycle of Nature study as indicated by Rudolf Steiner in his lectures on the curriculum of the Waldorf School, when he recommended that the teacher start with Man and Animal in the fourth grade, continue with botany in the fifth and with mineralogy in the sixth. The study of physiology in the seventh and eighth classes of a Rudolf Steiner School returns to the starting point of Nature study, yet on a higher level, of course.

The ordinary conventional study of physiology, as taught elsewhere and indicated in the usual textbooks, would start with the skeleton and the muscles, leading to the nervous system and the senses and would conclude with a description of the inner organs, speaking of them as a wonderful machine of stored or exchanged energies.

If one were to start with the skeleton, in teaching physiology at a Rudolf Steiner School, one would make a grave mistake in method! The skeleton is, on the one hand, the most refined and complicated result of the creation of man, on the other hand, it is also the last product of this whole course of development. The skeleton is the most mechanical part of the body. It is the lifeless product of the final stage of the evolution of man, and it would therefore be contrary to the biogenetic law to begin with a description of the bones of man. The skeleton, if separated from the whole organism, is actually a lie and deception, because its mechanical work and function is only thinkable through the entire interfunctioning of all other muscles, nerves, and organs, the circulation and respiration, as well as the life-forces, soul and spirit of man. The skeleton can neither speak, nor think, and could not stand erect a single second without being controlled by mechanical conditions. To begin with, a study of the bones of man would necessarily create a more or less materialistic viewpoint at the very outset; it would start with death instead of beginning with life. Yet physiology is the knowledge of the life of man.

The very start of the study of physiology is therefore the heart. Here is the center of life and its wonderful rhythms; for the blood circulation and the respiration of the lungs seem to form the most natural approach to the human organism as far as its living center, the work of art of rhythm and vitality, are concerned.

The circulation of the blood must be described as a life process — a process of both motion and rhythms, passing through the heart as its center — yet not in such a way as to evolve before the children the mechanical representation of a pump. The blood coming from the left ventricle of the heart flows through the aorta, the largest artery of the body. The aorta is divided into two parts, one goes into the head and arms, the other down to the lower parts of the body. The blood returns through the veins to the right auricle of the

heart. From here the blood passes into the right ventricle, from which it goes to the lungs. Here within the pulmonary arteries a most important interchange takes place. Oxygen enters the blood and carbondioxide is discharged into the air through exhaling.

This is the point where one should arouse in the children the right feeling of wonder and awe toward these rhythms within man's nature as well as within the outer world. With regard to oxygen, the bearer of life, we can draw a comparison between man and the plant when we mention that the plant gives forth the oxygen which man receives and takes in from Nature. In many ways, man appears as a reversed plant. The goal of man, however, must be to become within his blood, which is as red as the petals of the rose, as pure and chaste as the red rose itself. Then one must touch upon the wonderful relationship which exists between blood circulation and respiration. Here we have the proportion of one breath to four beats of the pulse, or eighteen breaths to seventy two pulse beats in one minute, approximately, within a normal adult. It belongs to one of the greatest mysteries of life that the number of breaths taken in a day is equal to the number of days within a normal human life of about seventy two years, and that the same number 25,920 indicates the total number of years in the Platonic, or World, Year.

It is essential to develop a feeling of awe and wonder toward these conditions and relationships in which the human being is interwoven as a living art work of rhythms and forms.

To point to such facts of life can really create a feeling of religious devotion and bring about the realization of how profoundly the laws of our life are connected with forces of a higher wisdom. Of course, such numbers, or indications, must never remain at a level of mere calculation, or counting, but must lead to a feeling of awe towards the divine hands which write these rhythms within our nature.

It is at this point that we proceed to the questions of nutrition and the function of digestion. In the same way that we avoided picturing the function of the heart as a pump (a conception to which Rudolf Steiner was decidedly opposed) we must refrain from making any comparison with the materialistic viewpoint of the metabolism, which represents it as a machine for the exchange of foodstuffs. In close connection with the description of digestion and nutrition we must emphasize that nutrition already began with respiration and the circulation of the blood, and that our digestion is only an interplay and result due to the functions of all other life organs, especially the kidneys, the liver, gall and spleen.

The next phase leads us to the nervous system, and it is here of utmost importance to emphasize again the threefold structure of the human body as it was frequently mentioned at the outset, in speaking of the rhythmic system (heart and lungs) as lying between head and limbs. There is a definite distinction to be made between the nerves of the brain, of the spinal cord and of the metabolic system, the so-called sympathetic nervous system. Rudolf Steiner's psychology reveals here most profound and illuminating discoveries concerning the functions of these three parts of the nervous system in connection with the functions of consciousness. Here again it is possible to trace the threefold nature of head forces, heart forces and the activity of the limbs in their relation to our thinking, feeling and willing, when one describes the nerves of the brain, of the spinal cord and of the sympathetic nervous system. This description must be also linked with a comparison of the brain and spinal cord, of lower animals, fish, birds, mammals and apes, so that a new feeling of awe and wonder can be created within the child's soul in looking at the tremendous difference between the brain structure of an ape and of man.

The way from the nerves leads naturally to the sense organs, first of all to the human eye. The final step leads then to the skeleton. In fact, the bones of man are a problem of music, are like a most refined instrument, which the ages of evolution have developed as the foundation of the physical body of man. The skeleton must be felt as a unique harp, on which all the tones and intervals of cosmic spheres and their motions have worked with endless variety. Now after the study of the blood circulation and breathing, after the introduction into the work of the metabolism, after the understanding of the nerves and senses, the student of the seventh and eighth class is prepared to understand the skeleton, not as a merely mechanical or mineralized structure, but as the last and most refined step in the creation of man. In the three parts of the skeleton, the skull, the ribs and spinal column, and the limbs, a threefold division is also clear.

In speaking of the skull, within which the brain is enclosed, we necessarily compare it with that of the monkeys, or mammals, in order that the children may learn to discriminate. The proportions of the forehead, nose and mouth region are the most harmonious in man. They express the incomparable beauty and nobility of man in his threefold nature, because the head of man represents again the threefold forces—nervous system (forehead, brain), rhythmic system (nose) and the metabolic system (mouth, tongue, etc.)

When the children become conscious of their own bony structure at the age of puberty, the physical body and its study become the great teachers of awe and wonder for the grandeur of the world, and can become an impulse for awakening. Therefore the following verse by Rudolf Steiner might be a guide in the meditation upon the whole teaching of physiology in general and of the skeleton in particular:

*"Behold the bones of Man
And you behold his death.
See within the bones
And you will see the awakening one."*

The children who have passed the age of twelve and are growing towards puberty come in contact with the forces of death, sin and error, the threefold results of the downfall of man and his entanglement with matter. In fact, the age of puberty is like an individual repetition of the fall of man.

A true and spiritually right study of physiology can give the young student a firm protection against the dangers of the age of puberty, and can enkindle within the soul a sincere feeling of awe and wonder, without which the mind of man cannot remain open to the grandeur and order of the higher world of the spirit from which all existence originates.

Freiderick Hiebel

TEACHER'S TRAINING AT THE RUDOLF STEINER SCHOOL

Having just completed a year's training at the Rudolf Steiner School, I have been asked to write something about it. Over and above the work of becoming familiar with certain teaching methods, there has been the far more elusive task of forming one's insight, so as to discover for oneself the actual capacities of the children and to begin to find out how one's teaching can be directed to these capacities and not toward some theoretical idea of the nature of a child.

Such a theoretical picture of a child can be found in the idea that a child is only a smaller person than his father, without of course any background of

experience, but who can be exposed to adult experience right away, and just as a result of such exposure will develop judgement, initiative and cleverness.

Anyone who has studied Rudolf Steiner's descriptions of the ages of childhood has begun to understand why, before the change of teeth, a child is quite a dreamy little being compared with what he becomes after the change of teeth; and that there is also a great difference between an eight year old, who still feels himself to be at one with the world, and a fourteen year old in whom there has by now taken place an event which makes him feel most awkwardly his separation from the world about him.

In the daily periods of observing classes at the School there was the opportunity to watch for the signs of these differences in the children. Observation in all the classes, from kindergarten through the eighth grade, was supplemented by opportunities to do some actual teaching in each grade, whereupon one found oneself face to face with the quite different needs.

A surprise, almost amounting to a shock, was the discovery that the eighth graders were not as capable of orderly behavior as the third graders. In both seventh and eighth grades there were a restless shifting and moving of long limbs, unexpected gusts of giggling and secret whispering and, most important of all, an attitude of critical questioning which dared the teacher to prove that what he said was true. While in the third grade the eight year olds were comparatively restful and concentrated in their wondering interest in all that was taught.

The transformations that come about in the growth of a child were also made evident to me as I observed the approach which each class-teacher took in dealing with his or her children.

While in the first grade the six year olds are entering the world of numbers and letters on the wings of fairy stories, the teacher herself had to be a Fairy Queen who, with each touch of her magic wand could transform a picture of the ocean waves into the letter W, or the brightly colored marbles (used for counting) into jewels which then had to be shared by all, each child eager to see that everyone had the right number, no more, no less.

In the third and fourth grades the children, now over seven, have left fairyland behind. The deeds of olden heroes — Noah, Moses and David, Odin, Thor and the giants, — take the place of the Sleeping Beauty and the Frog Prince. And here the children have the vigorous task of learning the tables, using hands and feet to clap and stamp the swinging rhythms of

one hundred and forty four
is
twelve times twelve
one hundred and forty four
divided by twelve
is
twelve

But in the fifth grade the deeds of legendary heroes and the rhythmic work of hands and feet are left behind in their turn, for a new ruler begins then to take charge, — the head — not yet fully enthroned of course, but more capable in mental arithmetic and anxious to hear about real people in a real world. As one ten year old boy said, after hearing several stories of the Greek heroes (with which the study of Greek history began), "When are we going to start the real history?"

Although at the age of ten the children eagerly step out from the imaginations of fairies and heroes to the joy of finding out about man himself, the teacher still is called upon to tell his stories, no matter how factual, in pictures that follow one another like the scenes of a drama. It is a drama in which each

child acts as he listens, often finding within himself, or his classmates, resemblances to one or another of men of old, whether admirable or otherwise.

Throughout the curriculum of the school one found the *method* at work; and realized that its purpose year by year was accomplished by the transformation of teaching that went hand in hand with the changes in the children's awakening capacities. There are, of course, in the curriculum all the fundamental subjects of reading, writing and arithmetic. But all the realms of knowledge have to be touched by the class-teacher, who stays with his class for eight years.

A chart shows the connecting threads of the development of two important phases of the curriculum: the elements of science and the history of the great cultural epochs.

Fairy Tales (first grade)		
	Second Grade	
Fables		Legends
	Third Grade	
		Bible Stories
SCIENCES	Fourth Grade	HISTORY
Man and Animal (zoology)	Fifth Grade	Norse Sagas
Botany		History of India, Persia
	Sixth Grade	Egypt and Greece
Mineralogy		Roman History
Physics		Medieval History
	Seventh Grade	
Electricity		History of Renaissance
Magnetism		and Reformation
Astronomy		
	Eighth Grade	
Physiology		Modern History
Chemistry		
Mechanics		

Although science and history are presented in a way suited to the age of the children, nevertheless they give a comprehensive background which provides a foundation for all their later work in high school and college. In preparing this work the teacher himself has an inspiring and broadening experience with world knowledge.

If one studies the inner connections of this progress of subjects it is obvious that the teacher, with the wonderfully living help of the curriculum, guides his children year by year to meet the moment when their childlike sense of security disappears in the changes that usher them into adulthood. At this moment they are helped to surmount their growing mistrust of all their former outer supports with the realization that through their own thinking they can discover the laws of Nature and the lessons of history.

Such a picture of the eight elementary grades points to what a teacher's training has to be. One year, with opportunities to observe and take part in teaching, is a long enough time in which to arrive at the conviction that there

is a life-time of work ahead. As one teacher said to me, "You teach differently after five years, and after ten years still differently."

In addition to observing and assisting in the School, I also attended courses of weekly lectures given by various members of the faculty about the education. I was invited to attend the pedagogical sessions of the weekly faculty meetings, at which the faculty together with the School doctor studied the problems of the individual children. And throughout the year there were adult classes in Eurythmy and Speech Formation, which supplied the artistic exercise and guidance for the teacher who is making the effort to approach the *art* of education through his own growth as an artist.

Dorothy Jeffery

CONCERNING ACADEMIC ACHIEVEMENTS

Although the whole curriculum and conduct of our studies at a Rudolf Steiner School are different from the ordinary public or private school at the same grade level and it does not at all belong to our method of teaching to give the pupils achievement or intelligence tests, it has been agreed upon by the faculty to check the standing and ability of our students, who are about to enter other schools, on the basis of the requirements of official achievement tests. The Stanford Achievement Tests (Advanced Battery, Complete Form D) were therefore given in both the graduating class of 1941, as well as the graduating class of this year. The School carries the children through the eighth grade.

As we are often asked how our pupils stand in relation to other schools, it may be of interest to mention here the results of these tests. They show that, according to their rating, the average mental age and grade equivalent of our students is about two years ahead of the actual age of the pupil. This does not mean however that they are any the less children. The class average of the graduating class of 1943 was 79.7, that of the graduating class of 1941, 81.3. None of the pupils has shown an average which was less than the ninth grade (first year High School) level. One pupil of the present graduating class has won a scholarship at the Millbrook School for Boys, in Millbrook, New York, on the basis of the Metropolitan Achievement Test which he took at Easter.

Naturally, we do not judge or rate our children by such tests, but they give a means by which their work may be compared with a general standard, and as such these results may be of value to those interested in the pedagogy.

Freiderick Hiebel

INTRODUCTION TO THE PEDAGOGY OF RUDOLF STEINER AND HIS ANTHROPOSOPHY

SUMMER CONFERENCE AT HYAMPOM, TRINITY COUNTY, CALIFORNIA

July 1 - 21

There will be lectures and study groups conducted by Dr. Freiderick Hiebel, a member of the teaching staff of the Rudolf Steiner School of New York City. Dr. Hiebel was formerly of the Waldorf School in Stuttgart.

Practical courses in Eurythmy and Speech Formation will be conducted by Elly Havas, a graduate of the Goetheanum in Dornach, Switzerland. There will be courses in drawing and painting in the method of Rudolf Steiner.

A series of lectures on history, art, and social science in the light of Anthroposophy will be given in the evenings.

Address Minerva Brooks, Hyampom

THE SEEDS IN RUDOLF STEINER'S EDUCATION FOR THE FUTURE OF HUMAN CULTURE

SUMMER CONFERENCE AT SPRING VALLEY, NEW YORK.

August 17 - 30

The Annual Summer Conference at Spring Valley, N. Y., consisting of courses and lectures based upon Dr. Steiner's educational work will be held at the Threefold Farm at Spring Valley, New York, August 17—August 30. If you have not received a program and wish one, or need additional programs for distribution, please write to our Secretary, Miss Dorothy Jeffery, care of the Association. If you cannot come yourself, is there someone you can send? Do you know of someone who could come if given a Scholarship? Please write Miss Jeffery about any of these points.

Education will be the groundwork for post-war planning of all sorts and this necessitates a greater knowledge of the human being.

The study of the human being will be the central theme of the conference, for only from such a study can "Seeds for the Future" be evolved.

Mary Holliday Mitchell

Dear Fellow Members,

The Annual Meeting of the Association was enlivened by a delightful musical program given by Hilda Deighton, and Yvonne Casa de Fuerte, accompanist Laura Lundegaard Blickfelt. A discussion, led by Thelma Dillingham, brought out various suggestions of work and growth for the Association. If you have any suggestion along these lines please send them in. You will hear more by letter about the suggestions made at the meeting.

The Executive Committee consists of eight members, as follows; Chairman, Mary H. Mitchell; Secretary, Dorothy Jeffery; Treas., Joseph Wetzel; Editor of the Bulletin (appointed by the Executive Committee) Arvia MacKaye; Faculty member to be chosen next fall; and three new members, Dr. Poppelbaum, Mrs. Nash Blackwell, and Miss Lacy Van Wagenen. These three were almost tied, so we asked them all to serve since the Executive Committee has the power to co-opt members as it needs them.

The definite aim of the Association is to stimulate individuals to work on their own initiative, along educational lines, as they feel a need, or see an opening, with guidance wherever needed from the Rudolf Steiner Teachers. This means that there is less organization of committees and that individual initiative is required for progress.

Sincerely yours,

Mary Holliday Mitchell, Chairman

Membership in the Rudolf Steiner School Association, including the quarterly Bulletin, is \$2.00 per year. Single copies of the Bulletin, 15c each; for more than 10 copies 10c each, postpaid.

Address Secretary, Rudolf Steiner School Association, 49 East 91st Street, New York.

Editor of the Bulletin: Arvia MacKaye.
