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Child and Man

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CHILD AND MAN

The Rudolf Steiner Educational Association

at

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CHILD AND MAN is a magazine for the education founded by Rudolf Steiner for children who are able to pursue a normal curriculum. It seeks to form a link with all those who are interested in this education, by giving an up-to-date and authoritative commentary on the development of the work in the member schools of the Rudolf Steiner Schools Fellowship Ltd.

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CONTENTS

"The Man that hath No Music in Himself" - -	EDITOR
The Future of "Child and Man" - - - -	3
Easter Conference of the Rudolf Steiner Educational Association - - - - -	R. Lissau
The Musical Element in the Teaching of English During the Classteacher Period - - -	E. M. Hutchins
Music in Teaching - - - - -	Roland Everett
Sound and Silence in the Classroom - - - - -	W. Glas

“The Man that hath No Music in Himself”

The man that hath no music in himself,
Nor is not moved with concord of sweet sounds,
Is fit for treasons, stratagems and spoils :
The motions of his spirit are dull as night
And his affections dark as Erebus :
Let no such man be trusted.

The words spoken by Lorenzo to his Jessica in the last act of the Merchant of Venice are famous. They are taken as a beautiful expression of Shakespeare's delight in music shared by so many of his contemporaries. But they may well be profounder in their import, reaching out beyond a merely personal confession of the music lover to the expression of a universal truth.

‘Let no such man be trusted.’ Lorenzo suggests that the lack of music in a man is not only an aesthetic matter, but a moral one as well. The man without music is not only a philistine but darkly untrustworthy. Herein is implied something of that wider view of art which the English Romantic poets supported so ardently, the view which recognises the moral effect of beauty.

In this number of CHILD AND MAN some attempt has been made from various viewpoints to assess the moral effect of musical education. In doing so the writers have taken a very wide view of what the “musical forces” are in the growing child. Rudolf Steiner has described them as being opposite in character to the plastic forces. The latter express themselves in writing, drawing and painting, the former in speaking, singing and instrumental playing. Where music is spoken of in the succeeding articles, the reader should give the word its widest possible connotation.

The annual conference of the Rudolf Steiner Educational Association chose musical education as its theme last Easter, and the articles appearing in this number have arisen largely from the deliberations of the members of the Association during their meetings.

THE EDITOR.

The Future of “Child and Man”

AT a meeting of the Rudolf Steiner Educational Association held at Michael Hall in April of this year it was decided to discontinue the present form of CHILD AND MAN as from the Michaelmas Number of this year, and to reconstitute it as an Annual of which the first number will appear at Easter 1959.

Among several grounds for this change it was considered that the time has come when the organ of the Rudolf Steiner Educational Movement should reach a wider circle of people, penetrating into Training Colleges and Institutes of Education, and secure notices in the educational and general Press; and that these aims would be more readily achieved by a substantial Annual than by the present slender quarterly. It is also intended that most of the numbers of the new Annual shall be devoted to one subject, so that each number may remain of permanent reference value. The format and price of the new annual CHILD AND MAN, together with the theme of the first issue will be announced in the next and last number of the Quarterly at Michaelmas.

It was decided that in future the Magazine would be better sponsored by the Rudolf Steiner Schools Fellowship, a decision later confirmed at a meeting of the Fellowship, and it was unanimously decided to ask Mr. A. C. Harwood, the Editor of the original CHILD AND MAN published before the War, to take over the editorial responsibility for the new Annual.

Easter Conference of the Rudolf Steiner Educational Association

R. Lissau

FOR one week in April 60 to 80 teachers of the Rudolf Steiner Schools in Great Britain spent a week at a conference, the subject of which was Music. They discussed many aspects of this important subject, but always kept in mind the needs of the growing child. Similar conferences had been held for the last 15 years, but this was the first time that music was in the centre of our discussions. Each conference is a new venture and an act of faith. For we have no rigid programme and the greater part of our time is devoted to discussions in which it is left to the meeting under its chairman to plot its own course. Thus the degree of success of such a conference does not depend on set statements from the platform, but on the relevance of the discussions on the floor.

At the end of the conference it was felt that much had been achieved, though had time been available some questions might have been investigated more thoroughly. In the following an attempt is made to sum up the general trend of our discussions on Jazz. Much of it is taken from the contributions of two professional musicians, Mrs. R. Bursey and Dr. F. Rauter, while the rest stems from the observations of a good number of other teachers, and emerged at various moments during our deliberations during that week.

J A Z Z

When we as teachers study jazz we are not so much concerned with abstract considerations, but in the first place with its moral and spiritual significance. The belief that artforms as well as media of artistic creation are morally neutral is one of the more naive assumptions of our time. 'One sculptor expresses himself in marble, another in wire. Both express themselves, both create. The one uses a medium to which we are accustomed, the other goes along new paths. Otherwise there is no difference!' Thus a familiar line of thought. Yet a sensitive observer will notice the different emotional appeal which marble, granite, wire, plaster, oak, beech, etc. make. They establish a particular mood in which the conversation between the work of art and the spectator takes place. There is, however, a second point. A work of art involves a process of transformation: A certain material is given form and meaning. Now some materials resist this process more than others, and therefore have a greater appeal to the creative artist. But just the degree of their resistance makes success—or communication, in the modern terminology—less certain. To many more people the modern sculpture is just so many wires.

To understand thus the medium of jazz we can proceed in three different ways: we can look at it historically, analyse its elements or describe its effects. We shall confine ourselves mainly to the first two ways of approach.

The music to which our ears normally are attuned arose in Western Europe during the last millenium and has certain features which distinguish it from any music outside this period and region. Non-European and pre-European music is built in many different scales, and uses widely different instruments and conventions. Yet it usually has two characteristics, the use of unison chant and an underlying strong rhythm either played on instruments or else clapped. European music developed out of the chant of the East, the plainsong, but developed certain unique features. It developed its own particular scale, the diatonic, it invented a galaxy of instruments, it created its own rhythm free from the vagaries of speech, and, most important of all, it discovered harmony.

Harmony arose slowly and its roots cannot be traced in history. Whether it was a Celtic or a Germanic people who first felt the need to sing in two voices, probably the same melodic line a fifth or an octave apart, we do not know. Soon the voices moved independent of each other, each a variant of all the others, and after a conscious development lasting many centuries harmony, as we understand the term now, was born: a melody riding on a firmly based concord of sounds. This harmonic elements might be called the heart of European music.

By the end of the 19th century this music had found its historical though not aesthetic, climax. Modulation, the shifting of keys, and the use of dissonance had been employed to such an extent that it often became impossible to say in which key a certain piece of music was written. Composers, and with them the general musical public, were led to new tonal and rhythmic experiences, experiences which lay outside the diatonic, post-Renaissance music, and a new interest arose in pre-Renaissance and non-European music. The modes of our folk songs were discovered, the pentatonic scale of the Hebrides became widely known, Dvorak studied the music of the Negro, Bartok the music of the Gypsy and Stravinsky the music of the Eastern Church and of the Middle Ages. Debussy built a new scale, the first musician after the Renaissance to do so, and he used, at least for purposes of comedy, rhythms which soon were to become popular in jazz. At this time of search and experiment, at the time when the diatonic system was already in decay, jazz became known in Europe.

Jazz arose out of the music of the descendants of African negroes who had been sold as slaves in America. Whoever has had contact with West Indians will surely have been impressed by their instinctive impulse to express themselves musically and in dancing. These instinctive gifts could have been used towards the creation of new forms of art, and certain European musicians did so occasionally (Dvorak, Debussy, Ravel, etc.) Jazz, however, is the standardisation and commercialisation of what lived instinctively in the music of the negro. Its origin is far from reputable as the word "Jazz" in its original meaning testifies. Jazz music is a by-product of the 'entertainment industry' of New Orleans. It grew up in the brothels of this town and when prostitution was made illegal there the practitioners of jazz moved into the great cities of the North. It thus grew up from its very beginning as a sexual stimulant and to this end the original folk music of the negroes was shaped and perverted.

The music of the African negro is famous for its imaginative use of rhythm. At our music conference we were greatly helped by an expert on African music. He described the amazing rhythmic sense of the negro who is sensitive to and knows how to employ most complicated rhythms, often played against each other. Some readers may remember from either personal experience or from books the incredible tension which arises in a negro village when the drums

begin to call. This most powerful element is, of course, used in jazz, but has become standardised. In a musicians' magazine Matyas Seiber recently published an article 'Rhythmic Freedom in Jazz', in which he analysed the rhythms employed in modern jazz. He found there were—sixteen of them. This is utterly meagre compared to the number of rhythms employed by both the European composer and the African musician.

Why then the great rhythmic appeal of jazz? Rhythm speaks directly to man's will organisation, to his limbs, his passions and instincts, to the subconscious. And what the jazzmonger misses in rhythm subtlety, he makes up for by repetition. He literally drums a certain rhythm into you, monotonously and relentlessly, until part of your subconscious is brought into play and the rest of your being is simply drugged. This is the reason why the musician who wants to listen consciously to music and not be swamped by murky emotions cannot warm to jazz: it is just too boring for words, he misses the thrill and freedom of rhythm of great music.

Clarity is found in music in the first place in the melody, and great melodies do not lose this clarity although they are filled with joyful, jubilant or mournful emotion. Chant has a magical quality, which we can still feel in the plain-song of the churches. The jazz musician leaves behind the magic of chant and the clarity and warmth of melodic line which, for instance, the negro spiritual possesses. He concentrates on a shoddy, awkward melody, for warmth of heart and clarity of thought are just the elements which he wishes to eschew. So far he only worked with, and perverted, negro music, but as jazz became more sophisticated he learned what only the European musician could teach him, harmony. The void spaces between the monotonous rhythm and the poverty-stricken melody were filled in with chords, or better, with one chord, the chord of the diminished seventh. This chord had become a favourite of the Romantic composers of a hundred years ago in their more sentimental moods, and harmonies based on or related to this chord are used in jazz on a most lavish scale.

The negro music out of which jazz arose had little need of instruments. If you had a drum you were alright, if not, a washboard played with the fingers tipped with thimbles or even spoons would do. To-day a jazzband employs expensive instruments. Apart from percussion it will prefer instruments with "thick" tones, that is such as have a wide range and many overtones, and its technique will favour blurring the clear outlines of a tone. The same with the human voice. While the Italian-trained singer works hard to achieve clarity and purity of tone, our modern 'vocalist' will proceed on a hit-or miss basis and sweep into one 'tone' a great many sounds. Thus jazz leads us away from the quest of pure tone into murky regions.

The most admirable quality of jazz is that in its best exponents it has preserved the freedom of improvisation whence it sprang; a

freedom that is apparent also in the skiffle groups, so popular at the moment, and that, unfortunately, has all but disappeared from European music. Yet the finished productions that usually reach the public are the concoction of a number of men who co-operate in the manufacturing of words, rhythm, harmony and tune, in a routine based on a well-worn bag of tricks. It is then 'plugged' over certain 'channels' and a steady flow of money ensured. For it works; it works as a dope on the conscious man and as a stimulant of certain basic urges. As such it can be classed with a host of other phenomena in our Western world whose cumulative tends to de-humanise man, to weaken him as a responsible, moral and spiritual being and make him part of an unthinking mass which can then be exploited by certain vast and sinister powers.

Are we then to dissuade children from listening to jazz? This is impossible, for we cannot cut them off artificially from what has by now become a recognised part of the world in which they grow up. Are we perhaps to stop children from going to dances and thereby attempt to make them outsiders, contemptuous of a 'wicked' world? I doubt whether we could succeed, if we made the attempt, and I am sure I should deplore such an attempt to succeed. The teacher and the parent—if he disapproves of jazz—should not condemn the thing wholesale, but know enough about it to discuss the matter intelligently with young people. Then he can make his critical remarks as well, which may, or may not, cause them to stop taking uncritically for granted anything that commercial interests present as the latest form of music.

A great deal will depend on whether we succeed in childhood and youth to develop a sense of moral and aesthetic discrimination in the growing boy or girl. If we do so the young man or woman will still go to dances and still be able to enjoy himself, but he will take the jazzmonger's stuff as what it is, a drug that has become widespread to-day, that may be harmful or harmless according to how much you succumb to it, but he will never take it for what it is not,—a form of art.

WITHOUT COMMENT

"A school teacher can give her class three different lessons simultaneously with the aid of an electronic device being tried at a school in St. Joseph, Missouri. Alternative lessons on the same subject are recorded and pupils listen through earphones to whichever version suits their ability."

Daily Telegraph.

The Musical Element in the Teaching of English During the Classteacher Period

E. M. Hutchins

IN the art of teaching the subject matter is less important than the way in which it is given. Head knowledge is not enough ; for factual information often falls out of date but in the effort of learning new faculties are born. We all know that the arts of swimming, skating and riding, once learned, are never forgotten, for the skill required is taken up into the habit-life of the whole body. We need to teach so that knowledge becomes not merely information but the capacity to think in a living way.

During the early life of the child there are two main powers at work in the forming of the human body. These, if rightly understood, are the greatest allies of the teacher.

For the first seven years inner plastic forces are building the child's own physical frame and after the change of teeth these become free for other purposes, for the forming of imaginative thinking and for remembering. We are then able to call them into play in the teaching of writing and the drawing of forms.

But there are other influences at work which come from the outer world. These we may call 'musical powers'. In its first years of life the little child has to learn to adapt itself to earthly rhythms ; the movements of day and night, of sleeping and waking, of joy and sorrow and of living and dying. Some time has to pass before it can form the habit of regular breathing ; its breath is a sort of fluttering. Neither can it sleep and wake in rhythmic alternation ; its round of life is a hovering between dreaming sleep and waking dreams. The harmonious working together of the breath with the beat of the heart is only gradually attained.

During the second seven years from the change of teeth to the coming of puberty, the child is especially susceptible to all the influences from the rhythms of the outer world and these work into the forming of its body. Thus it lives more fully in its sense of rhythm at this stage than at any other period of life.

During the classteacher period the plastic forces can be used more consciously but the musical ones are working in a way that is more difficult to recognise. Not only the bodily structure but also the harmony of the soul-life is affected by all that reverberates through the child's being, and what is experienced in the realm of speech during this time is especially important.

Today in education we tend to use the plastic much more than the musical element. It has become the custom to appeal almost entirely to the sense of sight and to use rigid diagrams rather than

forms capable of movement. This is not only one-sided but is a definite mis-use of the plastic activity for the pupil is given fixed ideas and the power to create inner imaginations is neglected.

Rudolf Steiner has shown in the Four Educational Lectures given in Stuttgart between Sept. 15th-22nd, 1920, how these plastic and musical forces work in the human being.

When we perceive through the eye, our perception depends on the optic nerve and the brain ; but what we perceive can be understood only because we have a feeling life centred in the rhythmic system of the heart and lungs. In order that what we have perceived and understood may be imprinted in the memory, it must be taken up into the whole system of the metabolism and the limbs. Thus when we teach through the sense of sight, we need to awaken feeling and lead over the whole experience into some kind of inner or outer activity so that it may become experience and the foundation of future capacities.

When we perceive musically the process is reversed. Our whole body responds to the sound and rhythm, understanding is again awakened through feeling, but memory is an affair of the head.

The Greeks knew very well that what was learned through bodily movement in youth became the capacity for thinking mathematically in later life. What is acquired through the body is a sure foundation for a later abstract knowledge which is no longer theoretical but genuine experience. Hence in the class-teacher period the firm basis for Arithmetic, Algebra and Geometry should be made by moving through the rhythm of numbers, the dimensions of space and the forms of Geometrical figures.

Even a teacher who is not a skilled musician can work with the musical forces of the child in the Kindergarten and in the classteacher period. From an early age the child can be helped to find its balance in the interweaving rhythms of life. When we celebrate the festivals of the seasons, children are brought to feel the rhythmic life of the year. The morning and evening verse give the contrasting moods of the wide awake life of day and soothing spell of sleep.

These feelings are further developed in nature stories in the first class. Then we can speak of the sun and the moon. We can show how the sun is for ever pouring forth his light and warmth to create life on earth and how he never grows weary. At the end of the day we are tired out and need to sleep but the sun passes on to other countries to bestow its blessing still further. Then we can speak of the moon who, though she has no light of her own, so loves the sun that her whole endeavour is to reflect his radiance into the darkness of earthly night. The poems of Blake describing the sunrise and the sunset most beautifully illustrate these themes.

Blake also provides many other examples of telling contrasts such as "The Tiger" and "The Lamb", "The Laughing Song" and

"On Another's Sorrow"; and sometimes the effect is gained within one poem as in "The Little Black Boy".

All poems in the early years should be taught for their mood or their musical quality and not for their thought content. Whatever appeals to the sense of sight should have nothing of the photographic element. Pictures should float and change so that the life behind the picture forms can shine through. Shakespeare's fairy poems are beautiful in this way. They are often almost purely movement and music as,

'Come unto these yellow sands,
And then take hands :
Curtsied when you have, and kiss'd,—
The wild waves whist,'—

or the pictures pass over into one another, as,
Full fathom five thy father lies ;
Of his bones are coral made :
Those are pearls that were his eyes :
Nothing of him that doth fade,
But doth suffer a sea-change
Into something rich and strange.
Sea-nymphs hourly ring his knell :
(Burden : ding-dong.)
Hark ! now I hear them,—ding-dong, bell.'

In the later years children will come to realise the wonderful truth of the transformation from the bones to coral and from the eyes to pearls ; but in Class II they feel the music and the magic without fully understanding the pictures.

Shakespeare himself has shown how reliance on the outer picture cannot bring a living understanding. In the Merchant of Venice when Bassanio is led before the casket of gold, silver and lead, Portia is under a vow not to reveal their secret. But a song is sung and Bassanio is able to interpret it.

'Tell me, where is Fancy bred,
Or in the heart or in the head ?'

The word 'Fancy' is here used to describe the state of being fascinated by the outer appearance. Fancy is engendered in the eyes and and is fed with gazing but it cannot penetrate to the inner reality and so it dies where it was born in the cradle of the skull. The perception which leads to understanding depends upon the heart not upon the head.

There is an annotated edition of the Merchant of Venice, used for examination purposes, which states that this song has no particular relevance to the scene in which it is sung. But the words of Bassanio which immediately follow reveal the implication.

'So may the outward shows be least themselves :
The world is still deceived with ornament.'

And he is able to choose the 'meagre lead,
Which rather threatenest than dost promise aught.'
And he receives the scroll which says, 'You that choose not by the
view,
Chance as fair and choose as true.'

We must not of course be too fanatical in selecting poems which have movement rather than pictures. A great deal depends on the real content of the poem. For instance some of A.A. Milne's poems have a good swing.

'Christopher Robin goes hoppity, hoppity,
Hoppity, hoppity, hop.
Whenever I ask him politely to stop it,
He says he can't possibly stop.'

Such a verse may suit a special occasion but we cannot possibly consider it as art in the sense of the true nursery rhymes or the Elizabethan lyrics which move the heart. Children should always feel that the poem expresses more than they can understand. Hence many of Shelley's poems are suitable even at times when they are not fully intelligible. Shelley so lives with the inner life and the changing appearances of Nature that stanzas from 'The Cloud', 'The West Wind' or even lyrics from 'Prometheus Unbound' seem magical to quite young children. They will very often repeat words and phrases, even though they do not know the meaning, because the sound and the flow of the language appeal to them.

Speech exercises can be taken with children at a very young age as long as they can fall in love with the sounds and do not turn too much attention to the meaning.

The strong alternation between joy and sorrow which is introduced into the Eurhythmy lessons of Class III is further developed through the themes of Myth and Saga in Classes IV and V. Children can then be brought to an important experience. For those who are sensitive the tragedy of Sigurd is hard to bear but the teacher can show that what is sad for the earth is often joy for the spirit world. When heroes died on earth their death brought joy to Odin who was gathering round him the souls of the heroic slain to help him against the powers of evil in the coming fight of Ragnarok. When Brynhilde had to leave her rank as a Valkyrie and live as a human being on earth, it was sorrow for the world of the gods. Thus birth and death can be looked upon from another point of view.

It is only possible to indicate very briefly the many lines of development through the different classes. In Classes V and VI when the themes of subject and object, active and passive, question and answer, direct and indirect speech are followed, the ballad form is especially suitable. Particularly in the Scottish Border ballads we meet a type of poetry which depends very little on the pictorial element but relies almost entirely on dramatic tension. For instance 'Lord Randall' is a drama in miniature. The whole setting is left to

the hearer to create. We are given only the words exchanged between the mother and son, and the repetition of the last line, in which the only variation is the final note of doom, has a very powerful effect. We feel very strongly in this kind of poem how the inner conflict creates the outer form.

During the entire classteacher period the different poetic rhythms should be taken into account. It is noteworthy that almost all the best-known Nursery Rhymes and the fairy poems of Shakespeare are composed in meters with a rising movement, either trochee or dactyl. In lyric poems both these meters give a quality of lightness. On the other hand dramatic themes are far better expressed in meters with a falling cadence. Thus the iambic meter is most suitable in English for story-telling and the anapaest is most effective for rapid movement, as in Flecker's 'War Song of the Saracens' or Byron's 'The Assyrian came down like a wolf on the fold'. Only a few passages from Longfellow's *Evangeline* can convince us that the dactyl, which was used with such grand effect in the Greek Epics, is not fitted for modern narrative. Nevertheless Greek hexameters should be taken very strongly in Classes V and VI; for more than any other rhythm, the lines of Homer are based on the harmonious pulsing together of the blood and breath. The effect of long passages from the *Iliad* or *Odyssey* is like that of waves on the shore, an endless ebbing and flowing suggestive of cosmic movements. This suits the themes of Gods and heroes but not stories of the modern world.

When in Class IV the curriculum recommends the awakening of a feeling for forms of expression, the Bible can be used as a valuable source. For instance children can be led to feel the difference between a question asked out of curiosity and a question asked of one's own soul, like David's words, 'The Lord is my light and salvation, whom shall I fear?' Although the imperative is used in each case, there is a contrast between the command of Eli, 'Lie down again', and Samuel's prayer, 'Speak, Lord, for thy servant heareth'. In reporting the death of Absalom there is an entirely different inner motive is the statements of Joab, 'The King's son is dead,' of Cush, 'The enemies of my Lord the King, and all that rise against thee to do thee hurt, be as that young man is'; and of Daird's heart-broken cry, 'O my son Absalom, my son, my son Absalom! Would God that I had died for thee, O Absalom, my son, my son.' Children should be led to compose expressions of strong feelings; blessings and curses, heartfelt wishes and reverential awe.

Later in their school life in the tenth class pupils become more conscious of what has lived with them during the classteacher period. When they study the course of Literature as Art they find in the great works of the ancient poets the contrast between those who experienced their surroundings more through the sense of sight and those who were more aware of the musical powers.

With our eyes we behold a world which has been created out of wisdom and thus an understanding of the forms of the outer world awakens in us a mood of tranquil veneration. This is to be found in the great epics of Homer with their strong pictorial element and joy in the beauty of the world. In spite of the many dramatic conflicts, the varying themes are always brought to a harmonious close.

On the other hand musical experiences tend to rouse enthusiasm and creative activity. This can be illustrated from the Norse sagas, such as the *Volsunga Saga* or *Beowulf*. In these poems the pictorial element is very slight and there is little joy in the beauty of the outer world, but the struggle of the hero to test his strength against overwhelming odds is the central theme. The Norse characters glory in defeat for only when they are overpowered can they feel that they have exerted their strength to the utmost.

In the eleventh class pupils come to realise how these two different impulses can be brought into harmony. In the Christian theme of Parsifal we see the character who through the power of compassion was able both to receive the wisdom revealed in the outer world of nature and raise his own inner creative activity into a deed of healing.

But at the end of the school course a teacher cannot be satisfied unless he has done something more than arouse the children's interest. In one respect most of us are sadly failing in our thought life. It is alarming how very few of us are able to remember accurately. So many sense impressions batter us that we cannot in a healthy way take them up through the realm of understanding into memory. Our recollections are broken and distorted fragments. This symptom is becoming more and more serious in modern life and it grows increasingly difficult to trust reports given from personal experience.

The teacher needs to sense how children take up into their life of understanding and memory what is introduced to them in class. We know ourselves how the tasks we do during the day can sometimes haunt us after we have retired to bed. If we have overdone some activity we can at times feel our body, though lying in bed, still performing physical movements. Sometimes when we have struggled with a problem and failed to solve it, we wake up in the middle of the night and suddenly know the solution. During sleep we continue to elaborate the experiences of the day. The teacher must learn to sense how this is taking place with his children.

In old stories warning and admonitions were always given three times. This was not merely arbitrary; the first time was a call to the senses, the second to the understanding and the third for the confirmation in memory. Learning in the true sense takes three times longer than learning with the head alone and parents and teachers of children in Rudolf Steiner schools need to take this into account. Learning will be slower but the results will be lasting.

Not only will the memory become healthy but thinking itself will be more alive. Pupils can acquire the faculty to think in advance, to grasp situations, to understand character and to come to the right decisions and actions. Factual knowledge can be forgotten but this way of thinking is a permanent source of strength.

Music in Teaching

Roland Everett

MUSIC, to-day, is taught in most schools and many music teachers work with untiring enthusiasm in schools throughout the country. If one were to ask why music was taught, one might receive the following kinds of answers :

Music brings joy into the life of the pupils ;

Music fosters the social sense ;

It offers a welcome relief from the more intellectual subjects ;

It enables pupils to share in the cultural life of mankind.

These reasons are true and valid enough to justify the teaching of music in all schools. Yet Rudolf Steiner has shown how music and the musical forces can be used on a much wider scale to enhance the right and healthy development of the growing child. Music, or rather the elements of music, should therefore pervade most subjects in a Rudolf Steiner School and they are not only a matter for the music teacher alone. How can this be achieved ?

As it is not possible to give a full answer to such a big question within one article, only a few indications can be given here in order to convey a general picture of how music and its forces can be used for the purpose of education. During the last Easter Conference at Michael Hall teachers from our schools and homes have studied this theme and a large part of the following considerations is the result of work done at this conference. Eurhythm, which in itself largely contributes towards a realisation of our musical aims, has been omitted in this article. Lastly I should like to add that many of our teachers feel only in the beginning-stages of using music as a healing force in teaching and that the possibilities in this realm have by no means been fully developed.

Many people have experienced moral forces when listening to music. I became particularly aware of such forces when listening to a performance of Beethoven's 9th Symphony in Brussels on the very day the war was officially declared to be ended, on V.E. Day. After the first movements of this unique symphony, in which the listener was being led through the darkness of human struggles to the heights of divine joy, the final chorus was sung in the original German, which was the language of the enemy at that time. It appeared to me as if the heavens had opened their gates to pour

down blessing and balm onto the wounds of war-scarred humanity. The reaction of the audience showed that I had not been alone in my experience, yet there was no mass-hysteria in the applause. Only an intense relief and gratitude were felt for having been freed from the fetters of hatred caused by the cruelties of war. We all had glimpsed the heights where every man is a true brother because our lower natures had been transformed by the harmonies of music.

Already the early Christian martyrs sang their hymns when facing the lions in the Roman arena. It is well known that ordinary people who owing to an accident had to face the ultimate test during their last hour on earth have burst into singing which gave them strength and an inner calm. Quite recently a boy who had lived through a night of storms and lashing rain trapped on a narrow ledge of rock, was asked what had enabled him to persevere so long. He answered, "I sang to myself throughout the night."

Another picture of moral forces emanating from music can be seen in Mozart's "Magic Flute". When Prince Tamino plays his magic flute, the wild beasts of the jungle flock towards him and lie down at his feet in order to listen to his tune. When attacked by slaves carrying chains, Tamino's companion plays on his magic chimes. The slaves cannot resist the charm of the music ; they drop their chains and their limbs begin to dance to the rhythm of the bells.

Many other examples could be found and many great poets have expressed similar ideas in their works. These might be summarised by the often quoted passage from Shakespeare's "Merchant of Venice"

"The man that hath no music in himself,

Nor is not moved with concord of sweet sounds,

Is fit for treasons, stratagems and spoils . . .

Let no such man be trusted."

How can we make use of these moral forces in teaching the young-classes ?

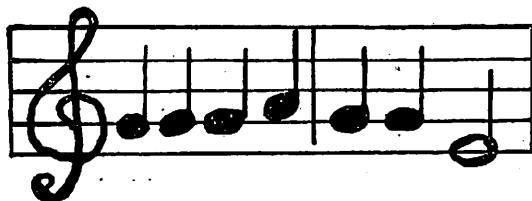
Strangely enough the answer would be : Not by making young pupils listen to music, not even by teaching them how to make music themselves ! We must go deeper and further into the problem.

Rudolf Steiner has shown us how the young child between the first and the third year must learn to overcome the forces of gravity by raising himself to the upright position in order to walk. This is essentially a spatial experience. But the young child must also learn to attune himself to the earthly rhythms of day and night and of the seasons, he must gradually fit the rhythms of his new little body to those prevailing on earth. This is an experience in time and a musical experience. We know that the relationship of our pulse beat to our breathing is 4 : 1. When we listen to music in 4/4 time (or common time), we experience more or less subconsciously our own blood circulation in harmony with our breathing and therefore such music tends to make us feel well settled in our body. A march is a typical example of such music and a straight line would express its dynamic (4 is an even number).

If, however, we have only three beats per bar ($3/4$ time), we are never allowed to live quite so deeply within our body but always feel slightly lifted out of it. A Waltz or a Minuet would be a typical example of this latter kind of music and a curved line would indicate its dynamic (3 is an odd number).

Yet these fundamental phenomena cannot be fully experienced by a child before the 9th year because only then has the child fully developed the pulse to breath relationship of 4 : 1, which in previous years is still irregular and which is brought into harmony only gradually.

Before the ninth year a child lives more in his surroundings, he cannot yet distinguish between himself and the outer objects. He is the actor, not yet the spectator of life ; he does not yet experience the boundary of his own periphery but flows beyond it. But all the more do young children experience their will-life which is mainly expressed in their limb activity. The experience of his little legs playing with gravity by passing the weight of the body from right to left while walking is reflected in the typical and ever repeating phrases of music which most children sing spontaneously while playing, walking or resting. One could almost call these "Signature-Tunes" most of which contain the following intervals : *



Just as the movements of toddlers appear controlled from outside rather than from a centre within and are somehow reminiscent of the flight of a fluttering butterfly, so is their musical experience not yet linked to the earth but is a freely meandering flow without beginning or end, without crescendo or ritardando. The mood of such music is expressed in the pentatonic style which can still be found in many folk songs, particularly in Hebridean Songs. The whole world, the sun and stars, sing into the child in the simple flow of the pentatonic music. During the early years of childhood, there slowly emerges a more definite pattern of rhythm and sound which is expressed in nursery rhymes and folk songs.

Observing the development of children before the ninth year, we can see how musical forces take hold of the child and gradually lead him down into the rhythms of the earth. Teachers in our schools try to work consciously with these forces, and therefore

* For further details see Edmund Pracht : "Die Entwicklung des Musikerlebens in der Kindheit", published in "Heilende Erziehung", Natura Verlag, Arlesheim (Switzerland) 1956.

counting numbers and learning tables are done in a musical way by emphasising rhythmical patterns in movement and by using the voice almost in a sing-song way. Each lesson is carefully planned to allow rhythms of concentration and relaxation to take place, of "Solo" work and "Chorus" activity, of listening and doing, of forgetting and remembering, etc. The Teacher can achieve an experience similar to that of conducting an orchestra whose instruments are human beings. Aware of his great responsibility he tries to play on the emotions of his children ; he brings out certain qualities which are needed in one or the other pupil who may have to overcome some inherent difficulties, and yet he must ever keep in mind the wholeness of his group. He experiences how laughter frees the class and how too much of it brings about wildness and lack of co-ordination. He knows when to introduce a sad mood through his story (which must not be told too melodramatically) in order to bring the class together again.

Such alternations between polarities, such a 'breathing' in the lessons, can also be achieved through music directly. When pupils listen to a new song or to any suitable composition, they are lifted out of themselves and such a moment can be like a breath of fresh wind entering the class room. If, however, they are asked to learn a song by retaining and memorising the tune phrase by phrase, they are led back again into their own being. This technique of the teacher-conductor, who plays on the growing pupils as on divine musical instruments, is continued throughout all classes, though always in an adapted form to be in time with the various stages of development. Perhaps here one could once more stress the importance of the class teacher taking the same class through eight consecutive years, namely from the seventh to the fourteenth year, from the change of teeth to puberty, in order to complete and to follow a whole cycle of development. One could hardly imagine a conductor handing over the baton after each scene in an opera or after each movement in a symphony ! However, experience has also shown that one must not be dogmatic in trying to follow these ideals.

An even more direct way of bringing about a harmonious breathing in the young pupils is the teaching of recorders or pipes which is introduced already in our first class. Apart from helping the pupils to become more skilful with their fingers through the manipulation of the instrument, their breath becomes controlled by a melodic line, whose structure and phrasing alone ensures a healthy breathing, provided a good tune is used. While playing, the children experience their breathing more outwardly via the instrument, and the activity of their individual breathing is spread beyond their own organism to become part of a larger group. This also has a harmonising and unifying effect, much in the same way as marching in step is less tiring than 'breaking step'. During such recorder playing a teacher can experience a mood of inner satisfaction hovering around

his little people which is not unlike that of a pussy-cat purring in front of a fire, though the sounds coming from the class room may be a good deal more jarring to grown-up ears than the purring of a contented cat!

Now to come back to our original question of morality in music: Not since the experience in Brussels on V.E. Day have I come to meet moral forces in such a definite way until I began to teach a first class of six and seven-year-old pupils. When young children are 'naughty' they may oppose the will of a grown up with their own will; they may be careless or lazy, or they may not conform with the demands of their elders in other ways. When they fight for the possession of a coveted object, their apparent selfishness is not so much an egotistic greed, but rather as living in the sphere of the will, because the other spheres of feeling and thinking have not yet been fully developed. Children under nine are free from malice, from calculated evil-doing, from sin. Having previously worked with older pupils, the innate morality of the young became a moving experience to me. There was no need to threaten with punishment when giving out orders because if a mistake was made, the mere failure itself was punishment in the eyes of the children and this was revealed in their faces and their attitude. It is quite a common occurrence that a pupil in the first class will shed tears when the wrong answer of a simple sum in Arithmetic is marked with a cross, because he wants to do the right and good thing. Other pupils of a more thoughtful disposition may write the answers of their sums so lightly in pencil that these can be put right without the stain of the teacher's cross appearing on the page. A wonderful source of complete faith in the good powers of the world is ever present in such a young class which nevertheless fully enjoys the antics of the villain just because it can see evil as something grotesque, almost as something unreal, like the antics of a slap-stick comedian. Anyone who is working with young pupils will experience the words of Christ: "Suffer little children to come unto me, and forbid them not: for of such is the kingdom of God." (Luke, Chapter XVIII, v. 15-17) At this stage the teacher can receive more from his pupils than he can give and the meaning of the words "teacher" and "pupils" is interchangeable if one thinks in terms of knowledge and morality.

First I mentioned moral forces working through music. I then attempted to show how musical forces work into the child, mainly up to the ninth year. I firmly believe that together with the musical forces in childhood, moral forces are streaming right into the child and that by recognising and working with these up-building musical forces we are allowing the moral forces to gain a lasting foothold in the lives of our pupils. Just as the child cannot yet grasp music made outside himself in an adult sense because the forces of music are still building up his body, so a child need not be taught moral behaviour because moral forces are still pouring directly through him. Darker times are bound to follow. Every pupil

is destined to experience the darkness of evil during puberty and in later life, but having tried to foster these inflowing musical and moral forces by adapting our methods of teaching to the inner needs of the pupils, by working in harmony with these divine forces, we hope that later on our pupils may be able to make their own sound judgments in life.

* * * *

After the ninth year the pupil enters a new phase of development: he loses the feeling of unity with the world and he begins to feel himself as a separate entity, as an individuality. He is now ready to deal with split numbers, with fractions in Arithmetic. Having completed their task in bringing about the right relationship between breath and pulse beat and having consolidated the other rhythms mentioned before, the musical forces withdraw from working within the child. Rudolf Steiner therefore told the teachers of the Waldorfschool that up to the ninth year music played or sung should be fitted to the rhythm of the child, whereas after the ninth year the child should learn to adapt his own rhythm to that of external music, the choice of suitable music naturally still being of great importance. Part-singing can now be introduced through simple rounds where each part has to learn to hold its own against the other parts. The splitting up of unity brings about a strengthening of the individuality and just as the splitting up of light through the prism brings about the rainbow colours, so does part-singing create harmonies, i.e. the sounding together of different intervals and chords. The pupil who has become aware of the difference between his own inner life and the outer life is now ready to experience the major and minor mood in music.

A melody can be drawn diagrammatically as a rising and falling line, it can be spun like the golden thread of a thought and it exists in the horizontal sphere.

The major or minor third of a common chord (i.e. the middle note of a simple chord) cannot be thought, it can only be felt and it has a vertical quality.

Just as the melody represents the "head" element in music (the embryo and the baby grows from the head downward), so does harmony represent the "heart" element.

After the loss of unity with the world, the powers of observation and judgment, also the first criticisms enter the life of the child. He is approaching another landmark in his development, the twelfth year, where in our curriculum he will meet music again, but in a more conscious way, through Science.

It is at this point that the so-called unmusical child has a chance of music meeting on an entirely different level through his scientific interest.

We introduce Physics in class 6 with Sound and Light, and the well known Chladni-plate experiment can set a keynote for the whole period: A violin bow is drawn repeatedly across the edge of a metal or glass plate which is covered by fine sand or salt, so that it begins to vibrate until a clear musical tone is sounding forth. The particles of sand or salt begin to dance wildly on the vibrating plate, but when the plate come to rest again, they are found to have arranged themselves in most beautiful geometrical patterns along the places where there must have been the least vibration, along the nodes. The pupils witness how sounding vibrations create physical forms, how they bring order into chaos. The words of God which are repeated again and again in the first Chapter of Genesis "And God said", as well as the opening sentences of the Gospel of St. John: "In the beginning was the word", take on a new meaning for the pupils. Every object on the earth is experienced as divine sound come to rest and frozen into form. This divine sound which cannot often be heard with the human ear is the music of the spheres, spoken of not only by the Greeks but also by Shakespeare, Goethe and many other great people. The example of the police whistle whose vibrations are not audible for the human ear because of the shortness of its sound-waves, but which can be heard quite distinctly by police dogs, shows us that our hearing of sound is limited to a certain margin of vibrations and that one can therefore look upon all vibrations as belonging to sound, whether audible to the human ear or not.

In each object also a physical sound lies hidden and when we 'coax' this sound out of the object by knocking, tapping or dropping it, it reveals to us some quality of the object. Blindfolded pupils can not only identify many objects by their sounds, but they can also recognise the difference between, let us say, a silver spoon and a spoon of a baser metal. Train wheels are tapped with hammers on railway stations to ensure that they are not cracked. Doctors listen to the bodies of their patients to find out if they are "sound." Rudolf Steiner tells us that when we are observing outer objects in the deepest way possible, we unite ourselves again with the streams of forces which once have created them before they were fully condensed into matter and that by observing an object rightly, we help to free the frozen being within in a spiritual sense, though it will not have changed in a physical sense. By uniting ourselves with its musical stream, we bring it to life again through our own activity. Needless to say, this kind of observation needs much practise and self-discipline and would not be mentioned in class teaching, but nevertheless the pupils can experience such an underlying mood within a lesson.

From the experience of sound in general the pupils are led to find the natural laws hidden within it. The relationship of length, tightness and thickness of a string to its pitch are discovered on the monochord and this leads directly to musical instruments and the orchestra. The three oldest instruments, the drum, lyre and pipe are found to be the ancestors of the three families of instruments in

our modern orchestra, namely the wind, string and percussion sections. A whole world is opened up to the children and although the teacher can tell the class only a little of it the unrevealed knowledge behind his words gives the lessons greater depth and can lead to interesting conversations whose educational value may be greater than the mere passing on of subject matter.

Rudolf Steiner has that an orchestra is an earthly picture of the whole cosmos sounding together, and that musical instruments are not just human inventions in the ordinary sense, but that they are manifestations of spiritual forces working behind physical matter. One can see this expressed in pictures of Stephan Lochner, Mathias Grunewald and other masters of that time, where angels appear playing musical instruments. Although the angels are painted to look different from human beings (e.g. no legs are shown) the musical instruments are painted with such accuracy that one could reconstruct them from the pictures alone.

The three families of the musical instruments are representative of the three elements of music, of melody, harmony and rhythm, and these again are closely connected with threefold Man in his thinking, feeling and willing. It is easy to see that the drum as a rhythmical instrument has a direct appeal to the life of will in Man. The pipe is the ideal instrument for melody-playing and the connection between thinking and a melodic line has already been mentioned. The lyre as the ancestor of the strings section is the first instrument on which harmonies (i.e. chords) could be played and these again are related to Man's feeling life. We could therefore make the following list:

INSTRUMENTS	ELEMENTS OF MUSIC	FACULTIES OF MAN
pipe—wind section of an orchestra	melody	thinking
lyre—string section of an orchestra	harmony	feeling
drum—percussion section of an orchestra	rhythm	willing

Although the connection between the instruments and Man as a threefold being appear quite plausible if one looks at their original form of pipe, lyre and drum, it becomes far more difficult to accept the correspondences between the modern instruments, the elements of music and the faculties of Man. Who for instance could look upon the violin as a chief instrument of harmony rather than that of melody? In the case of the Scottish bagpipes, an instrument originally belonging to the group connected with thinking in man immediately works upon the will and the feeling. (Scottish regiments in their kilts, nicknamed "Ladies from hell" did go into battle to the

tunes of their bagpipes.) Kettledrums in modern orchestras are very much used to emphasise the melodic line in symphonies and many other examples of such an apparent shifting round of the effect on thinking, feeling and willing could be quoted. Moreover, even the direct relationship between the elements of music and the three faculties of Man could be questioned. One only needs to play or write down a slightly complicated rhythm to realise how much concentration and thinking are needed for this musical element, rhythm, which appears so strongly connected with Man's will-life. A melody in itself contains the other two elements in as far as it is bound to have some kind of rhythm of its own, and also an underlying mood of feeling. As it exists in time, one never experiences only the one note sounding at the time of hearing (the present tense), but past sounds linger on in the memory while the ear anticipates notes to come in the future. The horizontal and consecutive sound picture of melody is slightly 'telescoped', as it were, in the act of musical remembering and it can thus create an experience of harmony, i.e. of different tones of one melody becoming intervals and even chords in the mind of the listener, if only for brief and fleeting moments.

What does all this tell us? The capacities of musical instruments and elements to transcend their own sphere and to transform themselves simply shows us again the balancing and harmonising forces inherent in music. It shows us why music can have healing powers, because healing means balancing what has fallen into disorder, as we have seen it in a different way in the order which sound vibrations created on the Chlodni-plate.

Just as one tone has to withdraw into oblivion to come to the fore again at a later moment within a given melody, so do musical themes in composition have to vanish for a time only to reappear, often in a transformed way. This rhythm of coming forward and withdrawing is also being used in our teaching when we take main lesson subject, e.g. Physics, for a period of some four to five weeks every morning from 9 a.m. till 11 a.m., only to leave it lying fallow for several weeks in order to develop it further during a future main-lesson period. Thus the rhythm of remembering and forgetting of subject matter appears to us as a natural and health-giving rhythm like the daily rhythm of waking and sleeping. Also the appeal to the three different faculties of thinking, feeling and willing at different times within one main lesson belongs to this use of musical forces, which enables pupils to go through their two hours' main lessons without feeling tired or bored.

As our pupils are encouraged to learn to play musical instruments, a few observations about their pedagogical value may be mentioned here. What for instance happens, when a child plays the violin? As he carefully picks up this rather fragile instrument, he must first tune it before he can begin to play. Tuning is an excellent training towards an active listening which many children find difficult to achieve because of the flood of background noises in our modern

civilisation. The expression of listening on the face of a tuning string player appears as one of a relaxed inwardness which strives to attune itself towards the perfection of the musical intervals. A good violinist has to tune his fifths according to his "inner ear", that is to a sound which is not physically existing at all! This true sound which has no vibrations in the physical sense, this inner hearing, remains a miracle and a gift of the Gods, which once enabled a completely deaf man to write musical works, perfect even to the minutest detail (Beethoven).

Tuning brings about a state of inner calm in which human capacities can ripen like fruits in the warmth of the sun.

While it is quite possible to play simple pieces on the piano or on some wind instrument without the player's listening to his sound, this active listening is of first importance in the case of a string instrument because the pitch of a note has to be determined by the lengthening or shortening of a string and not by the pressing down of a fixed key (piano) or by closing of a lid, as in the case of the oboe, clarinet, transverse flute, etc. A violinist friend helped me to recognise that the act of violin playing corresponds to an externalised activity of our rhythmic system, of our breathing and our pulse beat. As the pupil draws his violin bow across the strings, he sets them in motion in a way similar to that which our breath sets our vocal chords in motion. The production of a tone on the violin is therefore more akin to the activity of the human larynx than that of a wind instrument, where there is only one agent, the vibrating column of air inside the tubular part of the wind instrument. This correspondence between the breathing in man and the bowing on the violin can be experienced almost dramatically when one tries to play the violin as an amateur, where it can happen all too easily that one feels a sensation of choking and general shortage of breath if not sufficient bow-length is left to give a sustained note its full duration. One then realises almost with a shock that the control of one's breathing has become removed from the muscles of the chest and diaphragm to those of one's right arm.

The up-bow which moves against gravity corresponds to the inhaling, and the down-bow which naturally carries more weight as it falls back into gravity, takes the part of the outgoing breath with which we speak and sing. An up-beat in the music is therefore instinctively played with an upward bow, while a sustained note—like a long drawn call—is best played with a downward bow. Just as laughing or crying change our breathing, so do different moods of the music call for the different kinds of bowing. The 'hopping-bow' for instance appears to me like a 'laughing-bow' whereas the martelé-bow creates a more serious mood.

So much about the breathing of the 'violin-man'. Where do we find the pulse beat? It is hidden in the vibrato which is produced by the left hand, the 'heart-hand'. This vibrato is a quick

pulse, beating as long as a tone 'lives', and without which notes on the violin sound insipid and 'dead'. Thus every note on the violin has breath and pulse beat, is fully alive, while a note struck on the piano begins to fade and die at the moment of its creation. It is nevertheless possible to overcome and redeem the limitations of the piano so that its sounds of music come to life again like Phoenix, the fire-bird, which rose anew from the ashes of its funeral pyre.

The part-control of the breathing through a musical pattern from without obviously helps to harmonise the pupil's breathing, whose organism thus spreads beyond his periphery. As a healthy breathing is fundamental to a healthy body, the healing forces inherent in the right playing of a string instrument are obvious, particularly so in the case of children who have asthmatic tendencies. To help such children by giving them a wind instrument appears to me like trying to cure their breathing difficulties by making them run up and down the hills.

Another important factor in violin playing can be found in the true use of the left and right hand. Man's two sides are not symmetrical but they form a polarity. The right hand, which used to wield the sword, is the active, conscious, 'thinking' hand, whereas the left hand, which held the protecting shield in bygone days, has a receptive and 'feeling' quality. On the violin the fingers of the left hand are extended, as it were, into the strings and those of the right hand onto the hairs of the bow and on the spot where the two streams cross each other, the tone is formed. Yet nothing will happen until the right arm begins to move; the left hand has to wait for the action of the right arm, it has to wait patiently until the right 'pops the question'. (A further indication that also the male and female polarities are hidden within the polarities of right and left !)

The right arm performs much larger movements, whereas the left hand has to learn "neat and nimble stitches" on the strings. The bowing part is usually found to be the more difficult part, because more powers of consciousness are needed there than in the activity of the left hand.

This true quality of the polarity between left and right has been largely lost in piano playing, where both hands are used in a symmetrical fashion, although in the kind of music where the melody in the right hand is accompanied by the left has still retained something of it. Piano playing fosters an ambidextrous capacity (ambidextrous literally meaning 'both' or 'two-right-handed'). Yet Rudolf Steiner has shown us how we can make use of just this ambidextrous quality in order to harmonise a lack of control in children whose temperaments 'run away with them'. A child whose choleric temperament is too strong can easily become a bully. He is overactive, lacks patience and must learn to receive. One could say that in such a case the qualities of the right side are dominating and therefore he should be given music to play on the piano where the left hand has the leading part. A too strongly melancholic child, on the other

hand, feels that the weight and cares of the world are pressing too heavily upon him, and he should therefore be made to achieve more agility with his right hand in order to balance his receiving nature with active giving. It is quite feasible to realise these suggestions without spoiling good pieces, simply by using ordinary piano pieces as 'duets', i.e. the teacher playing the music written for one hand while the pupil plays the other, both of them using one hand only. A child who cannot concentrate because his over-sanguine tendencies make him into a 'scatterbrain' could be helped by a rhythmical co-ordination of right and left hand, as in the case of a simple choral. The too phlegmatic child should not be allowed to play too many chorals, he should be made to struggle with simple polyphonic music (which is akin to part-singing) where he is forced to split himself into at least two different parts—a painful, though quite healthy experience for him !

Other instruments can also provide a balancing and harmonising effect. It is a gratifying experience to see boys in the puberty-stage 'blowing off steam' of their often too much pent up and hidden feeling by blowing into a trumpet till their eyes are watering, or to see concentration on the faces of girls in the 'giggly stage' as they wait for the right moment in which to play their part on a drum or triangle. Let no one say that in the days of the Radio and Television it is better to enjoy music in the home performed by professionals than to allow children to make their often unpleasant noises on their instruments. Only where the will is actively engaged can a true experience of music come about and the understanding of great performances of artists be trained. Regular practice on a musical instrument (which is essential) strengthens the powers of will, concentration and determination in children and may enable them to perform worthy deeds in their later lives which outwardly may not at all appear connected with music. When playing a musical instrument, the powers of thinking, feeling and willing are always engaged in a wonderful harmony, more so than in any other activity I can think of, because of the necessity for a great manual skill, which is the result of concentrated thinking, and both of which are always woven together by musical feeling. In the ensemble playing of the most humble school orchestra egotism which wants to turn a player into a soloist is overcome as each player contributes towards the creation of something higher and greater than himself. Great patience is needed when waiting for one's cue while listening to the other instruments, combined with a state of readiness to come in when called upon to do so. This may well serve as a picture of the life and destiny of people or even nations living together.

It now remains to give one more example of how music can be used in teaching, this time in the upper school. The music main lesson in Class XI of our Schools is intended to convey to the adolescent pupils a picture of the development of Man through the medium of music. This difficult task is tackled in widely differing ways in

the different Rudolf Steiner Schools and we at Elmfield decided to use Richard Wagner's 'Ring' and 'Parsifal' as a foundation of this period, but it is quite likely that a future music course would take on quite a different form. Rudolf Steiner gave the teachers underlying principles and main directives which are not likely ever to become dogmatic since details have to be worked out in a more or less individual way by each teacher.

Wagner's 'Ring' consists of four operas forming one whole and consisting of 'Rhinegold', 'The Valkyrie', 'Siegfried' and the 'Götterdämmerung' (Twilight of the Gods). In 'Rhinegold' we see how the golden treasure, guarded by the daughters of the Rhine, is stolen by Alberich the dwarf. This Rhinegold appears like a symbol of the golden age of Man before his fall and it is stolen through the greed of Alberich who is willing to sacrifice love for lust of power. Alberich hides his golden hoard deep in the caverns of the earth where he forces the Nibelungs, his subjects, to forge and to work it into ever more costly treasures. On the stage these Nibelungs appear as gangs of slaves, mercilessly driven by Alberich's whip and insatiable greed, and accompanied by an ever repeating, monotonous phrase of music which has a marked dotted rhythm played in unison by the whole orchestra. The sound of this musical phrase with its insistent rhythm causes an uncanny sensation of being driven against one's own will and in some ways it appears strangely reminiscent of the kind of noise associated with the clanking of factory machines.

Further on in 'Siegfried' we again hear sounds coming from a cave which this time is situated on the surface of the earth. It is the music of Siegfried who is forging his sword and the contrast of mood between these two scenes is truly magnificent. This time the arduous work of forging metal is carried out in full freedom and fired by an enthusiasm which will overcome all obstacles. One feels literally lifted out from the cave into a realm of joy and exhilaration on the wings of music, created by Siegfried's singing and by a masterly orchestration of the instruments. What a picture of the different attitudes towards work to be presented to the young people just before they are ready to go out into life to embark on their own career! (We gave this main lesson period after the final examinations had been completed and just before the end of the school-life of this particular group.)

Despite the joyous moments in 'Siegfried', an ominous gloom spreads throughout the whole 'Ring'. One senses all the time that the gods are doomed to fall and that the old order must make way to a new era. And so Siegfried, too, must perish. It is given to Parsifal to attain his goal. Parsifal, the ideal of the Christian of to-day, has even more faults than Siegfried but after years of trials and patient search he learns to overcome his impetuosity and to tame his lower nature; he learns to achieve the Christian quality of mercy and love.

In the story Parsifal brings back the Holy Spear, which once had pierced the side of the Saviour on the Cross, to Amfortas, the sick and dying King of the Grail, in order to heal his wounds.

The hand which had previously held the destructive weapon became transformed so that it might join again, in full consciousness, the sounding together of a cosmic symphony from which man had once been separated through the fall. Thus could Parsifal, the new King of the Grail, bring down to earth the moral forces streaming forth in this heavenly music by sending his fellow knights of the Grail into the darkness of the earth, where their mission was to heal the wounds and scars of a suffering humanity.

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Sound and Silence in the Classroom

W. Glas

THE break-bell has sounded. The laughing, running, chattering and climbing are over. The last participant of the vigorous games enjoyed only two minutes earlier has left the playground and has joined the crocodile which winds its way to the classrooms. A whole sea of vitality is once again being controlled by each child.

As the teacher enters he passes between Avrii and Raymond. Avril stands near the door. At the beginning of each break she asks "Must I go out today?" Later she waits hopefully near the front door yearning for the day on which the first bell will be rung early. Her thin legs are planted a little primly behind her chair, her breath is shallow and regular, and she gazes steadily at the teacher with just a suggestion of a smile. The smile is for the world at large and the teacher knows that even when Avril will join in a customary choral greeting she will continue her daydream while she is speaking. Raymond, a round headed and stocky boy, stops the tattoo he is drumming on the back of his chair as authority enters. Although he has washed his hands and face with cold water he still feels too hot from the exertions of tug. Expectancy, impatience and fidgetiness ripple over his face; these expressions merge and dissolve as easily as circles in water. Standing upright behind a chair is an effort for Raymond. He wants the lesson to be underway, to get on

These are but two of the class. Each of the other children is also waiting in a characteristic posture. With a little practise the teacher can visualise the individual differences in stance when he is not in the classroom in less time than it takes to wipe a blackboard. Now, however, he stands very deliberately upright; at once there is a gentle shift of weight throughout the room. Perhaps another two or three seconds go by and now all are waiting . . . waiting for the lesson to start, waiting for the teacher's voice.

More often than not the products of the teacher's larynx form the medium that binds the lesson together. Adults looking back on their own childhood can become aware, sometimes painfully aware, how much of the school was the teachers voice. They must approve when the teachers re-examine again and again from varying points of view what actually occurs when they speak, and what happens when they do not.

Greetings are over; the class has sat down. It is an ordinary enough scene—a class of children faced by a standing teacher. Sometimes an imaginative exercise can intensify the reality of the familiar. So let us for a moment permit ourselves the luxury of fancy in order to grip the ordinary and usual afresh. Let us picture the whole group without any skin.

Beneath the supple, protective organism which forms the outer surface of the body each child becomes an aquatic world. Viscid and serous fluids motion to and fro. Among them is blood which is present everywhere. It pulsates in the arteries, glides through the veins, fills the capillary vessels, bathes all tissues in transparent lymph. Nothing seems stationary and solid. This impression has little to do with any picture gained from classical anatomy, for, as Alexis Carrel pointed out decades ago: "One cannot understand the living being by studying a dead body. For the tissues of a corpse have been deprived of their circulating blood and of their functions. In reality an organ separated from its nutritive medium no longer exists."

The circulation of the blood is rhythmic, so also is the breathing which plays into it. Each child is a world of rhythmic flow engendered within which is in collision with another world perceived through the senses. Walter de la Mare's lines come to mind:

"Two worlds have we: without; within
But all that sense can mete and span
Until it confirmation win
From heart and soul is death to man."

The sounds that reach the child's ear come from without, from the world that sense can mete and span, and the effect of a vocal bombardment not absorbed and confirmed by the inner rhythmic processes is indeed carrion food for child nature. This becomes evident when we consider how these two worlds meet in the ear.

The sound impulses which make the tympanic membrane reverberate are transmitted across the middle ear and reach the inner ear in a magnified form. When the little stirrup-like ossicle drums on the ear's oval window, fluid movements result. These fluid motions in the shell-like cochlea are possible because there is some flexibility in the walls of this spiral organ. The rhythmic eddies of endolymph and perilymph sway the loose ends of the hair cells which form parts of the organ of Corti and which are known as the auditory receptors. But the movements of these hairs are also influenced by rhythms from within.

It is difficult to state anything about this inner process in a short article. Here brevity is synonymous with oversimplification, and oversimplification always distorts. A more detailed account of the rhythms which reach the ear from within can be found in Dr. F. Husemann's book: "The picture of man as the basis of the art of healing." ("Das Bild Des Menschen Als Grundlage Der Heilkunst." Verlag Fries Geistesleben, Stuttgart.)

During embryonic development the aquaeduct cochlea still forms a direct link between the perilymph and the cerebral spinal fluid which envelopes the brain. In life this relationship is maintained functionally, although not directly, through the varying pressures transmitted from the little pillow-like ductus endolymphaticus.

Husemann goes on to show that modifications of the rhythms of the pulse and of the breathing are taken up by the cerebral spinal fluid. In other words the child's own breathing, as well as the effects of the heart's systole-diastole, produce subtle motions which meet those made by external sound. *In the act of hearing, the teacher's voice meets the child's breathing and circulation; the individual nuance of these will determine the manner in which his voice is absorbed.*

Avril who still must learn to take deeper breath, to experience the world with more participation, and Raymond who like to disturb his own natural inhalation and exhalation by talking whenever possible, have totally different listening problems. Avril's hearing needs an inner strengthening in order to cope with the deluge of impressions lessons seem to bring. Raymond requires additional order so that his unconscious and vital activity is not impeded by his actions.

Over and above their personal needs both of them, as well as all the others in the class, need periods of silence; times during which the "listening inwards" is stronger than the "listening outwards"; moments when the spoken sound can be absorbed and the ear come to rest. Rudolf Steiner, addressing teachers on the 15th of June, 1921, said: "at rest man creates within himself the means of holding the spiritual. When it is precipitated and settled he can make use of it," Meditating this thought can place a new value on the pause, even the pause a teacher has to make when he takes a new breath. Perhaps it is a fortunate providence which has ensured that human speech only rides on the exhaled air. Because of this the child must meet some pattern of tone and silence. A conscious appreciation of such alternations can assist the teacher's work. He can use the pause as the artist can use his materials. The artist must place his materials rightly; the teacher must place his pause into an existing silence. A tense condition created by force is not helpful, but a natural calm, ideally a stillness born of wonder, is the right frame for the consolidating deed of the pause. Boys and girls who experience such pauses should later be able to understand very well what Keats meant when he wrote, "axioms in philosophy are not axioms until they are proved upon our pulses".

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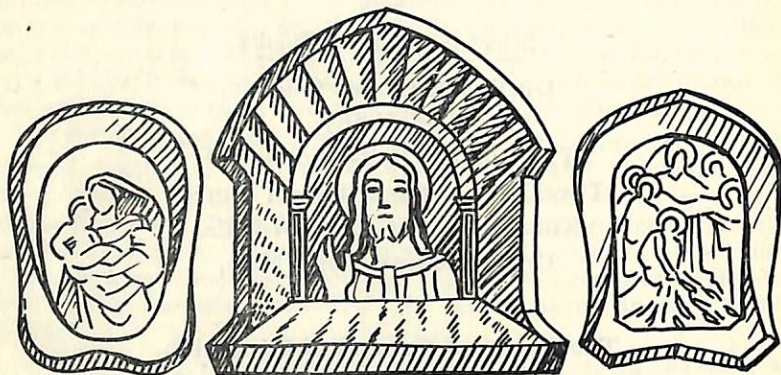
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