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by
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Introduction by Douglas Gerwin

ARJ2 Chapter: Spiritual Science

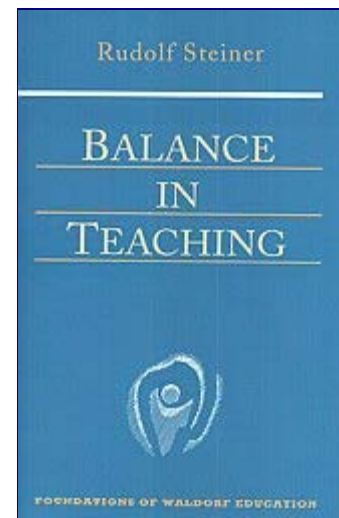
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Apollo and Dionysius shared the temple at Delphi each year; first Apollo then Dionysius but never both at the same time. In our human bodies Apollonian forces rule our growth from birth to age seven, sculpturing our growing bodies in a rational, ordered way. About age seven, the Dionysian forces arrive to gradually *balance* the child's one-sided centripetal sculpting forces with the centrifugal free-flowing forces of music and rhythm, followed by Dionysian lust by puberty. Steiner devotes the first four lectures of this book on how to achieve this balance in teaching, and the last three lectures to maintaining the health of the child.

Without this balance, a child might grow up into a gruffy, opinionated Archie Bunker, or might never grow up at all, remaining a Peter Pan forever. In his excellent Introduction, Douglas Gerwin describes the results if the two forces do not counterbalance each other during childhood.

[page xi] Left to themselves, these forces can work one-sidedly on the growing child, with devastating consequences. Allow the sculptural, formative, centripetal, linear forces of Apollo to exert too strong a grip, and we can see children grow prematurely stiff in carriage and sometimes burdened of soul, like grumpy little gnomes trapped in the confines of precociously sclerotic bodies. Allow musical, centrifugal, curvilinear forces of Dionysius to rise up too strongly, and we can see children who stay youthful and carefree too long, like flighty Peter Pans or fluid slender sylphs.

In the current Broadway musical "Finding Neverland" James Barrie helps the older brother, Peter, to overcome the Apollonian forces which had burdened him, keeping him from having fun. The magic wand which Barrie waved was music and play. This musical brings childlike play into an adult play in a marvelous way. Barrie freed himself from his own Apollonian forces which burdened him by embracing the Dionysian forces of childhood and writing a play which embodied his own liberation into balanced adulthood.

How can teachers achieve similar results with their children?

[page xi] Here Rudolf Steiner offers exceptionally specific suggestions on how teachers can use the subjects of the curriculum — both academic and artistic — either as

parachutes to buoy a child's overly precipitous descent into the physical body, or as anchors or tethers to coax a reluctant being down into corporeal existence on earth.

This sounds a little abstract, too Apollonian, but Gerwin quickly gives us specific things a teacher can do to balance each specific child.

[page xi] Children overly prone to becoming trapped in the body need to draw, write, and revel in the details of a subject in order to loosen their "I" a little from the confines of the physical organism. By contrast, children who have difficulty taking hold of the physical organism need to *observe*, as from a bird's eye view, what they have drawn or written, or be encouraged to attend to the overall *meaning* or *context* of a subject, rather than in its details.

In my work as a writer, I often feel the need to get away from my desk and walk around my estate to look at the flowers, growing plants, and maybe even sit in meditation for a while in a shady bower. Today, without an external stimulus to get up and move around such as happened often when I worked in a nuclear power plant for 14 years, I get these internal stimuli which drive me to take a break, and I always return to my work refreshed afterward. "Move, and you excarnate; be still, and incarnate," Gerwin says.

[page xi] But the *result* of the movement is that you feel more incarnated, as for instance after a brisk walk; of being still, that you feel more buoyant and excarnated, as for instance after a period of silent contemplation. As in any organic polarity, opposite forces such as movement and stasis, far from canceling the effects of each other, actually help to *generate* them.

Gerwin shows us the connections between Apollo and Cosmos, between Dionysius and Chaos.

[page xii] In other words, the forces of stilling and moving represent two vital principles of human development. The sculptural forces represented by the archetype of Apollo serve to induce calm, stability, and ultimately quiescence, even to the point of rigidity. What Steiner calls musical forces, represented by the archetype of Dionysus, serve to stir activity, instability, and ultimately dynamic motion, even to the point of dissolution. In Greek mythology the first was called *Kosmos* ("form coming to rest"), the second *Kaos* ("restless void").

"It only hurts when I laugh." I've heard people say that, often in jest, but there is a reality behind the statement. We cannot laugh if we are exerting ourselves by holding tension some place in our bodies to minimize pain. Gerwin tells a story of young men lifting a grand piano to move it and having to set it down before they could laugh. (Page xii footnote) When we are hurting, whether from an illness or an injury, we are often unconscious of the tension we are holding in our body to stem the pain, until someone says something funny, then we laugh, but only after releasing the tension we were holding to mask our pain. So we indeed can laugh, but in that moment, we feel the pain we had just released into existence, causing us to hurt when we laugh.

Steiner recommends that children learn to draw letters first, i.e., to learn Writing *before* they learn to Read. Writing is an action of the will, whereas Reading is an abstract action of comprehension. In this next passage, Steiner indicates that Speaking, an action of the will, must happen during the process of Hearing which, rightly understood, like Reading, is an abstract act of comprehension. The will-based activities of Writing and Speaking enliven the abstract processes of both Reading and Hearing, allowing us to comprehend, even if we are not consciously aware of the presence of our Writing and Speaking while comprehending.

In 1964 I worked as a research assistant to Hal C. Becker who had developed the concept of *subliminal perception* by observing small movements in the larynx of people in the process of perceiving something. His work led people to add subliminal information into movies which they claimed led people to buy more

popcorn, candy, and drinks during intermissions and breaks between double features. Steiner had learned of this subtle speaking while listening decades earlier.

[page xii] These complementary principles — movement and stasis — can be found in two bodily systems by which most of our classroom learning proceeds: the auditory and the visual systems. Ear and larynx, connected by the Eustachian tube, form a single sensory system, as anyone knows who has watched small children subtly mouth the words they are hearing. In his study of the human senses, Rudolf Steiner maintains that even in order to *hear* the spoken word in a conversation we have actually to reproduce gently the living etheric *movements* of the larynx that formed it. Indeed, we hear something only when it moves, and we hear only when the ear itself vibrates. In other words, our sense of hearing is profoundly integrated into the world of movement.

Speaking and hearing are two human abilities which require movement when they are in operation in us. What is the one human ability which requires stasis? It is our human visual system.

[page xiii] This system of ear and larynx, so utterly reliant upon our ability to move and be moved, stands in polar contrast to another sensory system which depends on our ability to slow down movement almost (though never entirely) to the point of complete quiet. This is the pictorial or visual sense given to us through our eyes. While each eye is surrounded by six (some say seven) muscles that allow us to roll our eyeballs, squint at a distant object, or simply stare at something close to hand, we see only when our eyes — and the head in which they are set — come to a fleeting moment of focus and rest.

Our environment may be in constant movement around us, such as when we are driving a car, but when we focus on a part of the scene, our eyes come to a halt to achieve stasis for a brief moment. The foveal system of our eyes gives us acuity in stasis, and outside the foveal area of the retina, the peripheral vision detects motion, often unconsciously while we are focusing on the central part of our field of view with our foveal vision(1).

Visual information appears first in our sensory system and must work its way down through the rhythmic system to be digested by the metabolic system and will to be expressed in our limbs. Auditory information comes to us in the other direction, working up from our metabolism and limbs, ending up in our brain and nervous system. "In other words, we perceive sound with our full body, not just with our ears." (Page xiv). Auditory information from another person is a kind of X-Ray, as I experience it. We perceive sound with our full body, and that allows us to in-form ourselves of what is happening in the full body of the person forming the sound. Listening and speaking are both full body experiences and not purely auditory data to be converted into words in the process of hearing as is commonly assumed.

[page xiv] These impressions must be lifted into our systems of circulation and breathing, the semi-consciousness of heart and lung, if they are to be comprehended, and only then can these auditory perceptions rise up into the brain and nervous system, where they are livingly remembered. "In the same regions where we perceive the visible [i.e. the brain], we remember the audible. In the same regions where we remember the visible [i.e. the limbs], we perceive the audible. And the two cross over each other like a lemniscate in the rhythmic system" (page 35). To the degree that we become conscious of this crossing over, he adds, we can "hear colors" and "see sounds."

This area of cross-over leads to the process of synesthesia in some people who are able to hear colors and to see sounds, a process which Kevin Dann tackled in his book, [Bright Colors, Falsely Seen](#).

The Apollonian sculptural forces which form the child work from the top down as sculptural forces and are countered by Dionysian musical forces as the child matures towards adolescence, the time around fourteen when these two inner forces try to break out and similar outer forces try to break in. Teachers need to comprehend the actions of these forces in order to help each child achieve a balance, a balance

that is essential in maintaining the health of the child, which Steiner will focus upon in the last three lectures of this series.

[page xv] However we understand these sculptural and musical forces, it falls to the teachers to form their lessons in such a way that the children overcome their natural one-sidedness, for in overcoming imbalance they can achieve, or sustain, a condition of physical and emotional health. Only our rhythmic systems — of breath and blood, of lung and heart — are of themselves health giving, since in these the relationship of movement and stasis is more in equipoise. Here the collaboration between teacher and physician can be especially useful to further the child's healthy growth and development, for the doctor engages at the unconscious level just those therapeutic forces that the teacher employs at the conscious level. "The forces inherent in education are metamorphoses of therapeutic forces" (page 88). In a sense, education begins where medicine leaves off.

Rudolf Steiner understood the power of an unanswered question⁽²⁾, which rightly understood, is the aim of an aphorism: to provide a short statement of a truth whose deep meaning can only come by holding it and allowing its meaning to unfold in your life. He begins his first lecture with a powerful unanswered question to be absorbed and allowed to grow into an answer inside each teacher.

[page 1] I should like first to add to what I said to you last year about the teacher, the educator. Of course, all I shall say about the teacher's intrinsic being must be understood in a completely aphoristic way, and it will really be best if it gradually takes its true form within yourselves, developing further through your own thinking and feeling.

What is a growing child to do when confronted by a teacher of botany who thinks everyone should grow up to be a botanist? Shouldn't a teacher help an individual child's natural gifts to grow instead of foisting upon the child the teacher's own gifts and predilections? Our textbooks in botany, zoology, chemistry, etc, are written for future botanists, zoologists, and chemists, etc, and end up deflecting a growing child's interest in learning the general aspects of botany, zoology, and chemistry appropriate to their age. My wife recalls that the football players in her high school didn't care about chemistry, so whenever the chemistry teacher asked them a question, their stock answer was, "Copper sulfate, Prof."⁽³⁾ This is the kind of scorn that a teacher can generate by trying to share their gifts with their children instead of helping each child find their special gift by providing a general education in each possible field.

The source of this scorn can be found in the teachings of Herbert Spencer, a nineteenth century English philosopher.

[page 4] Now the remarkable thing is that we ought to strive for the exact opposite of what Spencer laid down as a true educational principle. When we are teaching children about plants and animals in our elementary schools, we could hardly imagine a greater mistake in our educational method than to treat the subject as an introduction to studies required to become a botanist or zoologist. If, on the contrary, you plan your lessons so that your way of teaching about plants and animals hinders the children from becoming botanists or zoologists, . . . for no one should become a botanist or zoologist through what he or she learns in the early grades. People become scientists only through their particular talents, revealed by their choice of vocation, which are certain to appear at maturity if there is a true art of education. Through their gifts! That is, if one has the gifts necessary for a botanist, one can become a botanist, and if one has the gifts necessary for a zoologist, one can become a zoologist. This can result only from the gifts of the children in question, which is to say, through predetermined karma. This must come about by our recognizing that one child has the makings of a botanist and another the makings of a zoologist.

Steiner back a hundred years ago in his lecture said that he would side with the students instead of the teachers scorned by them. How did we get into this muddle where teachers have become the object of scorn by their students? It started in the universities who have confused the goal of their teaching, and this confusion finds its way down into elementary schools.

[page 5] Today if we were to ask whether we would side with the teachers when the students make jokes about them or uphold the students, we would in the present state of affairs in education side more with the students. The direction things have taken can be best observed in our universities. What are the universities, actually? Are they institutions for teaching young men and women or are they research centers? They would like to be both, and that is why they have become the exaggerations they are today. People even find it an excellent feature of our universities that they are at one and the same time institutions for teaching and for research. But this is just how all the muddle comes into education — it is carried out by scientists, works its way into our highest educational centers, later finds its way down into the high schools, and finally into the elementary schools.

Spencer laid down a set of principles for children's education, but he ignores in *process* what he has clearly stated in *content*, thereby contradicting himself. He may have fooled himself, but not Steiner, who points to one of Spencer's axioms.

[page 7, italics added] [On this axiom] he lays great emphasis: in teaching, *one should never proceed from the abstract but always from the concrete*; one should always elaborate a subject from an individual case. So he writes in his book on education, and there we find, before he enters into anything concrete, the worst thickets of abstraction, really nothing but abstract straw, and he does not notice that he himself is carrying out the opposite of just those principles he has argued are indispensable. We have here the example of an eminent and leading contemporary philosopher completely contradicting what he has just advocated.

Along the way from Spencer's paradox to us, the teachings of Herder, Fichte, Jean-Paul Richter, Schiller, and others have been neglected and forgotten, teachings which can show us there is "a way of educating drawn directly from life, that there is a life-infused education" possible. (Page 5, 6) Steiner's words ring across the centuries to remind us of that possibility, and his Waldorf school systems provide us living proof of their efficacy in creating a life-infused education for children in the twenty-first century and beyond.

Teachers in a Waldorf school for many years will teach grades 1 through 8 and start over again on 1. Will the second time a teacher takes on grade 1 find it easier than the first time? Steiner gives us a unique insight into what constitutes a good teacher in answering this question in an unexpected fashion.

[page 7, 8] Say we teach, beginning with the first grade, the six-year-olds. Every time we take a first grade, our teaching will be bad and will have failed to fulfill its purpose if, after working with this first grade for a year, we do not say to ourselves, "Who is it now who has really learned the most? It is I, the teacher!"

He is here confirming an insight I first had in 1977(4), "Thus a Teacher, So Also a Learner" — something that is true even for first grade teachers. Without a deep insight into this dictum, a teacher can do what others may consider a great job teaching, but Steiner would deem it a bad job.

[page 8] But if we say to ourselves, "At the beginning of this school year I had excellent educational principles, I have followed the best teaching authorities, and have done everything to carry out these principles," if you have really done this, you would most certainly have taught badly.

Each new incarnation of a specific model of automobile incorporates into the dashboard of the car new controls and indicators that formerly required us to use our limbs to activate or read. Think of the original headlamps in 1910 time frame which needed to be lit by a match. Or the crank starter under the radiator. In this new century, we can read the air pressure in all four pneumatic tires on our dashboard, and many other things. The human head operates like the dashboard of a car. Each human incarnation brings capabilities from the limbs of our previous incarnation into our head. At the time of our birth, Steiner says, "Our head is overripe." As we mature, we begin forming a new head from our limbs for the head of our next incarnation.

page 9, 10] All human heads are overripe, even the unripe ones — but the rest of the organism is only at the stage of furnishing the seed of the head in our next incarnation; it is full of life and growth, but it is incomplete. Not until our death will the rest of our organization really show its true form, namely, the form of the forces that are at work in it. The constitution of the rest of our organism shows that there is flowing life in it; ossification is reduced here to the minimum, while in our head it reaches the maximum.

My Cajun mother often hurled the epithet *tete dure* at me. I was a hard head! Often I did things my own way and her comment was always *tete dure!* Ofttimes I took it as a compliment. My head was so hard, it wanted to learn everything it could about hard things. I studied physics in college so I could learn how the hard things of the universe operated and could be manipulated. As I matured, I found it harder and harder to avoid the soft things of the world and my search led me to Rudolf Steiner. After many wanderings along dead-ended paths, I found a path without an end in his Spiritual Science which so beautifully complements the dead-ended hard sciences. From his work, I learned the power of humility and the weakness of arrogance.

[page 10] A specific kind of inward humility, the sense that we ourselves are still only becoming, is something that will give teachers strength, for more arises out of this feeling than out of any abstract principles. If we stand in our classroom conscious that it is a good thing that we do everything imperfectly — for in that way there is life in what we do — we will teach well. If on the other hand we are always patting ourselves on the back over the perfection of our teaching, then it is quite certain we shall teach badly.

Heraclitus famously noted that you cannot step into the same river twice. Unless you have held his dictum as an unanswered question as to its deep meaning, it will seem to be a trite saying. But it is the very advice Steiner gives to Waldorf teachers who begin grade 1 for a second time. The similarity, like with the river, is only identical at the map- or name-level; at the territory-level (the only place the river is wet), it is entirely *new* water flowing and *new* energy flowing from the grade 1 children.

[page 11, *italics added*] And so, after you have finished the eighth school year and have corrected everything, if you really have the good fortune to begin again in the first grade, you will find yourself in the same position — but now, to be sure, you will teach in a different spirit. If you carry out your teaching duties with inwardly true, noble, and not false doubts, you will find that your diffidence has brought you an imponderable power that will make you peculiarly fitted to accomplish more with the children entrusted to you. This is absolutely true. The effect in one's life, however, will really be only a different one — not one that is so much better, just different. I might say that the quality you bring about in the children will not be much better than the first time, the effect will only be different. You will attain something different in quality but not much more in quantity. You will attain something that is different in quality and that is sufficient, for everything we acquire in the way described, with the necessary noble diffidence and heartfelt humility, has the effect that we are able to make individualities out of human beings, individualities in the best sense of the word. *We cannot have the same class twice and send out into the world the same copies of a cut-and-dried educational pattern. We can, however, give the world personalities who are individually different. We bring*

about diversity in life, but this does not derive from the working out of abstract principles. The diversity depends on the deeper understanding of life that we have just described.

Teachers need to perform as actors in the various moods of tragedy, romance, and humor. What actors feel inside themselves, we can feel inside ourselves. With grade school children, this is especially true because they have not matured enough to become meta to what the teacher does — that will only come around puberty — so until then they home into what the teacher feels at a soul level. As the teacher changes from the mood of romance to tragedy to humor, the children experience an in- and out-breathing of their bodily organism. These changing moods keep the children's attention, helping lessons enter deeply into their soul as lessons fly quickly by.

[page 12] We should really be able to describe a subject tragically, taking our mood from the subject, and then pass over into a humorous mood as we proceed with our lesson, surrendering ourselves completely to the subject.

The important thing is that we should also be able to perceive the whole reaction of the class to tragedy or romance or humor. When we are able to do this, we shall become aware that all three moods are of extraordinary significance for the children's soul life. And if we allow our lessons to be carried along by an alternation of humor, romance, and tragedy, if we pass from one mood into the other and back again, if we are really able, after presenting something for which we needed a certain heaviness, to pass over into a certain lightness — not a forced lightness, but one that arises because we are living in our lesson — then we are bringing about in the children's soul life something akin to the in- and out- breathing of the bodily organism.

Tragedy and romance leads to the breathing-in of the bodily organism, and humor and laughing leads to the breathing-out of the bodily organism.

[page 13] Tragedy means that we are trying harder and harder to draw our physical body together so that in doing so we become aware of the astral body emerging further and further out of it, owing to this contraction. A humorous mood signifies that we paralyze the physical body, but with the astral we do just the opposite of what we did before; we expand it as far as possible, spreading it out over its surroundings so that we are aware, for example, if we do not merely look at something red but move out into it, how we spread our astral body over this redness and pass over into it. Laughing simply means that we drive the astral body out of our facial features; it is nothing else but an astral out-breathing.

The teacher needs sensitivity and experience to navigate between the three dramatically different moods of tragedy, romance, and humor, e. g., to move from the tragic to the humorous.

The four bodies of the full human comprise the ego, astral, etheric, and physical body, but each of these develop in various ways at various times in the life of a child. Each of these four bodies has a sheath enclosing it, just as the baby in the womb has its mother's body as a sheath enclosing its physical body. Outside the womb after birth, the etheric body is enclosed by a sheath until the time of teeth change around seven years old. The astral body is covered by a sheath until the time of puberty around fourteen years old, and the ego is covered by a sheath until the age of twenty-one, usually considered the age of maturity when a child is grown and able to live on its own. [\(5\)](#)

Teachers who are sensitive to these key periods of time can notice any retarded appearance or precocious appearance of one or more bodies and make allowances for that.

[page 14] We must clearly distinguish between the development of the physical and the etheric bodies, and that of the astral body and the ego. The outer signs of this dissimilar development express themselves — as you know from various indications I have given

here and there — in the change of teeth, and in the change that in the male appears as the change of voice at puberty, and also proclaims itself clearly in the female, though in a different way. The essence of the phenomenon is the same as the voice change in the male, only in the female organism it appears in a more diffused form, so that it is not observable in merely one organ, as in the case of the male, but extends over the entire organism. You know that between the change of teeth and the change of voice, or puberty, lies the period of teaching with which we are principally concerned in the elementary schools, but the careful teacher and educator must also pay close attention to the years following puberty.

There is a soul activity which radiates from the head into the physical and etheric bodies down to the very tips of the limbs, a soul activity that after teeth change morphs into intelligence and memory. One can notice around teeth change that the etheric sheath is worn away and the child begins to remember, begins to talk about things it remembers, and begins to ask questions about things it remembers. With the sheath gone, soul forces become active which will work into the next incarnation. The downward pushing forces of memory and reasoning in the soul battle the upward pushing forces of the physical body which want outward movement of the limbs.

[page 16] The change of teeth is the physical expression of this conflict between the two kinds of forces: those that later appear in the child as powers of reasoning and intellect, and those that need to be used particularly in drawing, painting, and writing.

Children need to express both their inward forces of intellect and their outward forces of movement, and each one can help the other. Leading a child into painting figures with its hands, figures which will morph into primitive letters of the alphabet, gets the figures into the child's body memory and helps the forming intellect of the child to recognize these figures placed side-by-side as words and to become able to read them.

[page 16] We employ upwelling forces when we develop writing out of drawing, for what these forces really strive for is to pass over into sculptural formation, drawing, and so forth. These are the sculptural forces that, ending with the change of teeth, have previously modeled the child's body. We work with them later, when the second dentition is completed, to lead the child to drawing, to painting, and so on. These are primarily the forces that were placed into the child by the spiritual world in which the child's soul lived before conception. At first they are active as bodily forces in forming the head, and then from the seventh year on they function as soul forces.

From the above passage we can understand why each child between the ages of seven and fourteen period needs authority figures to provide direction for these upwelling soul forces. After seven, each child moves from unconscious imitation to increasingly conscious imitation of these authority figures.

[page 16] Therefore in the period following the seventh year, through authority in our teaching we simply draw forth what had earlier been unconsciously active in the child as imitation; at that time these forces had a strong unconscious influence on the body.

These forces were carried from the spiritual world into the child's life, and the teacher's job is call forth these forces when the child learns to draw and write. Teachers, you do best to respect these forces when a child arrives in your classroom, and with your soul-feelings of reverence, lead the child in experiences which will draw out these forces.

[page 17] When this reverence for the divine-spiritual permeates your teaching, it truly works miracles. And if you have reverence, if you have the feeling that by means of this connection with forces developed in the spiritual world before birth — a feeling that engenders a deep reverence — you will see that through such a feeling you can

accomplish more than through any amount of intellectual theorizing about what should be done. Reverence will have an immeasurable formative influence upon the child; the teacher's feelings are certainly the most important tools of education.

To sum up these forces: from birth to seven, the child experiences sculptural forces through the internal workings of the etheric body. From age seven to fourteen, the child increasingly experiences musical, rhythmic forces as the etheric sheath is worn away and the etheric forces enliven its whole body. The next forces begin to show up as an internal battle which becomes externally visible at puberty.

[page 18, 19] Then the ego and the astral body turn against [these musical forces]; an element of *will* battles from outside against a similar *will* element from within, and this becomes apparent at puberty. The difference that exists between male and female has another manifestation in the difference of vocal pitch. The voice levels of a man and woman coincide only in part; the voice of the woman reaches higher, that of a man descends into the bass. This corresponds precisely to the structure of the rest of the organism, formed out of the struggle between these forces.

Steiner uses a droll metaphor of a skeleton sonata to explain the human skeleton, detailing how only a series of animal skeletons such as one can find in a museum could provide such a complete musical impression. This indicates how the unique structure of the human body includes components of all the animal species.

[page 20] Were we to play a sonata and preserve its structure through some spiritual process of crystallization, we would have, as it were, the principal forms, the scheme of arrangement, of the human skeleton.

From the above, we can understand Gerwin's focus on Apollonian and Dionysian elements in the child, how Apollo rules the child with sculptural forces till age seven, and then Dionysius steps in to rule the child from then on.

[page 20, 21] A Dionysian element irradiates, as it were, the music and speech instruction, while we have more of an Apollonian element in teaching sculpture, painting, and drawing. The instruction that has to do with music and speech we will impart with enthusiasm; the other we will give with reverence.

The sculptural forces offer the stronger opposition; hence they are arrested as early as the seventh year. The other forces, counteracting less vigorously, are arrested only in the fourteenth year. You must not take this to mean physical strength and weakness; I am referring to the counter pressure that is exerted. Since the sculptural forces, being stronger, would overwhelm the human organism, the counter pressure is greater. Therefore they must be arrested earlier, whereas the musical forces are permitted by cosmic guidance to remain longer in the organism. The human being is permeated longer by the musical forces than by the sculptural.

If you extract nothing else from the above passage, take this to heart: a teacher must appear as a combination of Apollo and Dionysius, having an abundance of *reverence* for sculptural forces and an avid *enthusiasm* for musical forces. The title of Lecture 2 is *The Three Fundamental Forces in Education*. We have seen the first two: *reverence* and *enthusiasm*, and we will shortly encounter the third force, *guardianship*. But first we need to understand music apart from the pleasure it brings us; there is music's crucial role in warding off luciferic forces, a role that Shakespeare was clearly aware of.

[page 24] [In the case of music,] what comes from within appears as an attack, and what descends from above through the head organism appears as the defense. If we did not have music, frightful forces would actually rise up in us. I am completely convinced that up to the sixteenth or seventeenth century, traditions deriving from the ancient mysteries were active, and that even then people still wrote and spoke under the influence of this

after-effect of the mysteries. They no longer knew, to be sure, the whole meaning of this effect, but in much that still appears in comparatively recent times, we simply have remnants of the old mystery wisdom.

Hence I have always been deeply impressed by the words of Shakespeare: "The man that hath no music in himself . . . is fit for treasons, stratagems, and spoils! . . . Let no such man be trusted." (6) . . . Music is our defense against the luciferic forces rising up out of the inner human being: disloyalty, murder, and deceit. We all have disloyalty, murder, and deceit within us, and it is not without reason that the world contains what comes to us from music and speech, quite aside from the pleasure it affords.

Eurythmy is a natural action of our etheric body; it is what our body tends to do of its own accord. Notice people who cannot talk without large hand gestures, for example. Any tall glasses of water on a table are liable to be knocked over by enthusiastic speakers using gestures. This happened twice during a luncheon the other day. Two men on different sides of the table knocked over a glass of water during the lunch.

[page 27] In connection with eurythmy we should know that in our etheric body we constantly have the tendency to do eurythmy; it is something the etheric body simply does of its own accord, for eurythmy is nothing but motions gleaned from what the etheric body tends to do of itself. It is really the etheric body that makes these motions, and it is only prevented from doing so when we cause the physical body to carry them out. When we allow them to be made by the physical body, these movements are checked in the etheric body but react upon us, this time with a health-giving effect.

What is the purpose of the third force, that of protective guardianship? What is the teacher trying to protect the child from?

[page 28] A person always has the tendency to become weak and stunted in soul, to make [rickety] limbs, to become a gnome. And in teaching and educating someone, we work at forming an individual. We sense this formative activity best if we observe the child making a drawing and we smooth it out a bit so that the result is not only what the child wants, and not exactly what we want either, but the result of both. If I can do this — improve what the child scribbles with his or her fingers — in merging my feelings with the child, the best results will come of it. And if I transform all this into a feeling and let it permeate me, it will be the feeling that I must protect the child from being absorbed too strongly by the outer world. We must see that the children grow slowly into the outer world and not let them do it too rapidly. We constantly hold a protecting hand over the child; this is the third feeling we teachers must cherish.

Here are three fundamental forces in education which a true teacher does best to strive for, from page 28:

***Reverence* for what precedes the child's existence before birth;**

***Enthusiastic* anticipation of what follows it, after death;**

***Protective* gesture for what the child experiences during life.**

Before I reached the age of thirty, I was a scientist by education but a dwarf in soul and spirit. I could feel my puny nature whenever I tried to talk to any of my childhood friends who were not scientists. I could make no connection with them on a scientific level, and yet that was the only level on which I could attempt contact. I was smart, but I felt like an ignoramus.



And I had no idea what was wrong with me nor any clue about how to adjust myself. At age 29, I began doing wood sculpture, and my feelings changed. I was experiencing the words of Goethe working through me, "He to whom Nature begins to reveal her manifest secrets feels an irresistible longing for her most worthy interpreter, Art." I was creating art and felt less puny doing so.

[page 29] As educators we should be able to perceive that as far as you are only a scientist, you might as well be an ignoramus! Not until you have transformed your organism of soul, spirit, and body, when your knowledge assumes an artistic form, will you become a human being. Our future development — and in this teachers will have to play their part — will lead from science to artistic understanding, from a deformed being to the attainment of full humanity.

In Lecture 3, Steiner discusses the role of physiology in education, not the materialistic version taught in medical schools, but the underlying spiritual reality of the full human physiology. Here is a brief passage from my review of Steiner's work on [Nutrition and Stimulants](#):

When human beings eat plants, their body makes use of forces that others leave unused when they eat meat. This has the following advantages:

[page 46, N&S] One does not tire so quickly. From within the organism one does not get so tired because one does not deposit all this uric acid and its salts. One does not tire so quickly and keeps a clearer head and can therefore think more easily, that is, if one thinks at all.

Read the [review](#) for more information on eating meat versus eating vegetables, but the above excerpt will serve to explain what food "partially digested by other people" might mean in this next passage:

[page 30] We can eat and digest suitable foods furnished by the outside world, but we would be poorly nourished if we ate food already partially digested by other people. The important point is that when we receive things from outside us in a definite form, they acquire value for our life because we need to work on them.

Cows and horses eat only vegetable matter. If you feed them meat to eat, the cows will get mad⁽⁷⁾ and the horses will get wild. Feed meat to humans and nothing bad seems to happen on the material level, but on a spiritual level one can perceive the forces of health generated by eating plant matter dissipating from

disuse. When we humans eat meat, we eat food previously digested by animals and we miss the boon that comes from digesting vegetable matter ourselves. Thus, the work we do digesting plant matter keeps us healthier than a purely meat-based diet.

Steiner compares a previously-digested food diet to studying education as a science filled with principles and formulas. Such scientific shortcuts cause us to miss the work of learning from the children we teach, the only process by which we can develop a strong understanding of the children who depend on us. Who was it that could have taught Picasso how paint, Hemingway to write, and Einstein to think? Teachers are inventors of the Art of Teaching: and the medium they use for their art is themselves!

[page 30] In the practice of teaching there will awaken in us, out of this knowledge of human nature, the art of education in a quite individual form. In reality the teacher must invent this art every moment. That is the point I wished to make as an introduction to today's talk.

Most people would say that we perceive with our eyes and we comprehend with our brains. This is another case where the materialistic physiology gets things half right. We perceive with our eyes, but our brains can only comprehend through the actions of our breathing. Yes, that sounds strange, but read on.

[page 32] First we have *perception* as such; this perception takes place within the organ of sight. Secondly, we must distinguish *comprehension*, and here we should be clear that all comprehension is transmitted through our rhythmic system, not through the nerve-sense system, which transmits only perception. We comprehend what a picture is, for instance, only through the fact that the rhythmic activity, regulated by the heart and lungs, is carried through the cerebrospinal fluid up to the brain. In reality, comprehension is transmitted physically by the rhythms that occur in the brain and have their origin in our rhythmic system. It is through breathing that we are able to comprehend.

This true story reveals how at age thirty-seven I began to outgrow my scientific ignoramus status. I was in a weekend workshop with Ed Hackerson, working on a weird dream I had the night before which was meaningless to me. None of my scientific training or powers of thinking could help derive any useful meaning from this dream.

I was driving a sports car with its top down up a long local bridge over the Mississippi River. In front of me was a guy about my age roller skating up the bridge. He had his arms together behind his back and was moving in long sweeps of his skates from one side to the other of the two-lane bridge, so that I could not pass him. Near the top of the bridge when the roadway leveled was a young lady whose truck had broken down. I watched as the guy skated up to her, looking at her as he skated past without stopping. I stopped my car behind her car and got out to help her.

Ed had studied many modes of therapy, including *Gestalt* and *Transactional Analysis*. As I finished the dream, he asked me to imagine myself as the various components of the dream, the guy, the girl, the sport car, etc. I did so, and nothing useful came of the exercise. I was ready to give up when Ed did something completely unexpected, he asked me to get up and skate around the group on the wooden floor in my socks. Whoa, I was thinking, "what a weirdo", but I had paid dearly for this workshop and did as he requested. I skated, around the group, doing my best to imitate the carefree guy in my dream. Nothing happened till the second pass when I stopped trying to figure out things and began to feel the carefree way the roller skater guy felt. I even imagined myself skating up to the gal in the broken truck, giving her a smile, and skating past without stopping to help. WOW! I thought, that's not like me. And I was right, it was not like the *old me*, the one that always took care of others. I was a new me, a bachelor, living alone for literally the first time in my life, with no one who needed me to take care of them, to be responsible for them. This new facet of my life I had not comprehended by all my thinking for the previous year, and

suddenly by *breathing* instead of *thinking* I comprehended it! In that workshop forty years ago, I learned the truth of Steiner's words, "It is through breathing that we are able to comprehend." Once I had comprehended this by breathing, my life became suddenly lighter and easier for me as I allowed the weight of responsibility to lift away from me in a manner appropriate to my then-current life conditions.

[page 32] How mistakenly these things are generally considered by physiology today! It is believed that comprehension has something to do with the human nervous system, whereas in actuality it is based on the fact that the rhythmic system receives what we perceive and forms a mental picture of it, and then works further on it. Because the rhythmic system is linked with our comprehension, the latter is closely related to our feeling. Those of us who study and observe ourselves carefully will see the connection between comprehension and emotion. Actually, we have to feel the truth of something we have understood if we are to agree with it. It is our rhythmic system that supplies the meeting place for our comprehending knowledge and the soul's element of feeling.

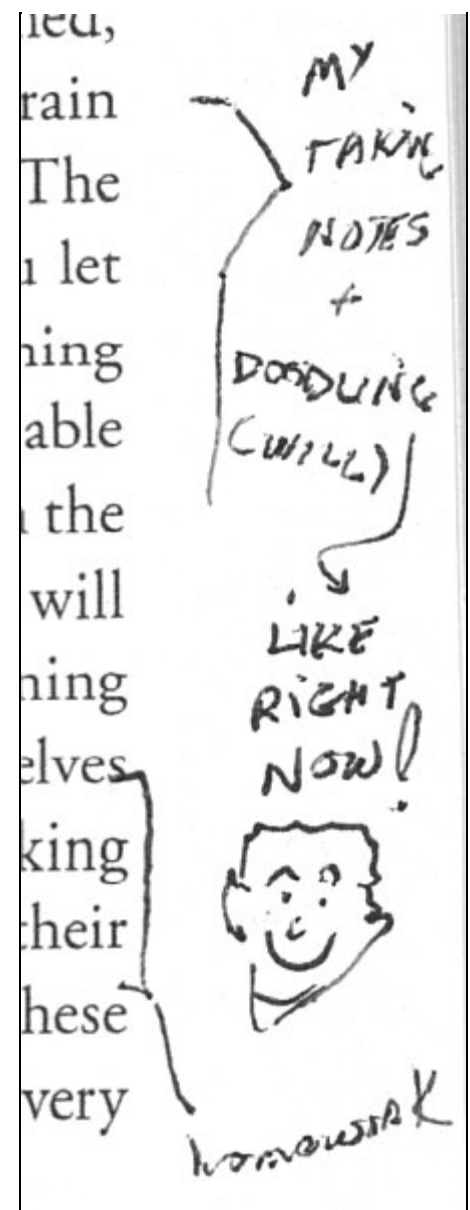
In addition to perception and comprehension, there is something else called memory to be considered.

[page 32, 33] There is still a third aspect: to take in what comes to us in such a way that our memory can retain it. With every event we have to identify perception, comprehension, and an inward working over of what we have understood so that our memory retains it. This third element is linked with the metabolic system; the most delicate inner metabolic processes going on in the organism are connected with memory, with the capacity for remembering.

How many times have you studied for a final in college, run out of time, and felt that you had not quite *digested* the material yet? The metabolism of the human being is the system most closely connected with digestion. Chew on that fact for awhile.

A child's will has to be active in order to learn. In the earliest grades and even now I keep active when I'm studying something. In grade school I doodled while the teacher was talking. Mostly I drew WWII fighter planes, but anything that popped in my little head might get drawn. The teachers seemed okay with my doing that, but often I was the only kid writing something at my desk while all the others were paying attention. Over the decades I've come to understand that my busy-ness in a classroom situation helped me to assimilate the material better than a stilted "paying attention" would have. When I read books today, they must be my own books because I write at times copious notes in the margins and often draw something like one of my early doodles, as I did on page 33 of this book. Steiner confirms my suspicions that such will-driven metabolic actions are useful aids to memory in children. Homework provides children a chance for some will-driven activity outside of class to help them assimilate their schoolwork. (Rightly understood, a parent who helps a child do its homework is robbing it of will-based learning.) I rarely did any work at home while in grade and high school. Any assigned homework I did during class as organized doodling or in the library during breaks in the school day.

[page 33] Another way of helping their memory would be to bring about for them in our teaching a balanced rhythm between mere listening and working on their own. Suppose you let the children listen too much. They will manage to



pay attention and they will also understand, if they're pushed, for they're breathing all the time and therefore keeping their brain fluid moving — but their will is not being sufficiently exerted. The will, as you know, is connected with the metabolism. If you let the children get too much into the habit of watching and listening without doing enough work by themselves, you will not be able to teach them properly; mental assimilation is connected with the metabolism and will — and the will is not active enough. You will have to find the right balance between the children's listening and watching on the one hand, and having to exert themselves independently on the other. The result of the children's working over by themselves what they have seen and heard is that their will works into the metabolism and enkindles memory.

In the tenth grade I faced what seemed to me an insurmountable challenge, learning how to march in step in the high school band. As a great visual thinker, nothing I thought of helped me find the downbeat on which my left foot was to hit the ground. If I could figure that out, it would be a snap. I tried and tried with no success. Luckily much of my marching that first Fall was during half-time and we were forming various figures on the field so my marching out-of-step was rarely noticed by anyone but me. How could I ever learn to march in step? The answer came to me 3 miles into a 6 mile-long Carnival parade in winter. I suddenly found myself marching in step. It took a will-driven activity to provide the answer to my question, something no amount of thinking or calculating could provide.

[page 34, 35] Our visual images meet with our audible images and weave themselves into a common inner soul experience because they are both comprehended by means of the rhythmic system. Everything we perceive is comprehended by means of the rhythmic

system; visual images are perceived by the isolated head organism; audible images are perceived by the whole limb organism. Visual images stream inward toward the organism; audible images stream from the organism upward.

I was able to perceive how to march in step when my whole limb organism was activated during the beginning of the Carnival parade. Those audible images streamed upward and soon I was marching in step.

Steiner tells us that in the region where we perceive the visible, we remember the audible, and vice versa. (Page 35)

[page 35] Anyone who has ever studied musical memory — a wonderful and mysterious thing, even though we all take it for granted — will find out how fundamentally different it is from the memory of something visible. This memory for music is based on a particular, delicate organization of the head metabolism; in its general character it is also related to the will, and therefore to the metabolism. Music memory and the memory of visual images are located in different regions of the body; both, however, are connected with the will.

The ancient Greeks thought with their souls and since the fifteenth century humans have thought with their brains in a materialistic fashion. And with their brain-based thinking, most are unable to comprehend how the Greeks thought inside of their soul nature during ancient times.

[page 38] Materialism is a perfectly correct theory when applied to modern human beings, for what the Greeks still experienced in the soul has gradually imprinted itself on the brain and has become hereditary in the brain from generation to generation. Today human beings have started to think by means of the brain's imprints.

In our era, we have gone as far as possible into materialistic thinking, and it is time to restore the spiritual processes to our way of being in the world.

[page 38] If the development of humanity is to progress, we must undertake this consciously, this bringing down of the supersensible into the sense world. We must consciously bring the human body, this body of the senses, into visible movement in a way that up to the present occurred invisibly, unconsciously.

Steiner has mentioned earlier in this book that we make eurythmy movements out of our awareness and volition (Page 27 passage above), but he urges us to bring these movements into visible, conscious actions in freedom.

[page 38] Should we fail to do this, humankind would gradually sink into daydreams, would become somnolent. Things would come to such a pass that although various influences would flow from the spiritual worlds into the human ego and astral body, this would happen only during sleep, and on awakening these influences would never be transmitted to the physical body.

The salubrious after-effects of a eurythmy performance are noticeable.

[page 39] If you were suddenly to wake up in the night after a eurythmy performance, you would find that you felt much more satisfaction inwardly than if you had awakened after hearing a sonata at an evening concert. Eurythmy has an even stronger effect; it strengthens the soul by bringing it into living contact with the supersensible.

What does all this mean? For teachers it means facing their children in a new soul-filled way.

[page 41] We start with an acceptance or perception of knowledge of the human being; then comes comprehension, a meditative comprehension of this knowledge that becomes inward and is received by the whole of our rhythmic system; finally, we have a remembering of the knowledge of the human being out of the spirit. This means teaching creatively out of the spirit; the art of education comes about and takes form. This must become a conviction, must become a direction of the soul.

Are you ready as a teacher to meet this child who flies out of the spiritual world to you on astral wings? This is Steiner's message to you as he begins Lecture 4 *Balance in Teaching*.

[page 43] Observing children in the early years of life, how they develop; how by degrees they bring their physiognomy from the depth of their inner being to the body's surface; how they gain more and more control over their organism; what we see in this process is essentially the incorporation of the ego.

When teeth change arrives in the child, its etheric body experiences its birth which, rightly understood, is the freeing of the intelligence from the physical body. This is the time when education begins in earnest. The child's eternal spirit, the ego, begins to stream into the etheric body and work upon it. A similar process will happen at puberty when the child's astral body experiences its birth, a release from the child's total organism. Note how birth of each of the bodies of the child occurs with a separation from the total organism, first: the physical body separates from the mother at birth, then the etheric body from the total organism of the seven-year-old, then the astral body from the total organism of the body at puberty. Each time the ego begins to work on the newly born bodies.

[page 44] Again, it is the ego, the eternal element, that unites itself with what is being freed, so that from birth to puberty — that is, up to the age of fourteen or later — we have a continuous anchoring of the ego in the entire human organization.

The amount of anchoring of the ego can vary from child to child and the teacher's job is to help each child maintain a balance of how deeply its ego drives into its total organism. Too deeply and the child becomes a materialistic thinker, not deeply enough and the child becomes a dreamer and visionary living in the throes of its own fantasies. Like a chemist with a delicate lab scale, the teacher must notice which side has fallen too low and strive to lift it back into balance.

If this seems a bit abstract, Steiner offers ways to notice an imbalance and ways to correct it.

[page 47, 48] When, on the other hand, we notice that children are becoming too materialistic, that the ego tends to become too dependent on the body, we need only have them draw those geometrical forms that are otherwise grasped more by thought. The moment we let the children draw geometrical forms we create the counterpoise to an excessive absorption of the ego. You will see from this that it is possible to educate properly when we use the subjects of instruction correctly. If a child — because of talent or other reasons — is receiving special musical training and we notice that they are becoming too dependent on their organism, that there is a certain heaviness in their singing, we must try to guide them to practice more spontaneous listening rather than musical memory. We can always look for a balance in these tendencies, either by helping the children to draw in their ego with the methods I have described, or by preventing the ego from becoming too drawn into the bodily organism. One of these conditions would certainly arise if we failed to maintain the right balance. It is especially good when we try to regulate things through the way we teach language. All the musical elements in language contribute to the absorption of the ego. When I notice that this happens too strongly, I take up something with the child that concerns rather the meaning and content of language. In this case I will work in such a way that I call upon the child concerning the meaning of things. In the other case, children are becoming dreamy or

fanciful, I try to make them take up more the rhythmic element of language, meter and recitation. The teacher must acquire the ability to achieve this artistically, and in doing so can develop a certain sensitive sureness.

If you wish to know what makes for a great teacher, look no further than the title for Lecture 5, *Gymnast, Rhetorician, Professor: A Living Synthesis*. The Greeks approached education through the body, through gymnastics, but in a form of physical exercise by which the Greek teachers were able to reach the soul and spirit. The Greeks worked on the body of the human being.

[page 66, 67] The Greek educator was a gymnast; he educated the body, and along with the body the soul and spirit, because he had the capacity, as if by magic, to draw down the world of soul and spirit into bodily movements. The more ancient Greek gymnasts were perfectly conscious of this. They had no desire to educate human beings in an abstract, intellectual way or to teach their pupils as we do today. We speak exclusively to the head, even if we do not intend to. The Greeks brought their pupils into movement; they brought them into movement that was in harmony with the dynamic of the spiritual and physical cosmos.

This way of reaching the soul and spirit via the body went into disuse by the time of the Romans, to be replaced by the art of speech, rhetoric.

[page 67] Roman education did, in fact, draw forth from speech what was to form the pupils; the educator thus ceased to be a gymnast and became a rhetorician. Beautiful speech was from Roman times onward the essential element in education.

The Romans worked on the middle part of the human being, the rhythmic system which can produce beautiful speech and the music of poetry.

[page 67] They trusted that if speech were handled properly, this musical and sculptural-painterly speech would work downward into the body and upward into the spiritual.

Until the fifteenth century, training the intelligence was not considered important, only eloquent speaking was prized. The next phase was that of the professor when education began to focus, not on the full body as gymnasts did, not on the center of the body as rhetoricians did, but on the head of the body as the newly minted professors did after the fifteenth century. Such professors are idolized everywhere in our culture in this era, except by Waldorf schools, which have no use for learned professors.

[page 68] In our civilization, however, a healthy condition will be achieved only when we realize that to be "learned" in this sense is actually harmful — and that far from adding anything to a human being, it takes something away. Though I am always delighted when someone nods intelligent assent to the sort of thing I have been speaking about, I am also a little uncomfortable about the nodding, because people take the matter much too lightly [\(8\)](#).

Here in the matter of education, Steiner introduces three aspects of teaching: the gymnast of Greek times, the rhetorician of Roman times, the learned professor of our own time.

[page 69] If we could manage things ideally, the teacher should cultivate gymnastics in the noblest sense, rhetoric in the noblest sense — with all that was associated with it in ancient times — and also the professorial element in the noblest sense. Then these three elements should be integrated into a whole. . . . Teachers should simply realize that for their own art of education they need a synthesis of the spiritualized gymnast, the ensouled rhetorician, and the living, evolving spiritual element, not the dead and abstract spiritual element.

John Grinder and Richard Bandler, founders of neurolinguistic programming, recommended that therapists in training take speech lessons because so much of the crucial information a therapist needs to communicate to a client requires a skill in rhetoric, mainly learning to control their unconscious speech patterns such as tone and tempo. The same could be said for teachers and Steiner says exactly that.

[page 70] The rhetorical element, in the noblest sense of the word, still has a particular significance for the teacher today. No educators, in whatever sphere of education they may be engaged, should fail to do their utmost to have their own speaking approach as closely as possible an artistic ideal.

One cannot study Waldorf principles of education without realizing that teaching starts from the ground up, from the soul requirements presented to the teacher by each student. The true teacher learns to build a program for each student, not apply some top-down set of principles. This top-down approach is a result of an ahrimanic influence so prevalent in our modern world. Our goal as humans today is to balance the ahrimanic and luciferic influences, not to get rid of either one.

[page 71] A great deal of ahrimanic influence can be found in the world today; indeed, the evolution of the world would be impossible without it. One of the worst instances of the ahrimanic, however, is that in order to become a qualified professor one must write a thesis(9). There is no real connection between writing a thesis and becoming a professor; the only connection is purely external, ahrimanized. Such things are taken seriously in our civilization today, however, and force their way into education, because educational institutions exert their influence from above downward, and the whole mode of their organization is totally unsound. Merely to say this sort of things gets us nowhere, except to make us unpopular and create enemies for ourselves. In working here, however, we should be fully awake to the fact that we are called to work out of different premises.

Textbooks are an ahrimanized teaching aid; they are supposed to help the children, but instead they mostly create scorn in the children. It was true in Steiner's days in school in the 1860s and mine in the 1940s and likely still today.

[page 74] If you rely on the accursed textbooks that are so popular, the children really understand nothing; you torment the children, bore them, call forth their scorn. What you must do is create a personal relationship to the world that is both living and true to reality. That, above all, is what the teacher needs. . . . One of the chief tasks in Waldorf education is to bring life to knowledge, and to feel a kind of repugnance for the way things are presented nowadays in so-called scientific textbooks.

"All destruction is birth" — Steiner says that on page 76 talking about the caterpillar dying to become a butterfly — but each time a new body is born in the growing human the sheath which is torn away dies. The etheric sheath is torn away at teeth change, the astral sheath at puberty, for example. True art is the process of destruction, a thought which came to me decades ago(10), and certainly giving birth to a unique form of art involves destruction of the sheath of sameness existing in art at the time.

[page 76, italics added] The moth can hurl itself into the light. The caterpillar has the same urge to give itself up to the light but cannot do so, for the sun is a long way off. The caterpillar develops this urge, goes out of itself, passes into the radiating light, gives itself up, spinning physical material out of its own body into the rays of the sun. The caterpillar sacrifices itself to the rays of the sun; it wishes to destroy itself but *all destruction is birth*. It spins its sheath during the day in the direction of the sun's rays and when it rests at night what has been spun hardens, so that these threads are spun rhythmically, day and night. These threads the caterpillar spins are materialized, spun light.

From this process we receive the beautiful colors of the butterfly, all born out of the light which was spun

into the chrysalis of the caterpillar. Unless a teacher appreciates the metamorphosis from egg to caterpillar to chrysalis to butterfly in this way, what they describe to the child in class will fall on deaf ears. Steiner exhorts teachers, "Every detail becomes interesting if you allow yourselves, with soul and body, to grow together with the cosmos in its work of artistic creation." (Page 76, 77)

[page 78] We must relate ourselves directly to life, and anything we are going to introduce in our teaching should sustain and uphold us inwardly, should truly enliven us. This is why no true teaching can ever be boring.

In Lecture 6 of this volume, Steiner deals with health and illness in education. He begins by asking Why do we educate?

[page 80] Proper adult behavior is perhaps also something that children cannot acquire by themselves; it must be imparted to them through education. But the answer to the question — why do we actually educate? — remains something rather superficial in modern culture because adults today don't really see anything of great value in what they became through the teaching and education they received. They don't look back with any particularly deep gratitude to what they have become through their education. Ask yourself in your own heart whether this gratitude is always alive in you. In individual cases, of course, it may be present on reflection, but on the whole we do not think with deep gratitude about our own education because the human soul does not fully realize what education actually means, nor which forces in human nature are quickened by it.

In my reviewing some 18 of Steiner's works on Waldorf education, I have often spent time reflecting on major learning events in my early life, many times outside the school system. My favorite librarian, my first *Mad* comic book, how I spent time doodling in grade school, etc. I certainly remember liking the teachers who brought levity and disliked those who brought heaviness or gravity to my classrooms. Levity and enthusiasm are infectious and I loved the teachers who evoked both because I enjoyed learning in their presence. *Artificial enthusiasm* evokes a Be Spontaneous Paradox([11](#)) and creates the opposite of its intention in everyone except the most superficial sorts who only know the *counterfeit* form of enthusiasm. As the Sufi saying goes, "One can know *real* gold exists because there are counterfeit forms of it."

[page 81] As a kind of obvious secret, let me say that although a great deal has been said about enthusiasm here, when I go through the classes in the school I see a kind of depression, a kind of heaviness in the teachers. The lessons are really conducted with a certain heaviness, and this heaviness must be eliminated. Actually, it may also express itself in artificial enthusiasm. Artificial enthusiasm can achieve nothing at all. The only enthusiasm capable of achieving anything is that which is kindled by our own living interest in the subjects we must deal with in the classroom.

What does health and illness have to do with education?

[page 82] People say the human being must evolve, must be brought to a higher level, but this is meant abstractly, not concretely. It will be interpreted concretely only when the activity of education is actually brought into connection with the activity of healing. In healing someone who is sick, one knows that something has actually been achieved: if the sick person has been made healthy, he or she has been raised to a higher level, to the level of the normal human being.

On page 83 Steiner tells us, "The human being really lives within four complexes of forces." Then he explains them in detail for five pages and summarizes them in this next passage:

[page 87] What kinds of activity are present in the human being? There are the movements of walking, grasping, the movement of the limbs, outer changes of location,

the activity in the process of nourishment, the rhythmic activity — which is through and through a healing activity — and the perceiving activity, if we regard it from outside. Regarded from within, educational activity is entirely a perceiving activity.

We are continually in the process of becoming ill and healing ourselves. We become ill when walking, grasping, and digesting and we heal ourselves through breathing and blood circulation. We cannot avoid eating, but if we eat or drink to excess we injure ourselves seriously. Since it is our rhythmic system's job to restore us to health, anything we do to upset our breathing and circulation makes us more likely to get ill(12). On the other side, our body creates alcohol internally in the process of digestion, so if we imbibe alcohol, the excess will increase our illness, something anyone who has suffered a hangover can understand.

The words "true" and "false" are abstract concepts, completely devoid of life. Steiner wishes us to substitute the words "healthy" and "ill" for them.

[page 88, 89, italics added] The concepts "true" and "false" are dreadfully barren, prosaic, and formal. The moment we rise to the truths of the spiritual world we can no longer speak of "true" and "false," for in the spiritual world that would be as nonsensical as saying that *to drink such and such a quantity of wine every day is "false."* The expression "false" is out of place here. One says something real regarding this only by saying that such a thing gives rise to illness. Correct or incorrect are outer, formal concepts, even regarding the physical. Pertaining to the spiritual world, the concepts of "true" and "false" should be discarded altogether. As soon as we reach the spiritual world we must substitute "healthy" and "ill" for "true" and "false."

I don't know if this is known by physiologists today, but people in low nitrogen-level areas become nitrogen donors in an attempt to restore the proper nitrogen level to the air in the area.

[page 90] Suppose a number of people come to a region where the air is poor in nitrogen, containing less than the normal percentage. If they breathe in this nitrogen-poor air, this air gradually becomes richer in nitrogen through their breathing. They exhale nitrogen that they would not otherwise exhale in order to augment the nitrogen content of the air in the environment. I do not know whether any account is taken of this in physiology today. I have often pointed out that human beings living in air that is poor in nitrogen correct this lack; they prefer to take nitrogen from their own organic substances, depriving themselves of it in order to augment the nitrogen content of the outside air.

Coca-Cola is known as the pause that refreshes and every ad for the carbonated beverage shows happy faces having fun, like the comic character Calvin in "Calvin and Hobbes". No matter how mischievous his behavior, he always had exuberant fun. On the other side of the extreme there is Charlie Brown of "Peanuts" comics fame who is best known for saying "Drats" and looking down when things invariable go wrong for him. What is the opposite of the carbon dioxide dissolved in sodas? Methane or marsh gas, where the oxide is replaced by hydrogen, creating CH₄ in place of CO₂.

Steiner tells us how it happens that some humans get the bubbly personality and others the sluggish, depressive traits.



Calvin (&Hobbes)

[page 91] In the sphere that extends from the rhythmic upward to the nerve-sense activity, there is a tendency to unfold an activity between carbon and oxygen. It is truly interesting, if one observes a soul-constitution not worn out by dry scholarship, to see sparkling soda water, where the carbon dioxide appears in the liquid as the result of the interplay of carbon and oxygen. If one observes these bubbles one has directly and imaginatively a view of what goes on in the course of the rhythmic breathing activity from the lung system toward the

head. The bubbling effervescence in sparkling water is a picture of what, in a fine and delicate way, plays upward toward the human head. Looking at a spring of sparkling water, we can say that this activity of the rising carbon dioxide is really similar, only in a coarser form, to a continual, inward activity within the human being that rises from the lungs to the head. In the head, something must continually be stimulated by a delicate, intimate sparkling-water activity; otherwise, the human being becomes stupid or dull. If we neglect to bring this effervescence of sparkling water to a person's head, then the carbon within him or her suddenly shows an inclination for hydrogen instead of oxygen. This rises up to the brain and produces "marsh gas," such as is found in subterranean vaults, and then the human being becomes dull, drowsy, musty.



Charlie Brown

There it is: give a child an excess of sterile abstract concepts and you can create a dullard for whom nothing ever seems to go right. Look at Charlie Brown: his head is full of abstract concepts of how his life should go. Lucy should hold the football while he kicks it, for example, but she always lets it fall down when he approaches to kick it. Steiner explains how teachers can use this knowledge in their language classes to avoid creating dullards like Charlie.

[page 92] Now if, in teaching languages, for example, we make the children learn too much vocabulary, if we make them memorize through an unconscious mechanization, this process can lead to the development of marsh gas in the head. If we bring as many living pictures as possible to the child, the effect is such that the breathing system lets the carbon dioxide effervesce toward the head. We therefore play a part, in fact, in something that makes for either health or illness. This shows us how as teachers we must demand a higher metamorphosis of the forces of healing. To be able to perceive these hidden relationships in the human organism kindles enthusiasm in the highest degree. We realize for the first time that the head is a remarkable vault that can be filled with either marsh gas or carbon dioxide. We feel we are standing before the deeper wellsprings of existence.

Steiner suggests we ponder the three faces of teachers, especially when they are teaching a class, for only then can we notice that their faces appear twice as beautiful as other times. It is due to their sharing vital, living knowledge. The look on their faces is an outward sign of the life of feeling inside the teachers, which can strengthen them as they spiritualize their chosen profession for the benefit of children of this and future generations.

[page 100] A teacher's face has three main nuances of expression, with any number of intermediate stages. There is the face with which teachers meet an ordinary person, when they forget that they are teachers and simply engage in natural conversation.

There is the face teachers have when they have finished their lesson and leave the classroom; and there is the face they have in the classroom. We may often be ashamed of human nature when we see the difference in teachers' faces when they going into their classroom and when they leave it. These things are connected with the whole consciousness of the teacher. Perhaps it may comfort you a little if I say that under the influence of an active, vital knowledge every face becomes twice as beautiful as it is otherwise, but the knowledge must do its work, the knowledge must live, and teachers' faces should always be alive, inwardly expressive, especially when they are giving lessons.



The importance in what I'm telling you is not that you should know these things, but that they should work on your life of feeling, strengthening you, giving you the vigor to spiritualize your profession.

Teachers today, especially those in Waldorf schools, are aiding the work of Mi-cha-el the guiding Archangel of our time(13). Look at any statue of Mi-cha-el and you will find his foot holding down a writhing demon or dragon and holding a spear ready to dispatch the evil

creature from existence. Note especially the writhing part which indicates the dragon is alive, but is pinned to the ground. It is a message to each of us to do our part by holding the spear of Mi-cha-el and helping in our own lives to drive the stake through the living heart of the dragon. (At left is my photo of Mi-cha-el at work, on the Basilica Altar to St. Michael in Mondsee, Austria.)

[page 105] The dragon takes on the most diverse forms; takes on every possible form. Those that arise from human emotions are harmful enough, but not nearly as harmful as the form the dragon acquires from the dead and deadening knowledge that prevails today. There the dragon becomes especially horrible. One might almost say that the correct symbol for institutions of higher education today would be a thick, black pall hung somewhere on the wall of every lecture room. Then one would realize that behind it is something that must not be shown, because to do so would throw a strange light on

what goes on in these lecture rooms! Behind the black pall there should be a picture of Michael's battle with the dragon, the battle with deadening intellectualism. What I have said today shows you how the struggle between Michael and the dragon should live in teachers. What I wanted to present to you is this: we must become aware of Michael's battle; it must become a reality for us if we are to celebrate Michaelmas in the right way. No one is more called upon to play a part in inaugurating the Michael festival in the right way than the teacher. Teachers should unite themselves with Michael in a particularly close way, for to live in these times means simply to crawl into the dragon and further the old intellectual operation. To live in the truth means to unite oneself with Michael. We must unite ourselves with Michael whenever we enter the classroom; only through this can we bring with us the necessary strength. Verily, Michael is strong! If we understand Michael's struggle with the dragon in a particular sphere, we are working for the healing of humanity in the future.

There is a lot of vibrant and life-giving knowledge packed into the 106 pages of this small book which can flow into your soul, dear Reader. Allow it to do so. Anyone, especially teachers, who feel down and unsure in any way about their choice of career would do well to study the contents of this book and at the same time the content of their own early lives, as each can inform and enliven the other. If you read these lectures with an open heart, it will seem at times as if Rudolf Steiner is leading you to an inspection of your own life, pointing you to your own teachers and caregivers who gave you great unanswered questions to ponder, questions which enlivened you and enabled you to receive an answer as you matured. Continue to collect unanswered questions from now, during your job, during your own teaching and learning, and allow yourself to present unanswered questions to your children. The answers which will appear to these children as they mature will be much better than any answers you could possibly provide them today, they will be answers which will become a living, vital knowledge revealed to them by their own spirit-filled being.

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----- *Footnotes* -----

Footnote 1.

For about 15 years, to cope with a one-hour drive each way to work, I experimented with reading while driving. Foveal vision provides acuity in the center of our field of vision, whereas surrounding the foveal area is our peripheral vision which detects movements. I learned to trust my peripheral vision to notify me of moving objects which required my foveal vision to shift from the book to the scene to inspect and inform me of necessary actions. After driving over 300,000 miles without an accident, I understood that it was possible, using the special techniques I innovated, to read and drive safely. It is not something I would recommend to others in these days of laws against texting while driving.

[Return to text directly before Footnote 1.](#)

Footnote 2.

[What is the power of an unanswered question?](#) This question presupposes there is a power in certain statements which fill us at first with uncertainty, but whose meaning reveals itself in our subsequent life.

[Return to text directly before Footnote 2.](#)

Footnote 3.

Steiner points out that Goethe in his *Faust*, Part 2, Act 2, portrayed a student highly scornful of all his

professors.

[Return to text directly before Footnote 3.](#)

Footnote 4.

See my [Teaching and Learning in the College Classrom](#) essay and Matherne's Rule [#29](#) for more information on this dictum.

[Return to text directly before Footnote 4.](#)

Footnote 5.

See [The Education of the Child](#) for more details.

[Return to text directly before Footnote 5.](#)

Footnote 6.

The Merchant of Venice, Act 5, Scene 1.

[Return to text directly before Footnote 6.](#)

Footnote 7.

Early in the twentieth century, Steiner had identified what has since been named *Mad Cow Disease* as the result of feeding animal matter, such as bone meal, to cattle.

[Return to text directly before Footnote 7.](#)

Footnote 8.

This kind of nodding is equivalent to someone saying "I know that" whenever they hear something new. These are people who have yet to learn to hold an [unanswered question](#) when presented with novel information. Instead, they attach the person's words and thoughts to something they had heard earlier and instantly make a vague generalization that the two are the same by saying, "I know that" or quietly nodding their head, always with a supercilious look on their face.

[Return to text directly before Footnote 8.](#)

Footnote 9.

Usually called a dissertation and necessary to receive a Ph. D. and be called a Doctor in the USA. The acronym Ph. D. is often ridiculed as meaning Pile higher & Deeper, referring the stack of pages in a typical dissertation directly and to bull excrement indirectly. Steiner would likely enjoy the double meaning today.

[Return to text directly before Footnote 9.](#)

Footnote 10.

See my essay on Art here: <http://www.doyletics.com/artpofd.htm>

[Return to text directly before Footnote 10.](#)

Footnote 11.

I learned of the *Be Spontaneous Paradox* from a delightful author who always brought levity to his writing, Paul Watzlawick. Eight of his books I have written reviews of, which you can Google to read, but see particularly this one: [The Situation Is Hopeless, But Not Serious](#) for insight into the levity he brings to his writing.

[Return to text directly before Footnote 11.](#)

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**Footnote 12.**

For example, nicotine ingestion makes us more likely to become ill by skewing our breathing and circulation pulse rate. It causes the pulse rate to increase and leads to the common complaint of "shortness of breath" by smokers, which is rightly understood, a "surplus of blood".

[Return to text directly before Footnote 12.](#)

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Footnote 13.

Mi-cha -el is the correct way to say "Michael" in English, not my-kull — it means Micha of God (el). This great Archangel is ruling as the Time Spirit (Archai) of our era, and he appears in various guises as St. Michael, San Michelle, San Miguel, and St. George in various countries and cultures.

[Return to text directly before Footnote 13.](#)

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