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Report from the Co-Directors

David Mitchell and Douglas Gerwin

Since the publication of the last *Bulletin*, the leit-motif for the work the Research Institute for Waldorf Education has been “reaching out.” Late autumn and Easter saw trips and presentations in Germany and Switzerland. In Stuttgart we met and had fruitful conversations with the Board of the Pädagogische Forschungsstelle—the European equivalent of the Research Institute. We also visited Kassel and met with leaders in the phenomenological scientific work at the teacher training seminar there. We presented the *Survey of Waldorf Graduates, Phase II* at the world leadership gathering of the Pedagogical Section and gave a course on “Will-Developed Intelligence” at the eighth World Teachers’ Conference, both events at the Goetheanum.

During these visits we established many key connections, among them contacts that will help inform schools in North America about international investigations concerning Waldorf education. We extended our cooperation with the European Union of Waldorf Schools through meetings with Christopher Clouder; we initiated an exchange of conferences based on phenomenological science in high schools with colleagues from the teachers seminar in Kassel, Germany; and we exchanged research information with Professor Christian Rittelmeyer from the Georg-August University in Göttingen, Germany, and Dr. Dirk Cysarz from the University of Witten/Herdecke, Germany. Rittelmeyer’s research focuses on the brain and its role in learning, and Cysarz specializes in researching heart and breathing rhythms and the effects of artistic therapies within anthroposophical medicine (see his article in this issue of the *Bulletin*). Watch for forthcoming articles on rhythms and brain research in future AWSNA publications. These visits to Europe also allowed us to deepen our work with Christof Wiechert and the Pedagogical Section at the Goetheanum.

We have completed the *Survey of Waldorf Graduates, Phase III*. This publication includes synopses, comparisons, and analyses of the three

major studies of Waldorf graduates and an evaluation of Waldorf methodology. The studies were conducted in Germany, Switzerland, Sweden, and North America. This third phase of our survey features constructive criticism offered by Waldorf graduates and suggestions on how schools can use this information in their processes of self-assessment and renewal. Finally, we have updated the popular pamphlet *Results of Waldorf Education* to include the most current information from the surveys. Both survey follow-up and pamphlet will be available this summer at the website of the Research Institute,

www.waldorfresearchinstitute.org

and in hard copy from AWSNA Publications.

Pressed into action by the dangers to children resulting from the 2002 Act—No Child Left Behind—a team of Waldorf educators representing the United States and Germany, led by the co-directors of the Research Institute, has written a white paper on high-stakes testing in which we offer alternatives to quantitative assessment and underline the importance of honoring the developmental stages of childhood. This paper, with a more detailed research document on the effects of state-mandated tests, can be read on both websites of the Research Institute—

www.waldorfresearchinstitute.org

and

www.waldorflibrary.org.

In cooperation with the Waldorf Curriculum Fund, the Research Institute is working to make available valuable out-of-print titles on, or related to, Waldorf education. These titles will be available as electronic books that can also be downloaded from both websites. Soon to be released will be three fruits from the first efforts:

- *Waldorf Curriculum Studies: Science in Education*, a collection of fifty-eight essays from the periodical *Child and Man* on the topic of

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science in the Waldorf schools. These essays, originally published by the Rudolf Steiner Fellowship in the U.K., provide an invaluable resource and inspiration for both class teachers and high school specialists on many topics in science related to Waldorf school curricula.

- *The Gospel of Hellas*, by Friedrich Hiebel, a study of Ancient Greece long treasured by experienced Waldorf school teachers. We are delighted to make this publication available for a new generation of teachers.

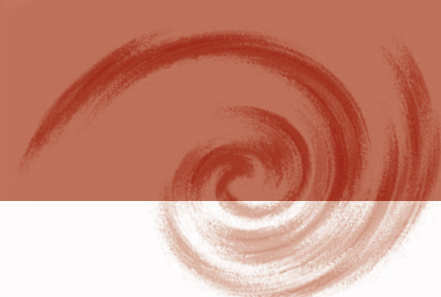
- *Handwork: Indications by Rudolf Steiner*, by Hedwig Haucht, the original handwork book written by the first handwork teacher in the Stuttgart Waldorf School. This profusely illustrated volume contains many examples arising from her conversations with Rudolf Steiner.

A symposium on the teaching of grammar, sponsored by the Research Institute with the help of a grant from the Waldorf Educational Foundation, was held this spring under the direction of Anne Greer, who, with fourteen experienced Waldorf teachers, explored advances she has developed in a phenomenological approach to grammar teaching. Her report on this symposium can be found in this issue of the *Bulletin*. The results of Greer's effort will appear in a source book to be published next autumn by the Research Institute and made available through AWSNA Publications.

Research on parenting in Waldorf schools across North America, conducted by Martin Novom, continues. Novom is conducting surveys of Waldorf parents in order to generate a database of sufficient size to draw conclusions about the changing role of parents in Waldorf schools. This research will be valuable to schools in their assessment of parent participation and the most effective ways to manage the volunteer culture so important in our work.

In collaboration with Rudolf Steiner College, the Research Institute is working to host a colloquium on physics teaching from October 16–19, 2008. The working title of the gathering is “Physics, Phenomena, and Personal Growth in Waldorf Education: What? Why? And What Else?” We hope that every Waldorf school with grades through at least six will plan to be represented. Proceedings from the colloquium will be published by the Research Institute and made available through AWSNA Publications. Contact Rudolf Steiner College for more information on this colloquium.

The third cycle of the popular course for class teachers on “Teaching Sensible Science” is underway on the West Coast with the largest enrollment to date. Word is getting around about the thoroughness of this AWSNA/Research Institute project for improving science teaching in our elementary grades. Further rounds of this course are being planned for the East Coast and the Midwest, to start next year, beginning with a week in Saratoga Springs, New York, from February 14–20, 2009.



From the Editor

Stephen Keith Sagarin

The Heart of the Matter

When Barfield pointed out that we need at least two words to say what we mean by “heart,” one for the muscular organ in our chests and one for courage, sympathy, and other qualities associated with feelings in and around the muscular organ. In earlier times these meanings were tightly bound. To speak of one was to speak of the other; material and immaterial meanings were virtually identical; quantity and quality were inseparable. Our present world favors material meanings and quantity over immaterial meanings and quality. Qualities are believed to be secondary characteristics, illusions, subjective perceptions, or “mere” metaphors. Several of the articles in this issue of the *Research Bulletin* address this imbalance of meaning around the word “heart,” implicitly and explicitly.

Dirk Cysarz, in research on rhythm and education, provides a subtle and provocative characterization of rhythm as a polarity or tension between mechanical repetition and motionlessness. He begins with the development of heart rate in childhood and continues with circadian rhythms (waking, sleeping cycles) and memory. Living rhythm is central to interest, learning, and memory; it is, we might say, the heart of education.

Jon McAlice, Patrice Maynard, and I examine various research studies on education pointing to the value of the “heart forces” that Waldorf schools develop in their students. McAlice examines German, Swiss, and North American studies on Waldorf school graduates, and I examine a Swedish study, all of which generally find that there need be no compromise between the qualitative goals of Waldorf education and quantifiable results. This is consistent with Barfield’s claim that quantity and quality are one; to sacrifice one is, in the end, to sacrifice the other.

McAlice ends by drawing attention to the small number of graduates who pursue training in anthroposophical endeavors. McAlice wonders if this is a sign that Waldorf schools do not do enough to demonstrate their own value to their students. Others, like Bo Dahlin in the Swedish study, are not bothered by this number, and see it as a sign of successful nest-leaving. This point of view might regard a higher number as an indication of unhealthy indoctrination.

Maynard writes on research by the Dana Foundation that validates the arts in education according to their positive effect on cognition and motivation. The arts here are not valuable in and of themselves, but as they support our prejudice toward cognition as “real” knowing. Still, education that includes the arts, even for an ulterior motive, moves closer to the heart-warmth that will allow students to find their place in the world.

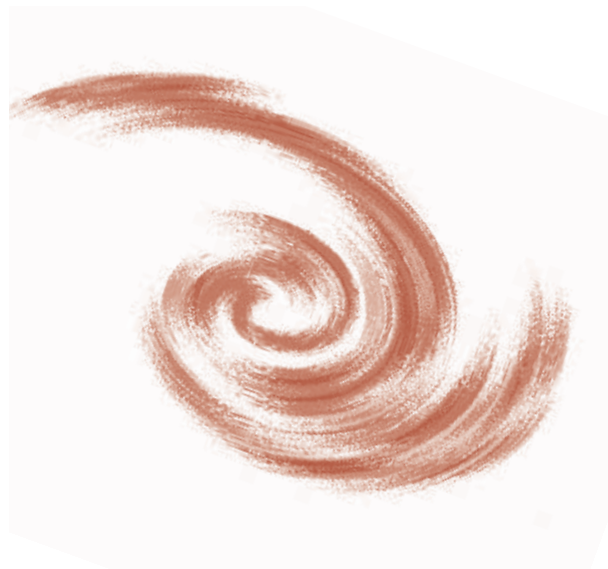
Further, David Mitchell, Douglas Gerwin, et al., and Renate Long-Breipohl have pieces here that arise from a heartfelt understanding of education and children. The first is a dissent on standardized testing, one that offers suggestions for alternative assessments; the second is a plea for the value of play for young children. High-stakes testing aims at quantifying not only education but human subjects, too. While it has its place—heart surgeons and automobile mechanics should be trained to the highest standards—standardized testing threatens to dehumanize education. Reducing or eliminating play—one result of the pressure of testing—locates the same threat in the realm of young children. Renate Long-Breipohl’s argument for the humanizing role of play aims to return the heart of childhood to children.

Barbara Schiller’s piece on aiding children in Lebanon and David Mitchell’s piece on a socially responsible and responsive school in Mannheim, Germany, extend the heart forces of this issue to sympathy brought to action in different parts of

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the world. Schiller was part of a team of doctors and teachers who worked with traumatized children, using the arts to begin to heal the emotional damage of war-torn childhoods. Mitchell visited a school for students from working-class, largely immigrant families, where the methods of Waldorf education address a population that needs support to integrate healthfully into modern Germany.

Finally, Douglas Gerwin's review of a German study of the health of Waldorf school students speaks literally about the heart: Waldorf school graduates seem to have healthier—quantifiably healthier—hearts than those who attended other schools. The heart qualities practiced by Waldorf education may, in fact, promote healthier muscular organs in our chests.



The Research Institute is seeking financial support to undertake new research. If you wish to make a contribution or are aware of an individual or a Foundation that may be interested in supporting the research of Waldorf education, please contact David Mitchell or Douglas Gerwin at:

researchinstitute@earthlink.net

or

(603) 654-2566

Rhythm and Learning

Dirk Cysarz

We might be inclined to define rhythmical phenomena as periodically oscillatory processes. A moment's thought, though, proves this statement to be incomplete. Taking the natural pattern of the course of the sun, for example, we could surely define it as a periodical feature that brings us day and night, but at the same time it is characterized by its fixed itinerary in the sky. Its position is predictable and no major deflection from physical laws is ever likely to occur. By the same token, many processes in our technical world imply a periodicity—such as clocks and turn signals on cars—but, again, they follow a standard sequence that can be correlated to physical laws. These periodical processes are fixed; no mutation is possible. And rightly so. If a clock were not accurate, it would be of little value, and if the sun were to cease following its fixed course, we would quickly recognize that the world was “out of joint.”

These simple examples show that the notion of “rhythm” is not adequately defined within the inorganic or inanimate world. The organic, animate world is different; here the essential can be shown by such rhythms as heart rate and breathing rate. Careful observation of both rhythmical functions shows that these are not fixed. In a healthy being, no heartbeat ever totally replicates another. Breathing is also flexible. Both functions adapt in order to meet the numerous requirements of everyday life successfully. When climbing stairs, heart rate and breathing rate accelerate. In a subsequent moment of physical rest, heart rate and breathing slow again. This flexibility, made possible by the rhythmic nature of the process, is typical of a healthy human being.

A steadier, less flexible heart rate is also possible. This is not common in a healthy being, but is rather a consequence of an illness such as a heart attack. It is difficult to determine the consequences of a fixed breathing rate—there would be

little possibility of speech or eating; both activities influence breathing rhythm. Briefly, in animate nature, the loss of rhythm brings considerable difficulties and consequences. A fixed rhythm denotes a pathological condition, a decided restriction of possibilities.

On the other hand, it is true that rhythms do not occur completely at random. Should the heart, for instance, lose its rhythm due to partial motionlessness—arrhythmia—a pathological condition is manifest. In this case, a “pacemaker” will restore certain vital margins of rhythm.

Based on these two descriptions of the loss of rhythm—one too regular, the other too chaotic—it is now possible to define rhythm more precisely. The rhythm of a healthy heartbeat ranges between the following two extremes: the fixed rhythm, which can also be defined as a meter at fixed intervals (and which is present in the inanimate world), and motionlessness that no longer represents rhythm as such. The margin between the two extremes can be fairly wide, and rhythm thus finds ample scope.

Bearing these considerations in mind, it is readily understood why rhythm can be defined in the abstract as “a chronological repetition of similar (timed) structures.” Rhythm contains aspects of the past within itself—something that has once occurred is repeated. Rhythm also allows for an aspect of the future, as the precedent feature is not stiffly repeated. Rhythm can undergo variation, offering innovation. This mutation is intended within a precise framework, however, or it would happen randomly. Rhythm unites both past and future. This combination is continually refreshed, not becoming obsolete and not running ahead of time. It takes place in the present.

Another attribute of rhythm is mediation of opposite, extreme conditions. In the heartbeat, for instance, two incompatible conditions are found: systole, during which the muscle of the heart contracts; and diastole, during which the same mus-

[S]leep considerably enhances both motor and cognitive learning performance.

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cle relaxes. Rhythm is the mediating, linking element between these two conditions. In the same way, past and future are irreconcilable; only rhythm itself links one to the other successfully.

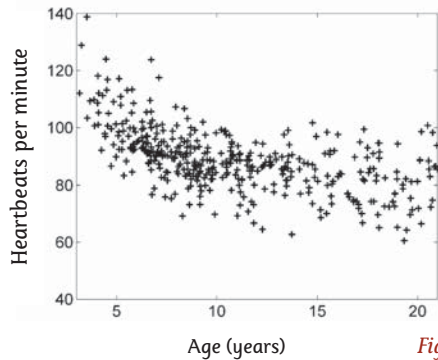


Fig. 1

Rhythms in Childhood and Adolescence

What do the foregoing statements about rhythm imply for development in childhood and adolescence? In a recent survey, we analyzed the development through childhood and adolescence of the rhythm of the heartbeat. Our research shows that the average heart rate decreases until around the age of 10 (Fig. 1). We found that the heart rate in toddlers averages 110 beats per minute and only 90 beats per minute at age 10. The rhythm of the heartbeat also changes. In toddlers we find a rather fixed rhythm; rhythmical margins are narrowed by increased heart rate. From around age 10 onward, the quality of the rhythm of the heartbeat reaches features comparable to those of an adult.

Another significant human rhythm is circadian rhythm. Different studies have confirmed subjective impressions. Some people prefer to get up early in the morning (so-called “early birds” or “larks”). Conforming to their predisposition, these people are more productive early in the day, feel tired relatively early at night, and tend to go to bed early. Their MSF (“midpoint of sleep on free days”) occurs earlier in the night (Fig. 2). Other people prefer to sleep in. Their productive phase occurs rather late in the evening (so-called “night owls”). There are many nuances between these two extremes and the average person’s sleep need occurs between them.

Roenneberg’s assessment of the distribution of different circadian rhythms in a group of

approximately 25,000 subjects shows that the subjective attribution of “owls” and “larks” is not constant; it alters during the lifespan. In childhood we find a strong tendency toward the “larks.” The “larks” gradually become “owls” through about age 20; that is, through childhood and adolescence, the pendulum swings from one side to the other. This result conforms to the subjective experience of parents. Children tend to prefer to get up early and they tend to have early bedtimes. The older they grow, the less sleep they need and, consequently, bedtime is generally delayed. Adolescents start to sleep longer hours and no longer want to get up early. During adolescence, nights can sometimes turn into days, postponing bedtime. Perhaps surprisingly, around age 20 the pendulum starts to swing slowly back again. Over the next decades of life, we wend our way back to the “lark.”

The authors of the survey associate this change of tendency with the end of adolescence. Although initially not linked to precise biological functions, some criteria (beyond the scope of this paper) are beginning to emerge. Another remarkable feature of this turning point is the distinct difference between genders. Men tend much more to be “owls” than women. This difference subsides only at around age 40.

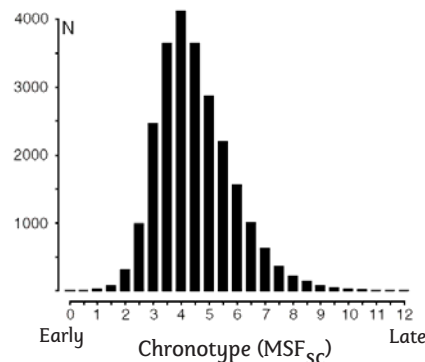


Fig. 2

If we compare the transition from “lark” to “owl” through childhood and adolescence with the development of average heart rate, it becomes clear that both functions differ in their progress. Heart rate is basically invariable from age 10 onward, whereas the circadian rhythm, including sleep habits, undergoes major changes in the

years to follow. One may infer that these two functions have different implications for general development. The rhythm of the heart is fully developed around age 10, thus permitting the development of other capacities—the ability to love, for example, which is biologically manifested by puberty. Adolescents can rely on already-developed heart features and concentrate on unfolding further capabilities, which then manifest themselves in circadian rhythms.

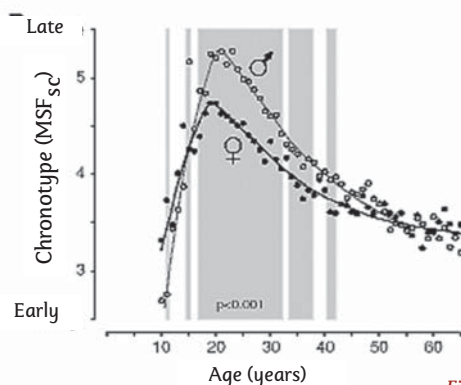


Fig. 3

The Circadian Rhythm and the Learning Process

In the past decades we have seen a remarkable number of studies regarding the relationship between learning and sleep. Many of these studies establish the relevance of sleep for the learning process. A significant number of these studies has been carried out at Harvard Medical School and at Lübeck University.

The American authors Stickgold, Walker, and their colleagues primarily study the performance of motor skills during wakefulness and sleep. In one study, subjects were asked to complete short finger-tapping tasks on a computer keyboard. The number of completed sequences and the errors were timed. The use of the computer allowed for the measure-

ment of intervals between the tapping of keys. This experiment was repeated a few times during one day, at the end of which the subjects were allowed to have a night's sleep before being asked to perform the finger-tapping task again the next morning. The fact that the keystroke transition speed moderately increased during the day caused little surprise (see Fig. 4a). The number of sequences per training session rose slightly. The distinct, large augmentation of sequences after a night's rest, however, was astounding. Further practice following sleep showed only a "normal" increase, that is, the normally expected improvement in performance during the day (see Fig. 4b). Another surprising finding was that those keystroke transitions that had been difficult on the first day became clearly easier to perform following sleep. By contrast, these same transitions could not be improved during one day (see Fig. 5). Sleep, therefore, manifestly enhances those motor skills that affect both speed and fluency of movement. Although this study was carried out on a computer keyboard, it is evident that other motor tasks, like practicing a musical instrument, for example, follow the same principle.

An obvious next step was to ascertain to what extent a daytime nap influenced the learning of motor skills. Here again extraordinary results came to light. A midday nap also yields enhanced motor performance, albeit less than a night's rest (see Fig. 6). When both groups (subjects who did and did not nap) were tested again

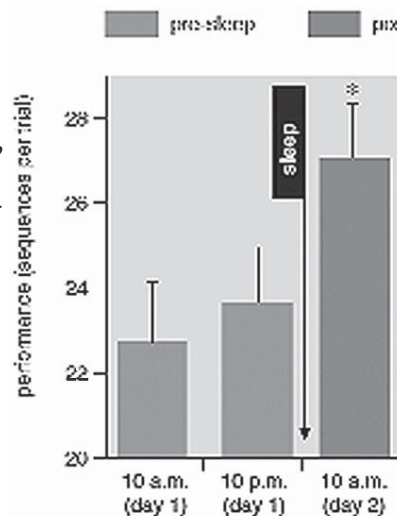


Fig. 4a

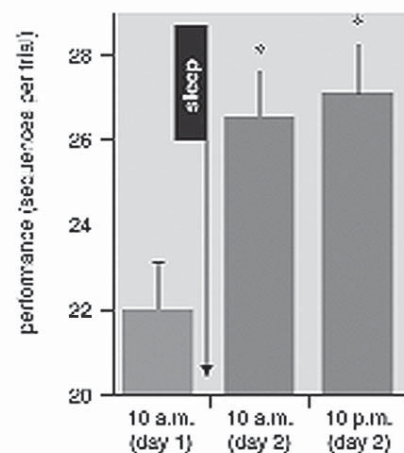


Fig. 4b

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the next day, following a full night of sleep, those subjects who had napped showed only a slight additional increase in performance speed. Those who had not napped (who had only a night's sleep), however, showed a more significant increase in performance speed. Total daily improvement for both groups (nap and sleep and sleep only) was approximately the same.

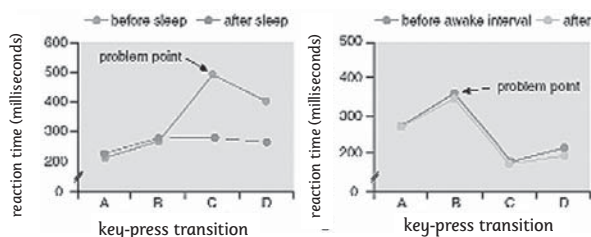


Fig. 5

These data suggest that there is a relatively fixed limit to performance enhancement in a 24-hour period. Even when one extends the period of sleep by repeated napping during the day, for example, it is not possible to exceed the daily limit of improvement. One conclusion to be drawn from these studies is that real, cumulative learning requires several sleep-wake cycles to be assimilated effectively. One 24-hour period is not enough.

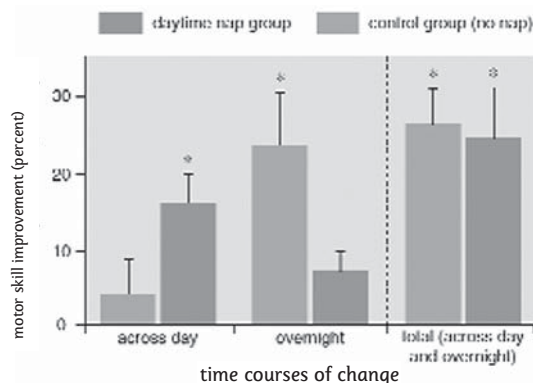


Fig. 6

Among others, an important study on the significance of sleep in learning to perform cognitive tasks was conducted by the endocrinologist J. Born and his team. Subjects participating in this experiment were asked to transform a given string of digits into a new sequence following a fixed scheme (see Fig. 7). Each string was composed of the digits 1, 4, and 9. Subjects had to follow two rules. The first was the "same rule" (for example, 1 and 1 results in 1). The second was the "differ-

ent rule" (for example, 1 and 4 results in the remaining digit, 9). Initially, the first two digits of the string are transformed, and the next digit is processed with the preceding result. After the final transformation in the string, the last digit is entered as a result. This procedure allowed measurement of the time that elapsed between the presentation of the transformation task and the first result.

The relatively long procedure (duration: approximately 9 seconds) could be significantly reduced by adopting a trick that was not revealed to participants. The final result of the previous transformation permitted subjects to recognize a shortcut that would save them considerable time (approximately 2 seconds). Because the shortcut led to the final result much faster, it was easy to discern those subjects who had discovered the trick.

How many subjects detected the shortcut? After practicing three times, more than 20% reached the solution (see Fig. 9, left bar). These subjects were then excluded from further study. The remaining participants were divided into two groups: the subjects in one group were allowed to sleep the following night, and the subjects in the other group had to stay awake. Surprisingly, almost 60% of those who had a night's rest were able to discover the shortcut the following day (see Fig. 9, middle bar). Only 20% of those who had not slept discovered the shortcut (see Fig. 9, second bar from the left).

Factors that might have affected the extraordinary increase in the group that had rested were excluded by using questionnaires (for example, had subjects dreamt of a solution?) and by testing additional groups to discover, for example, the possible influences of morning or evening trials (see Fig. 9, hatched bars). These results clearly show the influence of sleep on cognitive performance. The conditions of the study are artificial, but their import for the acquisition of other, real-life cognitive skills (learning mathematical rules, for example) is highly plausible.

The studies mentioned so far involved adults only, so to what extent can these findings be transferred to children and adolescents? Some first studies are beginning to show results that demonstrate similar phenomena for the young. In one study, children had to learn correctly at least half of given pairs of words. This procedure was

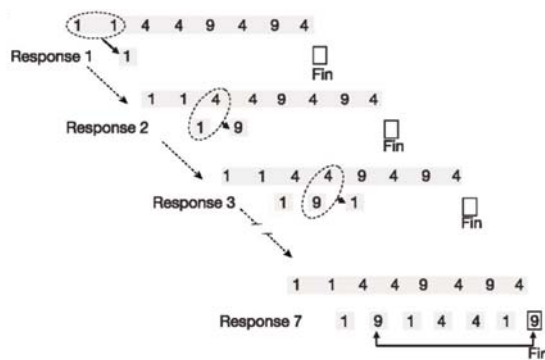


Fig. 7

performed with two groups at different times of the day: just before bedtime and in the morning. In both groups, at different points in the day, knowledge of the pairs of words was tested. The children belonging to the group that had been allowed to sleep right after studying, when tested the morning after their night's sleep, were able to remember three pairs more than they had the evening before. This result did not change when

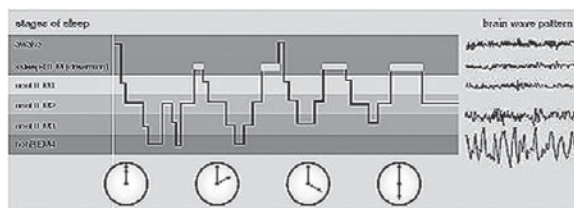


Fig. 8

tested a second time on the same day. When the pairs of words were studied in the morning, the children were able to memorize a new pair by the evening and to remember a set of two pairs the next morning after a night's rest. Studying just before going to bed yielded the best learning results. These findings lead to the conclusion that what was discovered to be valid for adults is likely also valid for children and adolescents. The conclusion for all groups is the same: sleep considerably enhances both motor and cognitive learning performance.

Learning Conditions

Clearly, sleep is an exceptional learning aid.
(We may even be tempted to infer that a lot of

sleep is beneficial to learning, but this is not necessarily so. Again, studies demonstrating this are beyond the scope of this paper.) The starting point for each of the studies included here was the subjects' first attempt at the task. Studies demonstrated that repeated practice, at intervals of a few hours, led to minor but constant improvement of motor skills. On the other hand, engaging intensively with the assignment did not lead to immediate improvement of cognitive skills. In both cases, however, intensive engagement with motor and cognitive challenges forms the basis for what is then carried into sleep. No subjects, however, awoke from their sleep able to master the tasks of the previous day immediately. An essential point here is that the task had to be resumed before it was possible to register a significant improvement. Given these results, we can formulate the following conditions for a learning process that includes sleep:

1. Initial practice of a motor or cognitive skill;
2. Sleep;
3. Resumption and practice of the skill.

Thus sequenced, it becomes apparent that the learning process has its own rhythm, one that builds on the circadian rhythm. Each of these three conditions may be further divided and treated as a rhythmic process involving practice and rehearsal followed by rest. We know, too, that sleep itself is a rhythmically structured process (see Fig. 8). Learning, then, clearly involves rhythmic processes that occur in different time scales.

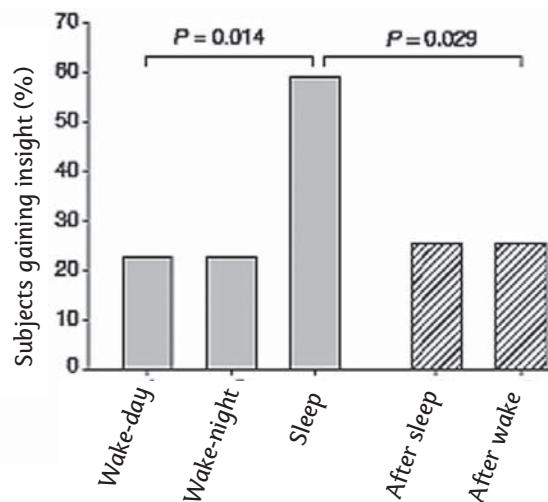


Fig. 9

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Conclusion

Sound sleep is essential to wellbeing and regeneration, and sleep also sustains learning processes, especially, as we have seen here, for motor and cognitive skills. Educational concepts, of course, must take into account various time scales, from the very small—within a class hour, for example—to the very large, even vast—the lifespan. Further, we should bear in mind that the learning effect for one day is limited. The learning objectives we set must be realistic for the children and adolescents whom we teach. Finally, we should acknowledge that the phrase, “I need to sleep on it,” is not empty procrastination, but a valid truth for human learning processes and, therefore, for education.

[T]he phrase, “I need to sleep on it,” is not empty procrastination, but a valid truth for human learning processes . . .

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Thinking and the Consciousness of the Young Child

Renate Long-Breisohl

Recently while observing young children in a child care situation, I watched one little boy around the age of two who was totally immersed in moving blocks into various positions. He stayed absorbed in his activity without looking up or saying a word. Was he thinking? Something was happening within this child that I wanted to understand in order to adjust the environment around him so that nothing would disrupt his concentrated activity.

My own study of the subject of thinking set me on a journey: I re-read essential works on the first three years, looked at developmental research, and observed children whenever the opportunity arose. Here I would like to share some aspects of my work in progress that relate to coming to terms with thinking as an adult, the development of thinking as a process during the first three years, and events occurring in the third year of life.

To put it bluntly, thinking is not a favorite activity of our time. While we are surrounded by an endless variety of products based on sophisticated human thought and created by a fairly small group of highly trained engineers and designers, the actual process of thinking for oneself is experienced as stressful by many contemporaries. Students often find it strenuous to pursue a train of thought related to a question, and teachers find it difficult to engage students in processes that require concentrated thinking activity.

In adult learning, more and more visual aids are appearing, and the more they are used, the less we need to engage inwardly in a thinking process. This one can experience as an average

computer user or by perusing a typical student textbook. It all comes down to information intake and information processing, following ready-made pathways or existing mental frameworks. Knowledge is broken up into small paragraphs, the main thoughts are boxed so that one can take them in at a glance and, overall, there is an abundance of accumulated information. Rudolf Steiner predicted that human beings would gradually lose the ability to think, and yet he regarded the human faculty of thinking as the gateway to spiritual development.

What is the faculty of thinking in human beings?

It is important to have an understanding of what thinking is when we approach children. Thinking is an activity that takes place within the inner realm of the human being and, in its highest aspect, is wisdom in individualized form. One can describe thinking as a supersensible faculty, since it does not derive its essence from sense experience. Thinking cannot be perceived directly by others. Concepts are formed and woven together through the activity of thinking, and in everyday life these concepts assist us in ordering, structuring and giving meaning to experiences.¹

Through thinking we are free to reach toward high spiritual ideals, but our thinking can also be reduced to rationalizing our wishes, desires, and actions. Then it binds itself too deeply to the material aspect of existence and is in danger of hardening and losing its connection to truth. The destiny of thinking is a theme to which Steiner returned in his lectures again and again. In our time many people find it

In adult learning, more and more visual aids are appearing, and the more they are used, the less we need to engage inwardly in a thinking process.

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difficult to devote themselves to thinking as a spiritual activity, or to think freely. However, one needs to consider thinking as a spiritual activity if one wants to find the key to thinking in the young child, as I will further elaborate in this essay.

Child development and thinking

In his book *Spiritual Guidance of the Individual and Humanity*, Steiner spoke about the first three years of life and the evolving human being.² He described how learning to walk, to speak, and to think is a three-step process in which the growing, incarnating child adapts to earthly conditions, and in which essentially spiritual faculties take hold in the child under the guidance of higher spiritual beings. Through this process, faculties gained in the spiritual world are transformed and reappear as the human faculties of thinking, feeling, and willing. These faculties develop within the bodily processes of achieving an upright position, turning the speech organs into instruments for the expression of language, and molding the brain into an instrument for thinking. Finally, in the third year, an evolving ability to think connects the child to the world community of human beings.

Active within these processes is the “I,” which through walking orients the body to three-dimensional space, and through speech attunes the child’s soul to a specific human community according to the individual destiny of the child. This activity of the “I” can be described as the streaming in of spiritual forces from a spiritual aura around the child. It is a process of which the child has no conscious awareness.

From this picture of human development questions arise regarding thinking in the young child. Why is the development of thinking primarily identified as occurring in the third year of life? Is it not a continuous process? What is our understanding of recent neurodevelopmental research that interprets early responses of babies to stimulation as forms of intelligence and that points to the ability of very young children to communicate from day one? And if there were a major leap in the development of thinking in the third year, why, then, would one wait until the seventh year before addressing the child’s thinking in education, as Steiner has suggested?

The first and second years in relation to thinking

It is generally acknowledged that thinking develops in the young child in accordance with the maturation and differentiation of the brain and nerve-sense system. It is interesting that Steiner spoke about thinking as a spiritual as well as an earthly faculty; he said that thinking originates in pre-earthly existence as a supersensible faculty of the human being, yet it is also active in and bound to earthly life through sense experience.

There are two aspects to thinking in the young child: The first relates to the supersensible nature of thinking, which is linked to the etheric body. In the very young child these etheric forces are still active from outside, sculpting and fine-tuning the head and bodily organs, without the child’s being conscious of them. “Connecting

threads develop in the brain, and the forces which organize the connecting threads are seen by the clairvoyant during the first few weeks of the child’s life as something that is forming extra sheaths for the brain.”³ The etheric body is still engaged in shaping the brain and radiating into the rest of the body.⁴ This image often appears in children’s drawings in which rays are depicted around the head of a human figure, connecting it to the world beyond.

I remember an eight-month-old child in a restaurant, sitting in a high chair, enthralled with a spoon he held in his hand; he moved it from one hand to the other. He licked it, turned it upside down and moved it faster and faster until the spoon fell to the ground. Does thinking play a part in such an activity?

Georg K hlew nd⁵ points out that a young child absorbed in exploration lives naturally in a state of pure attentiveness, which may be achieved in adults only after intense practice in awareness. He describes pure attentiveness as an advanced stage of thinking activity, based on the ability to maintain the intentional quality of the will without pouring it into action. He calls it “soft will,” that is, will purely within the activity of thinking. The child is able to be in this state of attentiveness naturally and is fully devoted to the object of his exploration.

Why is the development of thinking primarily identified as occurring in the third year of life?

This attitude of surrender is also found in the ability of the young child to imitate, an ability present from the very first stages of life. Steiner points to how thinking is dependent on imitation: "The child learns to think because it is an imitative being, wholly given up to its environment. It imitates what happens in the environment under the impulses of thoughts."⁶ Sense experience and thinking are one. The child imitates and simultaneously is able to understand what is going on the moment the sense perception happens.⁷

Steiner speaks about the work of the "I" in the first three years as molding the brain. Two important influences are part of this process: sense activity on the one side, leaving imprints of sensations in specific areas of the brain (as described by Eugen Kolisko in *The Bodily Foundation of Thinking*), and movement on the other. Steiner uses the term "bodily geometry" for the movement of the young child that allows her to find her place within spatial dimensions. Thinking is prepared through both activities.⁸ Thinking and movement, originating from head and limbs, form a polarity that organizes development during the early childhood years. The head pole relates to the etheric forces working from the head downward, and the limb pole relates to the human soul-spirit or "I" working from the lower part of the body upwards. This is the organizing principle that underlies the process of coming into uprightness during the first year of life. The "I" activity of movement has an influence on the healthy development of thinking. Steiner's spiritual research into this process is now confirmed by developmental research and the therapeutic practice of stimulating thinking through movement.

As the child approaches the end of the first year of life, we may assume that the processes of intensive looking, touching, moving, and exploring have left within him many imprints, mental images which, however vague they may be at first, will eventually be met by concepts formed through the inner activity of the child.

A new quality is added to those early internal pictures flooding through the child once the child

can anchor them in speech. Now words become the vehicle for the development of thinking. "Just as speech develops from walking and grasping, in short, from movement, so thought develops from speech . . . and since the child is one great sense organ and in his inner physical functions also copies the spiritual, our own thinking must be clear if right thinking is to develop in the child from the forces of speech."⁹

Karl König has beautifully summarized the process of speech acquisition in *The First Three Years of the Child*, in which he describes how the child progresses from express-

ing physical well-being or physical needs to expressing his relationship to the outer world in words (naming) and, increasingly, in short sentences. Speech mirrors the child's being in relationship to objects and people. It links the child to the fine nuances of feeling expressed in language. How does thinking manifest at this stage of development?

Recent developmental research has described how adults can stimulate memory in children between the ages of one- and two-and-a-half years if in the presence of the child adults verbally recollect recent events of the child's life.¹⁰ Russian educational psychologist Lev Vygotsky (1896–1934) suggested that intellectual development depends on the adult's verbal communications being slightly above the child's current level of communication.¹¹ His observations are interesting in that they point to the connection between speech and thinking. Could one say that the child, through the adult as model, is able to imitate memory activity?

Thinking in the child who is approaching age two can be observed in the child's solitary play. The child moves objects, covers them, puts them side-by-side or on top of each other. The purpose is solely to make contact with the world of objects and to change their positions. Steiner states that it is through this interplay with the environment that the child finds his way spontaneously into thinking. While observing a child engaged in such play, one can experience concentrated attention. If the child has sufficient opportunity to play

"The child learns to think because it is an imitative being, wholly given up to its environment. It imitates what happens in the environment under the impulses of thoughts."

– Rudolf Steiner

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without disturbances, this mood will be recreated in play for years to come.

Thinking in the third year of life

What is the gift of the third year of life? The soul-spiritual forces in the child now complete their work on the foundations of the child's faculty of thinking. The "I" of the child has penetrated the physical body, the limbs, the rhythmic system, and the head. At the same time some part of the etheric forces of the head is freed. "At the age of two and a half, the child's head organization is developed far enough for those forces of the ether body which have been working on it to become released . . . acting now as soul and spiritual forces [available for other developmental tasks]."¹²

What can be observed in the child of this age? A vivid memory, a more elaborate way of speaking, original word creations and thought connections. The child enjoys playing with words, turning them around, inventing new ones—and he can surprise us with his own original ways of arranging syntax or linking sense impressions. Speech develops in leaps and bounds. This stage of development shows new achievements of thinking in everyday life. It becomes easier to follow routines, because the child can understand more of the meaning of what is done. Therefore it becomes easier to guide the child. In conversation, she seems more able to take in what is said. It is fascinating to observe in children of this age that they not only are creative in inventing their own words, but also in producing their own logic. Interestingly, the very individual and unusual thought connections of a three-year-old do not arrive out of a conscious thought process but seem to emerge often unexpectedly, as if from somewhere else.

It is tempting for the educator who witnesses these new faculties as they arise during the third year to approach the child's thinking capacity with formal instruction. The ability of the child to process instructions addressing the intellect at age two has been documented in developmental research and has been utilized in program devel-

opment for early childhood education. The third year is when many early learning programs begin.

One can understand the motivation for using learning materials such as picture and word cards to support concept building, verbalization or memory, since the thinking potential is there in the child and can be called up. But the constant involvement of an adult is needed to keep this process going. What is learned at this age is not retained unless it is continually repeated. Steiner warned of the consequences of adult intervention and demands on thinking and memory before the age of three: "What then will happen, if we make too great a demand on the intellect, urging the child to think, into thinking as such? Certain organic forces that tend inwardly to harden the

body are brought into play. These forces are responsible for the salty deposits in the body and for the formation of bone, cartilage and sinew—in all those parts of the body, in short, that have a tendency to become rigid. This normal rigidity is over-developed, if intellectual thinking is forced."¹³ It is of great importance that those who live with young children understand the spiritual background of the capacity to think. Steiner affirmed that we are to become, and need to become, free-thinking beings in order to develop our humanness.

When the child learns to think—well, in thinking we do not remain in the realm of the individual at all. In New Zealand, for example, people think in exactly the same way we do here today. It is the entire earth realm to which we adapt ourselves, when as children we develop thinking out of speech. . . . In thinking, we enter the realm of humanity as a whole.¹⁴

In each child this possibility is established and in that respect the third year can be regarded as a culmination point of early development, representing in seed form the essence of the human being. This needs to be acknowledged in everyday life, so that one does not merely familiarize the

[T]he third year can be regarded as a culmination point of early development, representing in seed form the essence of the human being.

child with thought processes related only to the immediate material environment and mundane situations. Often adults take pride when the child can already express himself intellectually in a way similar to older children or even adults. Yet too much praise and encouragement of the child's intellect can cause the child's thinking to become fettered to fixed thought-forms and prevent the child's thinking from flowing creatively and freely between the two worlds of thought: the spiritual and the earthly.

Only the emergence of consciousness of self around or shortly after age three will bring the child's thinking closer to the earthly realm and change the sense of "It thinks" into "I think." This step indicates that the child has become more conscious of himself as different from others and from the surrounding world. He has to leave the experience of oneness behind; it is the price for becoming an individual. From this time on, the child will feel himself as the originator of his thoughts.

It is important to notice that "I"-consciousness is achieved only after the "I" has been active in the process of brain development and, thus, in establishing the possibility of thought as a universal human activity. Steiner stated that even though the child might use the word "I" correctly already at around the age of two-and-a-half, the appearance of "I"-consciousness happens after the age of three. In developmental psychology, the same phenomenon is called "the emergence of the psychological self" at around age three.¹⁵ Professor of child psychology Laura Berk, a researcher and author on child development, also describes phenomena of "metacognition" in the child, such as the use of the words "think," "remember," and "pretend," and the child's realization that thinking is going on inside his head.¹⁶

There is a deep wisdom in the sequence of development as I have outlined above. Thinking is not a personal achievement in the first place, but is established within us under the guidance of higher beings. Thinking becomes personal

through consciousness of self, but always encompasses the possibility of expanding beyond the individual into the universal realm of thought. Stimulating self consciousness at an early stage poses the danger of closing the door to the universally human realm.

However tender and immature this consciousness of self may be, there is a general eagerness in educators to use this emerging consciousness of the child for reflecting and reviewing processes, such as making choices and decisions. These may relate to the child's actions, social situations, daily routines, food and clothing. But consciousness of self is a double-edged sword. It requires maturity to handle it, more maturity than can be expected of a three-year-old. In becoming conscious of their wishes and choices, some three-year-olds are overwhelmed by their own desires and become demanding. They also may change their minds quickly and can appear swayed by emotions. In such cases, parents often complain about their child's self-centeredness.

Some children, when made conscious of their actions, become overwhelmed and react with insecurity, lack of confidence in their abilities, or fear of failure. It happens as early as three years of age that children say, "I don't like my drawing," or "I can't do that." Steiner speaks about this early appearance of consciousness of the "I" as a great mystery

and, in a certain sense, as being premature.

Some educational conclusions

Modern education has regarded and used the child's ability to think as an opportunity to introduce early instruction. Undoubtedly there will be more research identifying the potential of the child to think at an ever-earlier age. Programs have been designed for stimulating aspects of the young child's thinking, such as memory, color and form discrimination, and concept building. With this the child's thinking becomes tuned to the particular mode of abstract intellectuality prevalent in our time.

It is important to notice that "I"-consciousness is achieved only after the "I" has been active in the process of brain development and, thus, in establishing the possibility of thought as a universal human activity.

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Steiner recommended strongly that we leave alone the child's capacity for thinking at this stage, avoiding outer intervention. He was not concerned about intellectual progress, but, rather, about morality. In 1906 he wrote, "[Young] children do not learn by instruction or admonition, but through imitation. The physical organs shape themselves through the influence of the physical environment. Good sight will be developed in children if their environment has the proper conditions of light and color, while in the brain and blood circulation the physical foundations will be laid for a healthy moral sense if children see moral actions in their environment. If before their seventh year children see only foolish actions in their surroundings, the brain will assume the forms that adapt it to foolishness in later life."¹⁷ Steiner points to the link between thinking and morality, on which depends the future of humanity. He is concerned with how the quality of adult thought influences the child. Therefore he emphasizes the self-education of the adult. "The education during these first two-and-a-half years should be confined to the self-education of the adult in charge who should think, feel and act in a manner which, when perceived by the child, will cause no harm."¹⁸ And again, "Why have so many people 'nerves' today? Simply because in childhood there was no clarity and precision of thought around them during the time when they were learning to think after having learned to speak. . . . The organs and vessels develop after the models of love, truth and clarity."¹⁹

How might this understanding change our approach to young children in our care? We may find ourselves paying more attention to our own thinking and how that might relate to the child's thinking. There is already among Waldorf educators an awareness regarding the importance of self-education and self-development, as well as a recognition of how speech relates to thinking. But as yet not enough attention is paid to the detail of the child's play in the third year of life. As Waldorf early childhood educators, we should make ourselves heard in the general field of education, where the child's intellectual development is so heavily emphasized. If we are clear in our own understanding of the child's development of thinking, then other educators will be open to what we have to offer, and more children will

therefore benefit from educational and childcare practices that truly support them.

Let us return to the example of the child playing at the beginning of this essay. This play expresses the child's activity of thinking before the emergence of a consciousness of the "I." This play of the young child marks a specific stage in development and should not be seen merely as a precursor to the "real" play of four- and five-year-olds.

Sometimes one will find that among Waldorf early childhood educators there is too little differentiation in how they approach the play of the child under the age of three versus that of the child over three. Steiner describes the very young child at play as a "hermit," totally immersed in his own world. This play needs to be nurtured by providing a quiet space and adjusting the daily rhythm to allow for the unfolding of undisturbed individual play. Through this play, the child weaves his connection to universal human thought before being drawn into an awareness of himself.

Often the rhythm of the kindergarten day is used as a model for the rhythm of the day in play groups and childcare settings intended for younger children. But is it appropriate for children under three to be interrupted in play in order to make space for group activities such as the morning circle? What is the right daily structure for this age group? How can one create a balance between togetherness and the child's natural desire to follow his own inner impulse? One can find answers to these questions by observing young children and by becoming more and more attuned to the wonderful processes of thinking in the young child.

Endnotes

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11. Vygotsky's ideas are outlined in Berk, pp. 247–250
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15. Berk, p. 279.
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William Brock, former Secretary of Labor for the United States government, is currently leading the New Commission studying the skills of the American workforce and has created a report on the status of education in the United States.

Journalists recently quizzed Brock on how American education can be remedied. He replied: "First, we have to agree that we have a problem. In the last 25 years, spending on education has risen 240% while performance has remained unchanged. Only 68% of students graduate from high school. We need to start with better early-childhood education. We need the very best among us to become teachers, and we need to ensure that standardized tests of rote knowledge do not drive education away from the very things that have made America special: critical thinking, creativity, innovation, and teamwork."

He went on to say, "We recruit [public school] teachers largely from the bottom 30% of entering college graduates, train them, and then assign them to the toughest jobs in the most challenging schools. . . . Most feel that they have no voice in their schools. This is no way to treat professionals."

When queried as to why education was not a larger political issue, he responded: "Primarily because there is no quick fix. It is a complex problem. Perhaps most of all, no [politician] really wants to admit that we are leaving millions of children behind. Nothing is more important than education. Absolutely nothing."

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—DSM

Assessment without High-Stakes Testing

Protecting Childhood and the Purpose of School

*David Mitchell, Douglas Gerwin, Ernst Schubert,
Michael Mancini, and Hansjörg Hofrichter¹*

Picture a breezy spring morning at the beach. White-tipped waves roll rhythmically up the sand, washing away footprints like a blackboard eraser on a classroom blackboard. A group of children on a school outing marches purposefully along the shore through the edge of the frothy waves. A couple of eager kids stride out in front.

The teacher walking along with the main group of the class notices that one of the boys is lagging behind. She slows her step to find out why this child is not keeping up with his class. There are several possibilities:

1. The child is unable to keep up with the group, due to some disability, physical or emotional, or simply exhaustion for lack of sleep or nourishment;
2. The child is unwilling to keep up with the group, due to a lack of interest or, perhaps, a surfeit of distractions along the way; or
3. The child does not know how to keep up with the group, possibly because he is new to this experience and has not been taught how to hold his balance against the waves.

In each of these cases, the teacher will respond differently. In the first case, she may scoop up the boy and carry him, or ply him with a quick snack or a sip of water. In the second, she may draw his attention to something of interest up ahead or coax him with some gentle words of sympathy and encouragement. Or, in the final case, she may teach him how to high-step through the waves without losing his balance. In each of these three scenarios, the teacher assesses the situation of the child—as well as her most appropriate response—by taking in the full context of his circumstances, rather than by testing his performance against a standardized norm that may threaten to exclude him

from the company of his classmates if he does not speed up.

Yet, increasingly, this is what happens to students in school—whether or not they are lagging behind—as the result of government legislation enacted in 2002 under the promise “No Child Left Behind” (NCLB). Six years and billions of state and federal tax dollars later,² we may recognize that children don’t learn faster or better by being subjected to high-stakes tests. If anything, the contrary appears to be the case.³

Former Assistant Secretary of Education Diane Ravitch is commonly recognized as one of the chief architects of the modern standards movement. In her book *National Standards in American Education: A Citizen’s Guide* (1995), Ravitch provides this rationale for standards:

Americans ... expect strict standards to govern construction of buildings, bridges, highways, and tunnels; shoddy work would put lives at risk. They expect stringent standards to protect their drinking water, the food they eat, and the air they breathe.... Standards are created because they improve the activity of life. (pp. 8–9)

The purpose of a test is to inform the teachers how well they are doing in their teaching.

Ravitch asserts that just as standards improve the daily lives of Americans, so, too, will they improve the effectiveness of American education: “Standards can improve achievement by clearly defining what is to be taught and what kind of performance is expected.”⁴

This we may call “technocratic thinking,” thinking that sees society as a problem to be solved, that approves technological fixes to improve living interactions and relationships, and that mistakes children for products. Standards, of course, are helpful, even necessary, in all areas of modern technology. They make products cheaper, more reliable, and of better quality. But children

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are not technological products, nor are they just a collection of parts; they are whole organisms and they belong to the social organization as a whole. They cannot be summarily tested, rejected, and recycled like aluminum cans. Human beings require a different approach to educational assessment, one that will have as much to do with teachers as with students.

To return to our school hike at the beach: For the child who lags behind due to physical or emotional impediments, or, metaphorically, cognitive challenges or learning difficulties, much has been achieved in the field of remedial education. These students are not exempt, however, from the testing required of the NCLB act, which is to say that these students may be treated differently from their peers in degree but not in kind.⁵ For the child who falls behind due to lack of focus and motivation, high-stakes testing exacerbates the divide between those more focused students who perform well on tests and those more easily distracted who do not. And for the child who slips behind because of inadequate teaching, we must ask: What is the point of testing students if their learning deficiencies are due in significant measure to the ineffectiveness of their teachers? And what will it take for these students to receive an adequate education?

As the NCLB legislation comes up for reauthorization, a broad coalition stretching across the political spectrum is rising up to demand a new approach to evaluating students, teachers, and schools.⁶ A fundamental question needs to be posed, however, before any new laws are formulated, namely: Why are a growing number of children falling behind in their learning?⁷

There are many ways to find out, but even those who actually prepare for and administer these tests say that the tests are not one of them. As one critic of this legislation puts it, the closer one is to the classroom and the process of learning, the less useful this form of testing becomes.⁸ At a practical level, high-stakes, norm-referenced testing does not deliver the information it has promised. At a deeper, more troubling level, it raises moral questions when information from this testing is used for “non-educational purposes” such as grading, ranking, manipulating salaries, and student profiling. What are we trying to achieve when we send children to school? How can we help them to succeed as learners?⁹

NCLB legislation has a noble intent—to provide every child with a good-enough education. The resultant high-stakes testing, however, has become a wolf in sheep’s clothing. Interpretation or misinterpretation of NCLB has led to heightened stress in children,¹⁰ compromised the integrity of teachers, and has created an intellectual caste system in which end results have replaced established educational practice.¹¹ High-stakes test preparation is even found in preschools and kindergartens as schools struggle to create an edge that will increase their funding.

It is the birthright of every child to enjoy a healthy childhood that involves free play, loving warmth, and healthy child-centered rhythms—the unfolding of which will be transformed later into cognitive and moral capacities that become sources of strength in adult life. As teachers speaking on behalf of all children, we offer in this paper alternative methods of assessment that focus not simply on the performance of students but on the efficacy of teachers.

Why Should We Send Our Children to School?

Before we can address the forms of assessment appropriate to childhood, it is important to identify and set aside three widely held yet misleading assumptions given as the purposes of education or the reasons for going to school. The first assumption is that *one chief purpose of school is to instruct students*. By this is meant that teachers know and students do not. The teachers’ task is to convey what they know to their unknowing students, then confirm the efficacy of this transaction by testing the students’ ability to remember—or at least recognize—what they have received. The lesson may be transmitted to the students by the teacher, but often the instruction takes place by textbook or other medium. In other words, students receive their lessons primarily through what they hear and what they see. Other modes of learning such as working with the hands, demonstrating through gymnastics, and practicing elocution are secondary, perhaps entirely neglected, approaches. Teaching is not only involved in the transfer of knowledge but also serves to focus insight and the self-learning forces within the child—each requiring modification based upon the developmental stage of the child.

This assumption is valid only if by education we mean simply the transmission of information. A teacher's task is not to pour in material but to draw out students' nascent capacities. Herein lies the fundamental difference between instruction, which in its etymological origins means to pour stones (Latin *structus*) into an empty vessel, and education, which in its origins means to lead or draw (Latin *ducere*) forth or out (Latin *e*). When they instruct, teachers insert what they know into the empty vessel of the student who knows not. By contrast, when they educate, teachers draw forth from a student what he or she in some sense already knows, whether implicitly or explicitly. Like Socrates in Plato's dialogue *Meno*,¹² the teacher coaxes from the students—with the help of skillful leading questions—responses that help them figure out the lesson for themselves, instead of waiting for the teacher to supply it. In so doing, instead of receiving and retaining someone else's thoughts, the students create their own. That is, they think. And in thinking students use more than simply their visual and auditory senses, crucial though these are to learning. The difference between storing content and developing capacities is simple enough: in the one, you receive, primarily via eye and ear, something from without; in the other, you generate, usually with the participation of your entire body, something from within. Instruction proceeds from the outside in; education from the inside out. Both aspects are needed at appropriate stages of development, but education entails a more active, participative—albeit more time-consuming—form of learning.

This latter approach to educating is sometimes called “the discovery method” or, in some forms, “constructivism,” or even “the Socratic method,” and yet all too easily education is replaced, either for lack of time or lack of teaching skill, by instruction. If we are to place education ahead of instruction, we will need a new form of assessment, since the purpose of assessment will be to determine whether a teacher is drawing forth capacities from his or her students, activating the full resources of their entire organisms, not whether the students are retaining certain infor-

mation, primarily through eye and ear.

A second assumption about going to school, also widely held, states that *another chief purpose of education is to prepare students for the work force*. This assumption posits an economic motive for an essentially cultural activity. We read, for instance, that schools need to ready the next generation to compete in the global marketplace. In this view the mark of successful schooling will be students who are productive wage earners. To the extent that this paradigm rules the learning experience, testing will focus on skills having to do with economic values such as competition, efficiency, and speed.

To discern the fallacy of this assumption, it is helpful to distinguish in society three interrelated, sometimes overlapping, yet distinct spheres of activity: one economic, one political, and one cultural. To the economic sphere belongs all activity having to do with commerce and the generation of wealth; to the political sphere, all matters of law and political rights; and, to the cultural sphere, all that has to do with such things as the life of arts and humanities, science and technological research, morality and social customs, religion and philosophy.¹³

A school, then, is not primarily an economic organization; it is primarily a cultural organization. Put differently, the purpose of school is not to generate wealth as a business but to unfold human capacities as a center of learning. Place schools in the service of economic goals and we begin to undermine the purpose of schooling. Instead, the best way to prepare students for both economic and political life is to develop in them capacities of judgment and discretion.

It is perhaps an unwritten rule that cultural institutions or activities motivated by something other than themselves soon lose their cultural integrity. The value of a poem is ... its poetic worth. Cultural values, in other words, are self-reflexive. Consider what would happen if, say, the primary value or purpose of a publication were to become economic (that is, to make money) rather than remain cultural (that is, enrich the life of ideas). Which journals most successfully reward the profit motive? These are pornographic maga-

[W]hat is the point of testing students if their learning deficiencies are due in significant measure to the ineffectiveness of their teachers?

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zines. Which forms of music pay the best? Advertising jingles. Which forms of cooking make the most money? Fast food outlets. This is not to say that a cultural activity cannot be profitable. Rather the point is that a cultural activity made subservient to economic gain may typically result in the loss or even the perversion of its cultural value.

Social scientist Donald D. Campbell arrived at a similar conclusion by means of a social law he has formulated in this way: "The more any quantitative social indicator is used for social decision-making, the more subjected it will be to corruption pressures and the more apt it will be to distort and corrupt the social process it was intended to monitor."¹⁴ We have only to recall reports of cheating by school officials anxious to raise their state-mandated test scores to recognize the efficacy of this social law.

An education free of economic motives requires a different form of assessment, since assessments will inevitably be grounded in the values of the very activities they are designed to test. Instead of basing assessment on the economic goals of efficiency, speed, and competitive advantage, schools will approach assessment based on the cultivation of essential human qualities that may unfold slowly, often laboriously, over long periods of time. Even the most essential skills—reading, writing, arithmetic—can be successfully evaluated without resorting to standardized tests.

Educational practices may be distorted not only by a commercial motive; they may also lose their integrity if their motive is political. Literature taken over by political activity can easily devolve into propaganda; religious worship controlled by the state can soon appear as idolatry. This brings us to a third commonly held assumption: *A further chief purpose of education is to prepare students to become responsible citizens.* The motive for teaching, here, is to inculcate the values of a society and thereby help students align themselves with their political and social environment. Here testing will take the form of assessing familiarity with (and perhaps even obedience to) codes of conduct and social norms.

But this assumption flies in the face of the original intention of the founding fathers of the American nation—Thomas Jefferson in particular—who explicitly inspired a system of education

designed to strengthen the individual against the tyranny of social norms and conventions. Far from raising children to fit a pre-existing order, according to Jefferson, education was intended to cultivate a generation of leaders who would ceaselessly renew society out of their own insights and their own thinking. In a letter to his friend William Roscoe on the subject of public education, Jefferson wrote:

These schools will be based on the illimitable freedom of the human mind. For here we are not afraid to follow truth wherever it may lead, nor to tolerate any error so long as reason is left free to combat it.¹⁵

In sum, education needs to be pursued for its own ends, not for some extrinsic goal beyond itself. The moment education becomes primarily a means to some other goal, political or economic, it begins to lose its cultural value. The moment education—and, by extension, the assessment of education—is overshadowed by some economic or political motive, it begins to lose its own integrity.

And what is this integrity? Here we return to the question posed earlier about the reason for sending children to school. If not to fill them with instruction, train them for the work force, or outfit them as good citizens, what are the most important purposes of education?

An Alternative Way to View Growing Children, How They Might Be Educated and Why

The art of teaching presupposes a science of education based on accurate observation of children as they pass through distinct phases in their development from early childhood and elementary grades to the high school years and beyond. During these phases, each lasting roughly six to seven years, children learn in radically different ways:

- To educate preschoolers we need to encourage them to "do" something. We engage their will. Powers of imitation in young children provide fertile educational possibilities. A life rich in play—both free and structured—is crucial to learning at this age. In this phase we cultivate and discipline children's will, which sets the ground-

work for more conscious learning in later stages in childhood.

- To educate elementary school children we need to not only invoke their will but also stimulate their imagination through story-telling, which builds beautiful images and expresses the feelings and yearnings that reside deep within students' inner life. We work with their hearts in order to stir the imagination and invoke a sense of awe and wonder. A life rich in inner imaging holds the key to learning during these years. This is the phase of emotional development.¹⁶
- To educate high school students we need to not only to stir their powers of intrinsic motivation and imagination but also challenge their abstract thinking, exercise their powers of discrimination, and give them a sense of confident participation in the world. A life rich in ideals is vital to learning at this stage of development. At puberty, critical observation, scientific investigation, and rigorous thinking are exercised. This is the phase of cognitive development.

In all three phases, the overarching purpose of education is to assist human unfolding. Ultimately, school serves not the business world nor any political agenda, but rather the child and young adult as he or she unfolds those capacities that make him or her uniquely human. And what makes the human being unique? By contrast with any animal, the human is distinguished by, among other traits, its exceptionally high degree of flexibility. We see this, for example, in the free play of a preschool child, in the tireless creativity of a grade school child, and in the dawning of free and self-determined thinking in a young adult.

A teacher who works with the flexibility—behavioral, emotional, cognitive—within human beings at the appropriate stages of their development fulfills the purpose of education.

In this context, standardized tests have a minor role to play in the assessment of cognitive abilities in the high school years, though even here other forms of evaluation are likely to be more productive as tools of learning and prediction of success in adult life. The younger the child, the less useful are these tests, since they assess primarily cognitive function.

More alarming is the effect that testing can have not only on the classroom but on children's motivation to learn, especially in their early years. Consider the following story: Over-stressed due to the Vietnam War and Civil Rights confrontations, President Lyndon Baines Johnson was weary when the meeting of a blue ribbon educational reform convened in his office. As the panel spoke his head dropped, his eyes closed, and sleep overwhelmed him. At that point the panel's chairman, a distinguished professor from MIT, stood up and declared loudly, "Mr. President, we have a plan for the elimination of baseball in North America." At that point Johnson sat bolt upright, not believing what he had heard. The professor continued by putting forth a curriculum whose progression was determined entirely by testing.

- Fifth grade: take field trips to games with tests given on observations
- Sixth grade: study the rules of the game
- Seventh grade: learn about the history of baseball and key biographies
- Eighth grade: practice statistics, the computation of batting averages and pitching percentages
- Ninth grade: draw the geometry of the base paths and calculate the ricochet of balls hit off the green wall at Fenway Park in Boston
- Tenth grade: study baseball physics, calculating trajectory and velocity
- Eleventh grade: explore baseball economics, choosing an agent, negotiating contracts
- Twelfth grade: arrive at a grand synthesis—culminating in a major exam on all materials from grades five through eleven

The final test in grade twelve would be given to those who had passed all the previous tests. Some might pass, but not enough to field a team. "Through this testing method, Mr. President," the professor concluded with a flourish, "we would eliminate baseball as a national pastime." The professor had made his point, and a shaken President Johnson remained alert for the rest of the meeting.

This story points out the deadly effect testing can have on children's learning. Are we risking the same demoralization when we teach young children mathematics, biology, and history in order to assess them in this manner? Is there another way that still honors uniquely human qualities?

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Alternatives to High-Stakes Testing

There are many alternatives to high-stakes testing that educators can use in order to assess achievement in subject matter. Many of these approaches ensure greater retention of material and a more lively process, one that activates enthusiasm for learning rather than subjecting children to undue stress—which many teachers report is a growing problem among children subjected to mandated testing.

Alternative assessment techniques vary depending on the educational level or developmental phase of the children and the teacher's learning goals. Educational assessment should be used only for finding out the extent to which specific learning goals have been attained.¹⁷ Also, each developmental phase of childhood requires different techniques and approaches. For example, to assess children's kinesthetic abilities during pre-school years, we would observe how they engage their motor skills:

- Can they balance themselves while walking on a balance beam or climbing a tree?
- Are they able to skip?
- Can they walk backward in a straight line?
- How do they place their foot on the ground? Heel first; flatfooted; just the toes?

Assessment in early childhood should consider the physical development of young children as essential to their later artistic and academic learning. Gross motor skills need to be developed before fine motor skills. Social interactions, imaginative play, and tranquility essentially replace academic assessment at this age. Observations of children give rise in a teacher to intuitive insights that can be used for the design of movement exercises—for instance, in eurythmy,¹⁸ games, and gymnastics—to help remedy academic problems. Exercises in Spatial Dynamics¹⁹ involving orientation to direction (up/down, left/right, forward/backward) may be worked on rhythmically. All of this helps to center the child so that more focused learning can take place. Indeed, recent studies on the development of intelligence of young children suggest that “dramatic play” provides one of the most effective techniques for improving their “executive function” (EF) score, a measure of cognitive growth that is fast overtaking the traditional intelligence quotient (IQ) test as a reliable pre-

dictor of children's intellectual strengths and development. This new research demonstrates statistically that skills measured by EF, rather than those measured by IQ, lead to greater success later on in academic subjects such as grammar and arithmetic, and that EF scores can be improved through exercises such as those provided by dramatic play.²⁰

With elementary age children the teacher observes their emotional constitution by being awake to the following:

- How do they shake hands in the morning when they are greeted? Can they speak a clear greeting? Do they make eye contact?
- When the lesson of the previous day is reviewed, are they accurate in their recapitulation? Can they draw forth the essential points that were learned in the previous day's lesson?
- How do they apply and hold their concentration?
- How do they engage in artistic projects? Which topics do they focus on in the composition of their artwork? Do they have difficulty finishing their projects?
- Are they able to enter into the character of other personalities while engaged in drama and are they able to step out of a role with equanimity?

When the teacher observes these qualities of emotional intelligence in the children, she activates her own imagination that allows her to bring assistance and attention to the children, once again so that they can find a center. When a teacher is unable to correct an emotional or cognitive imbalance in children, then he or she needs to meet with specialists capable of assisting him/her through special lessons.

An awareness of “multiple intelligences,” for instance as described by Howard Gardner, also guides a teacher's educational methods and assessment process. Lessons consist of visual, auditory, and experiential components; assessment is based on multiple modes of student learning as a way to track a student's strengths and weaknesses within differing learning styles, such as visual, auditory, or kinesthetic. Auditory learners, for instance, internalize history most effectively through stories they hear; visual learners

through the illustrations they see; and kinesthetic learners through enacting the story.

Students need to learn traditional subject matter, but, in being questioned, are better served the more they are presented with questions for which there are “open answers.” Whereas multiple-choice high-stakes tests inculcate in students the assumption that there is one and only one correct answer to any given problem, open-ended questions encourage a plurality of responses. These can begin with a math lesson in first grade. For example, when we ask: “What is 12?” many correct answers are possible:

$$\begin{aligned} 12 &= 6 + 6 \\ 12 &= 11 + 1 \\ 12 &= 3 + 4 + 5 \\ 12 &= 1 + 2 + 3 + 3 + 2 + 1 \end{aligned}$$

From the beginning, children learn that a question can have many correct answers, and that not all answers are correct.

Students can write and illustrate notebooks to strengthen auditory recognition and subject retention. They can prepare portfolios and make class presentations, which enhance their ability to speak confidently and articulately in public. There are so many alternative ways for teachers to assess their students' actual educational growth besides high-stakes testing, and the few examples offered here ask for the full involvement of the children.

As children arrive at puberty and enter into the turbulent phase called adolescence, an entirely different set of observations is called for to support intellectual development. Now we concentrate primarily on their forces of thinking. Students have reached the stage of development—roughly around twelve years old—when cause and effect become active in their cognitive experience.

Now the teacher must work with the students' ability to think flexibly. Students need to learn not to become caught in fixed or rigid ideas; instead, they must become more rigorous in their pursuit of truth. Fluidity and movement are important as different forms of thinking (such as analytic, causal, teleological, and synthetic) are

exercised through appropriate coursework. For example, the study of geometry accentuates logical powers while the study of biology works with teleological and causal thinking.

Students at this age must be able to command different forms of thinking. Multi-layered thinking, far from inducing confusion and vagueness, requires ever greater levels of mental discipline and rigor.

How can we evaluate students at this age?

- Are their memories precise and active when a teacher asks for a recapitulation of the essence from the previous day's lessons?
- Do they extend knowledge beyond activities in the classroom and make this evident in their papers and projects?
- Are they able to integrate information, linking different fields of knowledge?
- Are they capable of translating ideas into action? Can they define a task, invent a procedure to accomplish it, and carry it through to completion?
- Are they able to take material learned in one subject and apply it to another?

The following list of guided activities opens the door for alternative assessment:

- Team projects with class presentation
- Research papers
- Oral exams and thesis writing
- Science and history fairs with community participation in which students describe their efforts and answer questions
- Projects presented at a public gathering of parents and friends of a school
- Drama: remembering and reciting lines, and emulating prescribed movements on stage
- Sports: practicing confident hand-eye coordination, fluidity of movement, and team-building

Observation of these activities allows a team of teachers to work with forces of inspiration to help and guide students past obstacles. Note that for the adolescent years, during which development becomes more individualized, correct assess-

A teacher's task is not to pour in material but to draw out students' nascent capacities.

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ment requires a group of teachers because different perspectives are crucial in determining appropriate courses of action.

While these examples are only a few of many possibilities, they are fundamental to successfully assessing the essential development of each student. Assessment that furthers student progress and thereby fulfills the real mission of education requires the full engagement of the teacher or team of teachers involved with the student. This approach fosters the healthy development of the student and builds hope in the student's heart of future improvement. High-stakes testing cannot come anywhere near helping in this essential educational task.

We fully recognize that alternative forms of assessment can be effective only when class sizes are held to manageable numbers. This individualization of educational experience, especially for younger children, occurs when students learn in small groups of less than forty students and where teachers are truly dedicated to the success of their students. In such a setting teaching is more than simply a job and a teacher is more than a coach who trains students for test days.

The Ultimate Test

Ultimately, as mentioned previously, a teacher who tests her children is testing herself. Children fail quizzes and need to make up inadequate work, but as they become older they become increasingly responsible for their own learning. When our children are left behind, however, we need to turn to the teachers who are responsible for shepherding them through their childhood. We need a culture in our schools that proclaims that there shall be "No Teacher Left Behind."

This does not mean that teachers should be rewarded according to the performance of their children, for this introduces unhealthy dynamics into education. But it does mean that, for students to succeed, their teachers need to be on an unending path of self-development, one that includes self-assessment. Practically, this entails that, before teachers administer tests to their students, they need to submit themselves to self and peer review, asking: How am I doing? Only then can they administer tests to their classes. Even these tests will have the primary purpose not of testing students' comprehension but rather of

helping teachers evaluate the effectiveness of their own teaching.

In the final analysis, educational reform is the task of a school's circle of educators, not of a government's house of legislators. Teachers need to be charged with the task of studying their students, deepening their expertise, and developing appropriate methodology as a result. They can then set appropriate educational policies based on freedom and cultural pluralism. The task of the government is not to guarantee equal schooling for everyone; rather it is to guarantee equal *access* to the kinds of education that parents believe right for their children.

Endnotes

1. These authors and teachers are all active within Waldorf schools and institutes, members of an international independent educational movement with more than 1,000 schools and teacher training centers worldwide that do not participate in high-stakes testing. They are also concerned with the welfare of all children.
2. The year before NCLB went into effect, states spent \$423 million on standardized tests. During the 2007–2008 school year, that amount increased to almost \$1.1 billion. And the windfall goes largely to five (soon to be four) testing companies. The cost of funding NCLB programs over a six-year period (2002–2008), authorized by law, has a cumulative gap of \$70.9 billion. Including President Bush's budget for 2009, that expense will become \$85.7 billion.
3. See, for example, Sharon L. Nichols and David C. Berliner, *Collateral Damage: How High-Stakes Testing Corrupts America's Schools*, Cambridge, MA: Harvard Education Press, 2007.
4. Diane Ravitch, *National Standards in American Education: A Citizen's Guide*, 1995, p. 25.
5. The Department of Education's new policy does not exempt any students from the assessments required under NCLB, including those with disabilities. NCLB requires annual testing of all students in grades 3 through 8. In addition, high school students must be assessed once during grades 10–12. Students must be tested in reading/language arts and math. Beginning in school year 2007–2008, all students must also be assessed in science once during grades 3–5, once during grades 6–9, and once during grades 10–12.

6. "An education policy that traumatizes children, destroys the desire to learn, and corrupts the purposes for learning should be eliminated, not reformed," from "Schools Matter," <http://schoolsmatter.blogspot.com/2006/03/where-are-mental-and-social-health.html>. Also, stories from each state are online at www.nea.org/lesea/nclb/stories-lstates.html. Finally, Reggie Clark, a middle school robotics teacher, said that under NCLB, students "are not really even thinking. They are just remembering certain skills." "Discouraging Words," Posted January 11, 2008, by NEA Editor.
7. In a study of 271,000 Texas public high school students, Rice University researchers found that the state's accountability system, the model for NCLB, "has succeeded wildly... in producing more dropouts ... disproportionately minority student dropouts." See http://www.utexas.edu/news/2008/02/18/education_accountability/.
8. See also Nichols and Berliner: "By restricting the education of our young people and substituting for it training for performing well on high-stakes examinations, we are turning America into a nation of test-takers, abandoning our heritage as a nation of thinkers, dreamers, and doers."
9. See the white paper, "Why Are We Doing This to Our Children?" at www.waldorfresearchinstitute.org.
10. See report from the Missouri Association of School Psychologists, <http://www.maspweb.org/nclb.html>. The National Association of School Psychologists recognizes that, when high stakes are attached to test scores, there is greater potential for misuse of data and negative consequences (such as): The impact on student mental health.
11. "When 'failing' the test means failing the grade, failing to graduate, or even lesser consequences such as attending summer school or loss of certain privileges, students may experience long-term anxiety, low self esteem, depression, etc. At a more systemic level, class-wide and building-wide testing can put students, teachers and administrators at risk for anxiety and other forms of emotional distress. These consequences can impact not only test-taking but also learning and motivation." National Association of School Psychologists, <http://www.naspweb.org/nclb.html>.
12. Plato, *Meno*, trans. W.K.C. Guthrie, in *The Collected Dialogues of Plato*, ed. Edith Hamilton and Huntington Cairns, Bollingen Series LXXXI (Princeton: Princeton University Press, 1973).
13. This differentiation of society into three distinct but deeply interrelated spheres of activity is further elaborated by Rudolf Steiner in several books and many lectures on the theme of social reforms. See, for instance, Rudolf Steiner, *Towards Social Renewal* (London: Rudolf Steiner Press, 2000).
14. Donald Campbell, "Assessing the Impact of Planned Social Change," in *Social Research and Public Policies: the Dartmouth/OECD Conference*. Ed. Gene Lyons. Hanover, N.H.: Public Affairs Center, Dartmouth College, 1975.
15. Thomas Jefferson to William Roscoe, 1820. ME 15:303.
16. In *Counseling Today*, May 2008, Angela Kennedy reports on a presentation of American Counseling member Susan Eaves who said, "Low emotional intelligence (or EQ, as opposed to IQ) and the surge of self-centeredness in the children are products of our culture [which] puts too much emphasis on academic [testing] and not enough on emotional development.... Emotional intelligence is one of the most important predictors of success in life." Emotional intelligence develops a host of traits—impulse control, delayed gratification, ability to resolve conflict, cooperation, self-motivation, and most important empathy. "Empathy is the one trait that will put an end to all cruelty, violence, aggression, and bullying in our children."
17. See Paul Zachos, "Discovering the True Nature of Educational Assessment," *Research Bulletin*, IX, #2, Research Institute for Waldorf Education, 2004, pp. 9–12.
18. Eurythmy is a form of artistic movement to speech and music and is a core course in Waldorf schools.
19. Spatial Dynamics is a study and discipline of enhancing the growing human being's relationship to his or her body and surrounding space through appropriate movements and gestures. This subject is also used in Waldorf schools.
20. Wray Herbert, "Is EF the New IQ?" *Newsweek*, June 4, 2008, <http://www.newsweek.com/id/139885>.

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The Art of Education as Emergency Aid

How Waldorf Education Enables the Souls of Traumatized Children to Breathe Again

Barbara Schiller

translated by Martyn Rawson

A team of six educators, an anthroposophical doctor, and a helper traveled in the name of the Friends of Waldorf Education (Freunde der Erziehungskunst Rudolf Steiners) to Beirut in October 2007 to help traumatized children. It was the first deployment of a new branch of our work—pedagogical emergency aid—with the task of helping as many children as possible to stabilize themselves following trauma. Barbara Schiller led the team.

It was strange to sit in Berlin, Stuttgart, or Munich and try to imagine the emotional consequences for children and young people who survived the war between Israel and Lebanon last summer. Naturally, there are also traumatized children in Germany. But what would it be like in Beirut? All of us—eight persons who are normally active in various Waldorf education and curative settings—thought about this in the weeks leading up to our departure. First Step Together Association (FISTA), an organization that represents various curative institutions in Lebanon and which has been in contact with the Friends of Waldorf Education for many years, had requested our help. The idea behind our project was that through artistic therapeutic work with the children we could gain pedagogical therapeutic insight into how we could help heal the emotional wounds of these children and youngsters. Our work was to be spread among four locations—in the curative Rudolf Steiner School, in a curative kindergarten, in a kindergarten and meeting place for children in the Palestinian refugee camp of Shatila, and in a small school in the south of Beirut.

My first thought on landing was this: the city appeared to be quite normal. The untrained eye from the air saw no war damage. People at the airport were all very friendly and open. The actual suffering of the people and the land would only later become apparent.

A Whole Country Is Traumatized

On our first working day we visited all the initiatives. One of our first tasks was to identify some of the most traumatized children. In retrospect I realize how superfluous this question actually was. In the Lebanese schools no one had asked this question. Teachers were fully occupied trying to master their own lives; after all, they had themselves lived through a sixteen-year civil war in their own childhood. The memories of that time were awoken again during this summer; these memories brought fear and uncertainty.

One woman told us how she totally overreacted by plunging into anxiety and how her five-year-old son was sick after every bomb attack. Another woman described how she would shake and begin to lose control over her body, but that what shocked her most was to see how her children became fully insecure by witnessing the helplessness of their mother. One co-worker in the curative kindergarten told us that since losing seven relatives and his house he had suffered sleeplessness and headaches. Many other teachers had suffered similar events—there was no end to such stories.

In view of sorrowful experiences and an uncertain future, daily life revolved around mastering immediate tasks. The question as to which children were most traumatized could not be asked. The whole country is traumatized, children as well as adults.

On the surface, Beirut appears to be occupied with everyday matters, but this peace is superfi-

The whole country is traumatized, children as well as adults.

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cial, for underneath lies great palpable uncertainty. Everybody knows that it doesn't take much to re-ignite the conflict. There are plenty of weapons circulating in Beirut.

Even in the relatively stable postwar situation we experienced clearly what contributes to the ongoing trauma of the country. One teacher told us that, since the war, water and electricity are available only sporadically—something we soon experienced. One cannot really make any plans; this leads to continual stress and, ultimately, to total exhaustion. Everything has become much more expensive following the war and, considering the high unemployment, one wonders how people manage to stay alive.

Among the heaviest burdens is the constant sight of destruction. Some parts of the city look like a moon landscape in which fragments of empty high-rise buildings reach toward the sky. On such streets one may see a sofa, torn books, parts of a lamp, broken toys. In contrast to this stark world are real lives of those to whose stories one can't listen without remaining unmoved. One must take them in and give them support. Where once a single family lived in three rooms, four families now live.

Academic Challenge or Artistic Schooling?

Because the schools could close any day and, indeed, are continually being closed, the teachers try to teach as much material every day as possible, naturally using a wholly intellectual method and even military drill. The state curriculum prescribes that children should learn to read and write Arabic, English, and French, beginning at the age of three. The sight of these small children sitting at desks and experiencing no childhood shocked me deeply. In Shatila, one of the oldest refugee camps in Lebanon, the children are at least allowed to play in the kindergarten, and, of course, this is also the case in the anthroposophical settings. In the other settings that I saw, the children in kindergarten were already living the life of school children. They receive a detailed school report three times a year and an academic mortarboard.

Everywhere, from the first day onward, the children met us with open arms. They beamed, as

only children do. And yet one could see signs of exhaustion under their eyes and in the stress that marked their faces. One kindergarten teacher told us that as soon as the lesson stops the children talk about the war. All the kindergarten teachers rejoiced to meet us. Although we spoke no Arabic, they immediately felt helped by us, not least because they are normally alone with 25 children—which is particularly difficult after this summer of war. Language was really no problem, since English and French are widely spoken. We could also use our hands and feet to communicate and, in any case, artistic work with language and movement speaks directly from person to person.

Myrna Faltin worked intensively with the lower senses of the children and we experienced how hungry the children were for everything we brought. Even the kindergarten teachers absorbed our ideas. Focusing on the sense of touch was something quite new to them, although there is no end to what can be experienced through the sense of touch: small bags full of lentils, beans, leather, hide, sheep-

skin, and so forth. The schoolteachers were just as fascinated and open. Georg Kreuer, for example, modeled with clay and the children all around him copied the movements of his hands. Erika Wickenhäuser took up individual colors with small groups of children. All these activities occurred in a quiet, almost devotional mood. In the therapeutic exercises with Claudia Bartholomeyczik, the children turned themselves into stones, flowers, trees, and much besides. Tomon Tröndle did balancing exercises and juggling. As one girl stood at the edge of the room in a games lesson, he turned to her and started juggling with two and three balls. What joy radiated from her eyes when she succeeded! Also, eurythmy with Sebastian von Tschammer was taken up with great engagement by adults and children. I was greatly moved by the directness with which the children imitated movement and I experienced it as arising from a powerful emotional hunger.

A Successful Pioneering Deployment

What do all these artistic activities have in common? Every time we painted, modeled, practiced artistic speech, did roundelays, or juggled

[A]rtistic work
with language and
movement speaks
directly from
person to person.

with these youngsters, a stone fell from their hearts, a heavy burden was lifted from them, and a deeply quiet atmosphere arose in which the soul could breathe. People long for this free inner space. In creative activity the soul is quickened as if nourished from a refreshing spring. An inner space is created in which the soul can awaken to life-giving forces rather than merely function mechanically. One becomes a creator once more and not only a victim.

That the kindergarten and elementary school teachers took us in so warmly also had to do with the fact that we were active. We hadn't come simply to give advice. No one who has experienced such a heavy burden of destiny can bear to be simply told how to do things differently, let alone how to deal with their war trauma. We were simply there to work with the children, and it was just this that was so gratefully appreciated.

There is an incredible need in the world for the deployment of such educational emergency aid missions, and we hope, with the support of others, to be increasingly able to start to meet this need.

So what can be done to help and heal our children's nervous systems? First, I support rhythmic, harmonious, noncompetitive movement activities like walking, hiking, and swimming. I support movement therapies that strengthen balance, proprioception, and touch. These movement therapies, which are done to help integrate a child's sensory system, must be gentle and slow. Care must be taken not to further activate the sympathetic nervous system. If the movement therapies are done too quickly or too competitively, then proper pathways can't form. The child needs to be in the relaxed, parasympathetic nervous system in order to make new pathways. The child needs to be fully engaged in the moment, full of love and enthusiasm for what he or she is doing. Movement therapies cannot be prescribed like recipes from a cookbook or items from a list. The therapist needs to be present to the child's movement and fully engaged with the child in a loving way so that child can relax, move, and create neural pathways.

**In creative activity
the soul is quickened
as if nourished from a
refreshing spring.**

Next, it is time to stop medicating our children with stimulants. These stimulant medications may dampen or inhibit pathways competing for a child's attention, but we still don't know what these drugs may be doing to that child's future capacity for learning.

I also support an educational environment that teaches our children about the world using all of their senses, including vision, hearing, and, especially, hands-on learning experiences. Our culture and even some educational institutions, with

their reliance on television, computers, and videogames for teaching, are not developing our children's minds and senses.

Competitive sports in very young children overstimulate and activate the sympathetic nervous system. Sugary foods, a lack of essential omega 3 fatty acids (found in

cod liver oil, fish, walnuts, flax seed oil, algae, dark green leafy vegetables, and breast milk), inadequate sleep, a sedentary lifestyle—all make it hard for children's neurological pathways to be myelinated and formed. In addition, toxins in our environment, including mercury in some of our vaccinations, also may affect these sensitive pathways.

It is time to stop labeling our children and putting them on medications that just alter their neurohormone levels. It is time to slow down and focus on being in the present moment. It is time to start promoting a healthy lifestyle including nutritious foods, adequate sleep, and turning off televisions, videos, and computers. It is time to provide lots of healthy rhythmic movement for our children to do at home, in school, and out in nature. It is time to start healing our children.

Barbara Schiller is a trained lawyer, a mediator, and a Waldorf teacher.

THE GREAT COSMIC LAW

There is only One Law of Life, and that is Love.
The Self-Conscious, thinking individual who will not or does not obey that Eternal,
Beneficent Decree cannot and will not retain the physical body,
because all that is not Love dissolves form;
and it matters not whether it be thought, word, feeling or deed—
intentional or unintentional—the Law acts regardless.

If man knew that he never ceases creating even for an instant,
he would realize through the Presence at God within himself
he could purify his miscreations and thus be free from his own limitations.

Whoever makes himself willingly obedient unto the Law of Love has
Perfection in his mind and world permanently maintained.
Unto him and him alone does All Authority and Mastery belong.
He only has the right to rule because he has first learned to obey.
When he has obtained obedience from the atomic structure
within his own mind and body, all atomic structure
outside at his mind and body will obey him also.

The Great Cosmic Law does not discriminate any more than does the
multiplication table if one makes a mistake in its application,
or electricity when one who is ignorant of the Law governing its use
tries to direct its force without knowledge of the way to control it.

The Great Immutable Decrees which forever keep order in the Infinite Realm
of manifested Life are all based upon the One Great Principle of Creation—LOVE.
This is the Heart, the Source of All, and the very Hub
upon which existence in form takes place.
Love is the cohesive Power of the Universe, and without it a Universe could not be.

— Comte de Saint Germain

What Have We Learned?

Jon McAlice

Comparing Studies of German, Swiss, and North American Waldorf School Graduates

Waldorf education is a riddle of modern civilization. In a world in which accomplishment is thought to be quantifiable, where the only outcomes that matter are those that can be measured, this school movement has struggled to find its guidance in the immeasurable. This may be changing. A series of studies published in various countries appears to offer quantifiable insight into the strengths and weaknesses of Waldorf education.

The three surveys of Waldorf graduates examined in this report rely heavily on graduates' responses to a series of question clusters. All three studies, two done in Germany and Switzerland under the auspices of the Heinrich-Heine University in Dusseldorf and the Institute for Empirical Social Research at Alanus College and an American study by the Research Institute for Waldorf Education (RIWE is the publisher of this survey), focus on individuals who graduated from Waldorf schools between 1943 and 2004. The study of U.S. and Canadian students embraces the entire range; the German and Swiss studies cover those who finished school between the late 1950s and early 1990s.

International Comparisons

The three studies were designed to make possible a comparison of results. The same questionnaire was used in the German and Swiss studies (both were conducted by the same team of researchers) and the North American study was adapted to include a number of questions from the German and Swiss research of Dirk Randoll and Heiner Barz.

The cluster of questions examined here asked respondents to indicate to what extent their time in a Waldorf school influenced their relationship concerning aspects of their lives and to indicate how important these aspects were to them.

Although both studies rank responses on a scale of 1 to 5, with 5 indicating the highest level of influence or importance, the intermediate steps in the two studies vary. In the German-Swiss study the choices run from 1 (negative influence) to 5 (very positive influence). The choices in the North American study, however, run from 1 (not at all influential) to 5 (extremely influential). The difference in interpretation between a negative influence and no influence makes it somewhat difficult to compare data. The German report groups data as either negative or positive, with responses of 1 and 2 combined to indicate negative influence and 4 and 5 combined to indicate positive influence.

For the sake of comparison, I have taken the liberty of grouping the North American responses in a similar way, overlooking the middle of the scale. I should note, too, that I am comparing the 35 categories that overlap between the two studies; each study includes different data sets that do not overlap. The primary

question and the 35 categories are these:

Please rate the following aspects of your life, first in terms of the influence your Waldorf education has had on that aspect of your life... and second in terms of how important to you each aspect is in your life....

Do we do enough to challenge students to immerse themselves in self-directed activity?

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1. My ability to express my views and attitudes to others
2. My ability to know my own capacities and limitations
3. My interest in discussing points of view different from my own
4. My fairness and tolerance regarding other people's opinions
5. My ability to think critically and to evaluate
6. My creative capacities
7. My self-confidence (in the sense "I am capable of doing something")
8. My readiness to share responsibilities in my community
9. My ability to handle competition
10. My spiritual, religious orientation
11. My practical knowledge (e.g., how to repair a bicycle)
12. My grasp of theoretical sciences (e.g., physics, chemistry, mathematics)
13. My ability to step into the thoughts and feelings of others
14. My ability to work on something together with others
15. My ability to formulate my own judgment about something
16. My spontaneity
17. My ability to resolve conflicts with others
18. My ability to challenge assumptions
19. My ability to express myself verbally
20. My feeling of self-worth (in the sense "I am worth something")
21. My athletic abilities and achievements
22. My sense of responsibility for the environment
23. My choice of profession
24. My ability to endure and overcome burdens
25. My feeling of responsibility for my own health
26. My interest in working with other cultures and traditions
27. My interest in spiritual themes
28. My feeling of responsibility for other human beings
29. The development of a meaningful perspective on life
30. My love of learning
31. My ability to react in an open and flexible way to changing circumstances
32. My political orientation
33. My interest in working with anthroposophical themes (e.g., reincarnation, karma)
34. My ability to see certain developments of our times in a wider context
35. My ability to overcome personal crises successfully

Table 1 gives an overview of the available data. German responses are on the left, North American responses are on the right. The symbol "+" pertains to what graduates cited as the positive influence of school on the various categories and combines the percentages of 4 and 5 on the response scale. The "-" columns combine the percentages of responses indicated with 1 or 2. The columns headed "Imp" combine the percentages of responses given as 4 or 5 in the scale of relative importance. The difference between importance and positive influence is calculated in the columns headed "Diff."

For the most part, students in both groupings found the same things to be important, although the precise sequence varies. Twenty-four of the 35 are ranked within four places of one another. For instance, work on my own is most important to the greatest percentage of German graduates and it is fourth most important to North American graduates. "Self-confidence" is first on the North American side, fourth on the German side. "Form own judgments" is sixth on the German side, ninth

among North American graduates. In eleven categories, however, the difference is greater than four places.

The only category in which they are in full agreement concerns anthroposophy. It is the least important of the aspects for Waldorf graduates both in Germany and in North America. With two exceptions (step into others' minds and resolve conflicts), German respondents rated the aspects relating to social skills higher than did their North American counterparts. North American graduates, on the other hand, tended to rate those aspects pertaining to their own sense of self more highly. Those aspects furthest apart on the scale were "sense for the environment," "handle competition," "love of learning," "overcome crises," and "meaningful view of life." The first two were rated notably higher by the German graduates, the last three by the North American graduates. For instance, 86% of the German respondents viewed a sense for the environment as being important in their lives, whereas only 81% of the North American respondents did. It stands as the tenth most important category among the Germans; among North American respondents it is number nineteen. On the other hand, unless we can compare these data with graduates from other, non-Waldorf schools, we cannot know whether this difference is meaningful or not; after all, between 80 and 90 percent of both groups believe it is an important issue.

If we turn our attention to aspects that show the greatest disparity between the German and North American graduates, we see quite a different picture. Sixty-five percent of German respondents found spontaneity important, and only 49% of North American respondents did. A greater percentage of German graduates also found "see times in broader view" (11% difference), "choice of profession" (11%), "athletic abilities" (18%), and "overcome crises" (12%) more important than did their North American counterparts. A greater percentage of German graduates (70%) than North American graduates (56%) felt "practical knowledge" to be important. In five categories we find a difference that is more than twice the average (9%). These are athletic abilities, share responsibilities, grasp of science, handle competition, and meaningful view of life. Only 32% of the German respondents rated the latter

Ger +	Ger -	Ger Imp	Ger Diff	Categories	NAm +	NAm -	NAm Imp	NAm Diff
75	5	91	16	1. express views to others	69	6	90	21
76	8	92	15	2. work on my own	61	7	91	30
54	18	84	30	3. know own capacities	48	15	76	28
79	3	90	11	4. tolerate others' views	63	8	90	27
72	6	88	17	5. think critically	63	10	92	29
88	2	86	-1	6. creative capacities	87	1	86	-1
64	13	89	25	7. self-confidence	69	7	94	25
77	3	85	8	8. share responsibilities	49	16	62	13
31	26	70	38	9. handle competition	21	41	43	22
31	11	37	6	10. spiritual/religious life	27	44	44	17
50	13	70	20	11. practical knowledge	29	34	56	27
34	28	69	36	12. grasp of science	26	38	44	18
71	3	85	13	13. step into others' minds	57	8	83	26
74	4	85	11	14. work with others	62	8	82	20
68	6	88	20	15. form own judgments	55	7	89	34
48	7	65	17	16. spontaneity	29	32	49	20
54	8	80	26	17. resolve conflicts	40	20	82	42
62	6	85	23	18. challenge assumptions	49	10	80	31
75	7	87	12	19. express verbally	84	8	93	9
62	12	85	23	20. feeling of self-worth	62	8	91	29
24	28	53	28	21. athletic abilities	24	44	35	11
77	2	86	9	22. sense for environment	59	10	81	22
38	13	65	27	23. choice of profession	36	36	76	40
53	15	85	32	24. endure burdens	38	22	82	44
44	5	73	29	25. sense for own health	29	35	80	51
67	4	77	10	26. other cultures	53	17	70	17
38	12	38	0	27. spiritual themes	37	28	42	5
79	2	88	8	28. responsibility for others	61	7	82	21
59	5	32	-26	29. meaningful view of life	64	8	82	18
53	13	83	30	30. love of learning	74	4	91	17
60	6	82	22	31. flexible to change	46	15	86	40
20	11	40	20	32. political orientation	23	48	48	25
31	17	26	-4	33. interest in anthroposophy	22	48	21	-1
59	4	66	7	34. see times in broader views	52	16	77	25
48	8	77	29	35. overcome crises	36	22	89	53

Table 1: Overview of responses from German and North American graduates

as important compared with 82% of the North American respondents. Science and sports are also markedly more important for the German graduates than for those who have graduated from Waldorf schools in North America. 69% of the German graduates indicated that a grasp of the theoretical sciences was important to them and 53% cited their athletic ability as important. Only 44% of the North American graduates found a grasp of science to be important and, surprisingly, on a continent that glorifies sports, only 35% cited athletics as important in their lives. Competition plays a larger role among German graduates: 70% compared to 43% found the ability to handle competitive situations to be important in their lives. On the other hand, a greater percentage of Germans also found it to be important to share communal responsibilities: 85% compared to 62%.

How do respondents in the two groups rate the influence of their Waldorf educations on these same aspects? The highest percentage of respondents in both groups found that their creative capacities had been strongly influenced by their

time in a Waldorf school (88% German, 87% North America). This is also the category that had the highest positive response. Six of the categories are found in the next ten responses for both groups (tolerate others' view, express verbally, work on my own, express views to others, work with others, think critically). Both German and North American graduates cited these categories as areas in which Waldorf education had a positive influence. The other four entries differ from group to group. High percentages of German graduates found the school to have influenced them in aspects that have a clear social focus (responsibility for others, sense for environment, share responsibilities, step into others' minds), whereas the North American graduates saw the schools' influence as stronger in aspects of personal development (love of learning, self-confidence, meaningful view of life, feelings of self-worth). It is worth noting that these studies may demonstrate a difference between German and North American consciousness, mentality, or mindset, distinct from time in a Waldorf school.

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The aspects cited as least influenced by Waldorf education were, for the most part, identical and include “grasp of science,” “athletic abilities,” and “handle competition,” as well as the three aspects pertaining to spiritual life.

On the whole, German graduates found that their time in Waldorf schools had a greater positive influence on their lives than did the North American graduates, 57% to 49%. This difference is apparent in Chart 1. With the exception of five categories (self confidence, express verbally, love of learning, political orientation, meaningful view of life), the percentage of German graduates who cited a positive influence from their time in a Waldorf school is higher than that of the North American graduates. These five categories, how

large percentages of North American respondents cited, at best, a negligible influence of Waldorf education on such aspects as spiritual/religious life, grasp of science, handle competition, practical knowledge, and sense for own health deserves attention.

Table 2 groups responses according to the difference between personal importance and school influence. Figures for German graduates are on the left, those for North American respondents are on the right. The highest difference cited by the German graduates pertains to being able to handle competitive situations. Seventy percent held this ability to be important and only 31% experienced school as having a positive influence on the development of this ability (a difference of

38%). On the North American side, we find “overcome crises” in the first position. 89% felt this ability to be important and only 36% indicated that school had a positive influence on the development of this capacity. The average difference is 17% in German data and 24% in North American data.

This indicates that a greater number of North American graduates may experience a dis-

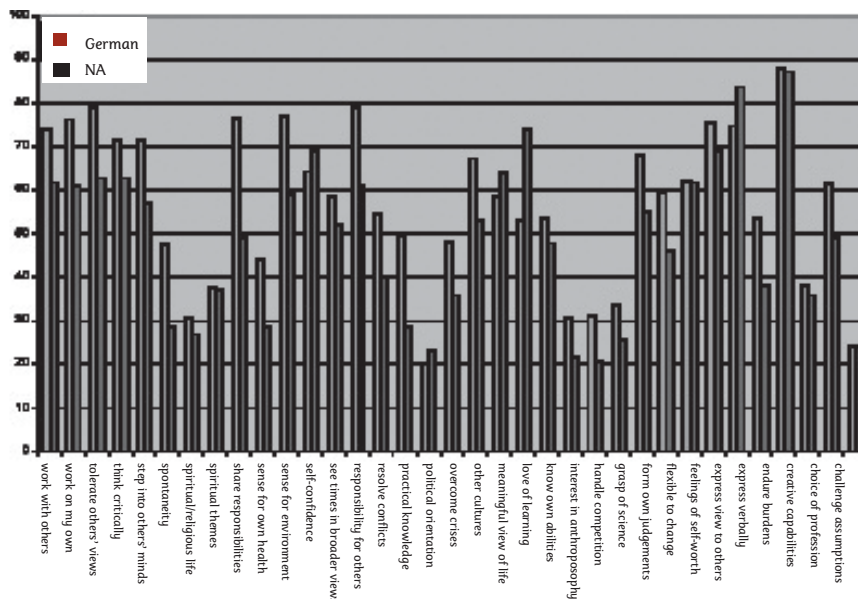


Chart 1: Positive influence of Waldorf education—comparison of German and North American graduates

ever, correspond to the disparity between social responsibility and personal development.

A look at the areas in which Waldorf education had a less than positive influence on respondents' lives is shown in Chart 2. In almost every category, the percentage of North American graduates that cited a less than positive influence is higher. The exceptions are “self-confidence,” “feelings of self-worth,” “know own abilities,” and “love of learning.” German graduates indicated that their time in school had a negative influence on these aspects of their lives. That such relatively

disparity between what is important to them and what they experience in school.

The difference between the North American and German studies is generally greater in aspects that have to do with knowledge and learning. In data from German graduates, for instance, the difference concerning the ability to grasp theoretical science is 36%, and in North American responses it is 18%. Only 44% of North American graduates, however, felt this to be important. Similarly, “the ability to work on my own” shows a 15% difference in the German

Categories	Ger +	Ger Imp	Ger Diff	Categories	NAm +	NAm Imp	NAm Diff
handle competition	31	70	39	overcome crises	36	89	53
grasp of science	34	69	35	sense for own health	29	80	51
endure burdens	53	85	32	endure burdens	38	82	44
love of learning	53	83	30	resolve conflicts	40	82	42
know own abilities	54	84	30	choice of profession	36	76	40
overcome crises	48	77	29	flexible to change	46	86	40
sense for own health	44	73	29	form own judgments	55	89	34
athletic abilities	24	53	29	challenge assumptions	49	80	31
choice of profession	38	65	27	work on my own	61	91	30
resolve conflicts	54	80	24	think critically	63	92	29
self-confidence	64	89	25	feelings of self-worth	62	91	29
challenge assumptions	62	85	23	know own abilities	48	76	28
feelings of self-worth	62	85	23	practical knowledge	29	56	27
flexible to change	60	82	22	tolerate others' views	63	90	27
form own judgments	68	88	20	step into others' minds	57	83	26
practical knowledge	50	70	20	political orientation	23	48	25
political orientation	20	40	20	see times in broader views	52	77	25
spontaneity	48	65	17	handle competition	21	43	22
think critically	72	88	16	sense for environment	59	81	22
express views to others	75	91	16	responsibility for others	61	82	21
work on my own	76	92	16	express views to others	69	90	21
step into others' minds	71	85	14	spontaneity	29	49	20
express verbally	75	87	12	work with others	62	82	20
work with others	74	85	11	grasp of science	26	44	18
tolerate others' views	79	90	11	meaningful view of life	64	82	18
other cultures	67	77	10	spiritual/religious life	27	44	17
sense for environment	77	86	9	other cultures	53	70	17
share responsibilities	77	85	8	share responsibilities	49	62	13
responsibility for others	79	88	9	love of learning	79	91	12
see times in broader views	59	66	7	athletic abilities	24	35	11
spiritual/religious life	31	37	6	express verbally	84	93	9
spiritual themes	38	38	0	spiritual themes	37	42	5
creative capacities	88	86	-2	interest in anthroposophy	22	21	-1
interest in anthroposophy	31	26	-5	creative capacities	87	86	-1
meaningful view of life	59	32	-27	self-confidence	69	94	25

Table 2: Difference between Influence and Importance

study and a 30% difference in the North American results. The third highest difference in both studies pertains to the ability to endure burdens (German 32%, North America 44%). While both groups felt this to be important, neither experienced a positive influence on the development of this capacity from their time in school.

There is little question that these differences are important for an understanding of the role that educational experience plays in supporting the attainment of core capacities. German graduates cited a disconnection between schools' influence on their ability to handle competitive situations and their sense of its importance, but, at the

same time, felt that their experience in school did not support the development of self-confidence, a sense of self-worth, their love of learning, or their insight into their own abilities. Similarly, North American graduates indicated a disparity between the importance they give to the ability to overcome crises and schools' influence on the development of this capacity. They also left school feeling, relative to their German counterparts, that they had not learned the importance of sharing responsibilities, being responsible for the environment or their own health, or having the ability to resolve conflicts.

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Perhaps the disparity between subjective experiences of importance and experiences of institutional influence points toward a weakness of the schools to fully engage the learning individual. Perhaps the issue is not primarily a problem of program or method but one of culture. Do we do enough to challenge students to immerse themselves in self-directed activity? These are activities that strengthen the capacity of individuals to respond out of themselves, whether in a competitive situation, in a moment of crisis, or in a situation in which one just has to stick things out. Perhaps what the data indicate is not that Waldorf schools need to adopt mainstream approaches, but that we have to re-examine our fundamental principles and ask ourselves whether or not we live up to them.

The Fine Line between Bias and Prejudice

Each of the studies has its bias. The German and Swiss studies look at the responses of Waldorf graduates through the eyes of conventional educational research and view them in light of general societal expectations for educational institutions, while the North American study views the graduates' responses through the eyes of supportive Waldorf educators.

When does bias become prejudice? Randall—a lead researcher for the German study who has been on the periphery of the Waldorf school movement for a number of years as a parent and, professionally, as a project analyst for a foundation which has supported Waldorf schools in various countries and, in recent years, a number of comparative studies—has a self-described critical relationship to what happens in Waldorf schools. Much of his contribution in the almost 400-page report revolves around questions that in his assessment cast a critical light on Waldorf school practices.

Randall presents results with a certain eloquent disinterest until he finds something that, from his point of view, seems questionable. Then one can almost see him leaping onto his horse and riding off to give battle. There are several examples in his 60-page article. Take, for instance, the discovery that there is a noticeable difference between the percentage of male graduates who are able to identify strongly with their time in school and the percentage of female graduates.

Randall writes: “These results support the conjecture that girls are better able to adapt to the situation in Waldorf schools than boys are.” He goes on to suppose that this conjectured conclusion is based on the fact that girls respond better to the “musical-artistic tendencies of these schools” and that it is perhaps also due to the greater percentage of female teachers—also present in public education. At this point, Randall lets loose a salvo of questions:

What does this mean, however, for male Waldorf students and their development? Is there a dearth of male role models in the Waldorf schools? The development of one's sense of identity as a man is not an easy undertaking in a “feminized” environment. How do Waldorf schools deal with aggression, with emerging sexuality, with alcohol, cigarettes, and drugs? Are such things discussed openly and constructively or are they dealt with as bagatelles, swept aside, talked to death or moralized? Does the 8-year class teacher still make sense? Do the changing social structures demand a new look at gender socialization among the students in the feminized environment of the Waldorf schools?

What began as conjecture seems to have become stated as truth. Without a comparison to the experience of students from other, non-Waldorf schools—in which it is likely, too, that girls generally suffer less than boys—Waldorf schools cannot legitimately be singled out on this issue.

Later Randall tackles the question of student achievement and the lack of performance assessment in the schools, again based on input from graduates. He sees the lower percentage of positive responses from male participants as the basis once again to presume a lack of performance-based assessment in the schools. Also in regard to sports: “Here we find again the tendency that performance-based learning plays a subordinate role in Waldorf schools.” And he becomes almost passionate when addressing the expressed lack of certainty among graduates on how to deal with competitive situations:

Here too we find clearly expressed that Waldorf schools do not place enough value on student achievement and performance, on the pressure to perform and

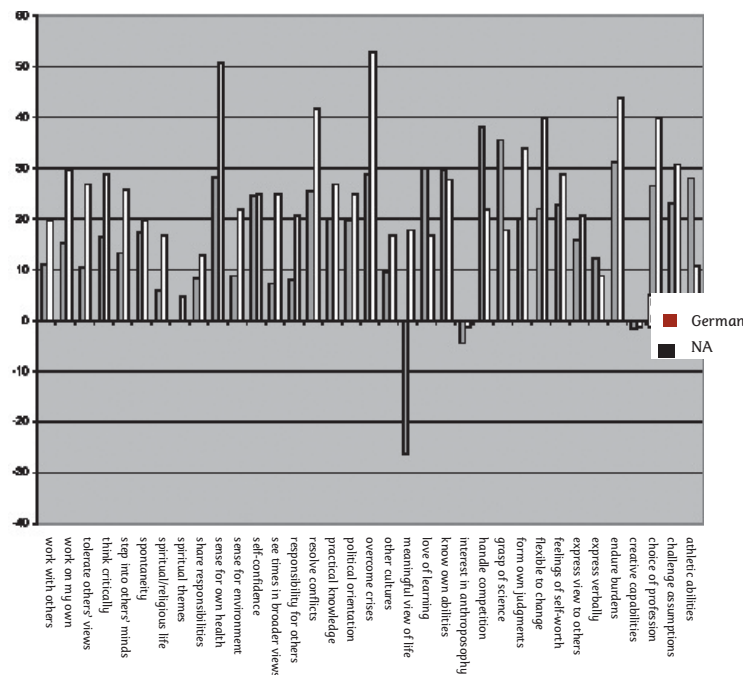


Chart 2: Comparison between Importance and Influence

on learning strategies to deal with competitive situations, which was clearly shown in the study by Randall (1999). Why do the Waldorf schools, or the teachers there make such a big deal about it? Then it is well-known that performance and competition can also be a source of joy, they can motivate and satisfy one, yes, they can even support social processes. The Waldorf schools are thus not appropriate places to adequately prepare students for the performance-based, competitive aspects of our society, in part because they have grown apart from it or chosen to distance themselves.

One wonders whether Randall bothered to read the analysis by his colleague Michael Brater of the vocational biographies of the same group of graduates. Although acknowledging the respondents' generally positive assessment of their time in Waldorf schools, Randall's report emphasizes areas in which the schools do not measure up to ubiquitous societal educational standards. They may be fulfilling their intrinsic

goals, something the majority of the respondents affirmed, but they do show specific weaknesses in areas that play a primary role in mainstream education. These areas are the ones Randall addresses most energetically.

The North American study, which was similarly structured, shows a different bias. If one takes the published results of this study at face value, Waldorf schools not only produce good college students and fine citizens, but graduates are also healthy, socially intelligent, tolerant, artistic individuals who spend time with their friends, help others in need, don't watch television, and earn good livings. They appear to be perfect examples of well-rounded individuals able to assimilate well into a presumably decadent culture.

Whereas Randall was explicit about the goals of the German study (to discover, on the one hand, whether or not the claims made by Waldorf educators about the results of Waldorf education are supported by graduates, and, on the other hand, "to make a contribution to the further development of Waldorf schools by pointing out the strengths and weaknesses"), David Mitchell

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and Douglas Gerwin, authors of the North American study, do not explicitly articulate goals for their research. It appears that they set out to study what Waldorf graduates do with their lives and how, in retrospect, they view their Waldorf educations. The structure of the report belies this ostensibly open-ended, heuristic approach. The presentation seems designed to dispel certain assumptions about Waldorf education, specifically concerning its ability to prepare students to succeed in college.

What Randall skims over—the general affirmation of a productive schooling—is the meat and potatoes of this report. Mitchell and Gerwin seem to be satisfied with the fact that, yes, Waldorf schools are good and that even “students attending the newer or pioneering Waldorf high schools are at no disadvantage, in terms of college placement or career choices, when compared to those graduating from older Waldorf schools.” This level of analysis may serve well for enrollment and fundraising brochures, but it does not provide much of interest for the teacher or for anyone interested in the further development of Waldorf education. The authors of the report have acknowledged this. The question concerning the data on Waldorf graduates, one that applies as well to the German report, is whether it is specific enough to support assessment of current practices with a view toward better meeting the needs of Waldorf school pupils.

Compromise?

Perhaps the most troubling statistic to come out of the studies is one of those which has been broadcast most loudly: that only a small percentage of Waldorf school graduates go on to work in anthroposophical endeavors. This choice—made by precious few, it seems—may have nothing to do with indoctrination; it may have to do with schools helping students find real perspectives for living a life of practical idealism. Do the data suggest that we don’t do enough to give our students concrete ways to apply the forces of individuality that we help them to awaken in school?

During a teacher’s meeting at the end of the first year of the first Waldorf school, Rudolf Steiner spoke about the tension between his edu-

cational principles and practices and expectations of the educational establishment: “All that is important is that we do not enter into any compromises.... Outwardly, we may be conciliatory, but inwardly, when it comes to questions of principle, one must hold a strong position. To do this it is necessary to have the strength to see the things radically and not have any inclination to compromise.”¹

Endnote

1. Steiner, Rudolf. *Conferences with Teachers of the Waldorf School in Stuttgart, Volume One*, July 24, 1920, Forest Row, England: Steiner Schools Fellowship Publications, 1986, p. 95.

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- Thomas, Robert. *Bildung und Lebensgestaltung ehemaliger Schülerinnen und Schüler von Rudolf Steiner Schulen in der Schweiz*, Zurich: Arbeitsgemeinschaft der Rudolf Steiner Schulen in der Schweiz und Liechtenstein, 2007.

[Note: This article is a condensed version of a chapter published from *Survey of Waldorf Graduates, Phase III*, by Douglas Gerwin and David Mitchell]

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Cultivating Humanity against a “Monoculture of the Mind”

Stephen Keith Sagarin

Dry, rigorous, and, in the end, philosophical, Bo Dahlin’s study on Waldorf education in Sweden nonetheless provides a ringing endorsement for the power of Waldorf schools to humanize students, for the possibilities of Waldorf teacher education programs to meet state requirements, and for the necessity to preserve and support holistic and other non-mainstream pedagogies in the face of a developing global, technocratic “monoculture.”

Between 2002 and 2005, Dahlin, Professor of Education at Karlstad University, and colleagues conducted a study to compare Waldorf schools, including students, teachers, and parents, with Swedish “municipal” (public) schools in three areas: pupils’ knowledge attainment; relationship of the schools to society; and teacher training.

The study, released in preliminary reports on results for each of six questions, was based on questionnaires and interviews with students, parents, and teachers. These findings were supplemented with classroom and school observations; in addition, some data were generated by including test questions and other assessments in questionnaires. The six questions that express the purpose of the study are these:

1. What percentage of Waldorf pupils go on to higher education and what results do they achieve?
2. In their capacity as independent schools, Waldorf schools attract many pupils from special groups within society. How far does this contribute to increased segregation or to greater understanding between different sections of the population?
3. Are Waldorf pupils encouraged to develop social and other human skills necessary to be active citizens in a democratic society?
4. What results do Waldorf pupils attain in national curriculum tests, compared with pupils in municipal schools?
5. Do Waldorf schools need an especially “tailored” teacher training program or can it be a part of the state teacher training program?

6. How do Waldorf schools cater to children with learning difficulties?

It is worth highlighting or summarizing some of the findings for each question:

1. Higher Education

In contrast to a more instrumental (“I just want to pass the test”) approach to their own higher education, Waldorf school students take a deeper approach to their studies than do their contemporaries educated in state schools. Waldorf school students also show increased confidence in their ability to handle independent study and they experience a more fruitful relationship to learning and knowledge. They pursue as broad a range of higher education goals as do their public school counterparts and they continue on to higher education at rates comparable to their peers in public school. (This comparison is trickier to make than it may appear; public schools offer several “tracks” and Waldorf school students don’t easily compare with any single one of these. See the full report for details.)

2. Segregation and Understanding

Sweden does not bear the burden of shame that the United States, with its history of slavery and racism, does. Instead, Sweden faces challenges to a stable society from questions regarding the assimilation of immigrants and the rise of fringe neo-Nazi ideologies. Swedish schools, therefore, promote a concept of “school for all” that aims to reduce ethnic and socio-economic segregation. Interestingly, although Waldorf schools are “factually segregated” because of their cultural homogeneity, which includes “left wing” politics, relatively highly educated parents, and a greater number of native Swedish speakers who share an interest in religious or spiritual questions, they are not “ethically segregated” in that they demonstrate a greater commitment to universal solidarity and a greater openness to foreign cultures.

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3. Active Citizens in a Democratic Society

Researchers began by asking 9th and 12th grade students to react to a scenario or picture. In one instance (the “Växjö Task”) they were asked to describe a picture from a newspaper that showed an elderly woman hitting a neo-Nazi, during a demonstration, over the head with her umbrella. Students were then asked to explain the events that led to this moment, in which ways this scene raised questions of right and wrong, and so on. Researchers discovered that Waldorf school students felt greater responsibility for social and moral issues than did their peers in public schools, and that, unlike public school students, their involvement with social and moral issues increased with age (between 9th and 12th grades).

Not all responses can be categorized as equally enlightened, however; Waldorf school students were also more likely than their public school peers to leave the test blank, to write sarcastic or “destructive” answers—refusing to engage with the testers—or to write criticisms of the test itself.

When asked about their experiences in their own schools, Waldorf school students said that their teachers attached greater value to human dignity, equality, and respect for the environment. They reported that they experienced less bullying or unfair treatment, and that their teachers were more likely to intervene to stop such activity among students. The Waldorf school students also demonstrated more tolerant attitudes toward minority groups—homosexuals, for example—and their responses to this portion of the study showed less variation between boys and girls than did public school students’ responses.

4. National Curriculum Tests and Attitudes Toward Teaching

The fourth question addressed schoolwork specifically. A primary finding here is that, despite differences in school community, parent background, or pedagogy—these are all thorny issues for researchers, and those interested should consult the study itself to see how they were dealt with—Waldorf school students and public school students scored and achieved equally on virtually every measure.

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Waldorf school students take a deeper approach to their studies than do their contemporaries educated in state schools.

Waldorf school students are more active in politics and culture, are more likely to be involved in what we would call extracurricular activities. They enjoy school more, and have a more positive view of schoolwork in general. They work less just to pass tests, and report that school is calmer and more pleasant than do their counterparts. They report, too, that the study of Swedish (their native language) is easier, and they have a more positive attitude toward math. They don’t demonstrate a statistical difference in performance in either subject. Finally, boys in Waldorf schools do better on the whole than boys in public school (girls perform equally well in both settings).

The only reported shortcoming for Waldorf school students in English (foreign language study) is that they demonstrate greater insecurity with regard to performing concrete tasks—say, booking a hotel room in English. Perhaps the cultural focus of Waldorf school language instruction leaves students feeling less prepared for “practical world” activity.

5. Teacher Education

At the core of this portion of the study is a question of importance for the future of Waldorf teacher education in Sweden: Can state teacher training include a “Waldorf profile”? The report takes into account state requirements and Waldorf teachers’ attitudes, which might be at odds, and concludes that state standards and Waldorf teacher education requirements may be met in the same program if the program designers give Waldorf teacher trainers a “wide degree of freedom.”

6. Learning Difficulties

The last question examined the education of students with special needs or learning difficulties. Waldorf schools report the same proportion of students in need of support—between 10 and 30 percent, depending on grade, teacher, and school—but do not use traditional concepts and diagnoses in supporting these students. On the other hand, a strength of Waldorf schools’ treatment is that students are more likely to be seen as

the “responsibility of the whole school,” and not just of one (specialized) teacher.

Interpretation of Results

In light of the overwhelmingly positive results of the study (for Waldorf schools), researchers asked, “Was there nothing negative?” They acknowledge a few challenges that Waldorf schools face. Among these, discovered in the course of research but not in the data of the research itself, are:

- A lack of administrative order and an inefficient use of time and energy in such things as school decision-making;
- A greater requirement for communication with parents, given teachers’ mastery and virtual possession of Waldorf pedagogy; and
- A “reserve and dogmatism which can easily follow from all well-developed holistic world views.” (p. 54)

In a narrative consideration of overall findings, researchers laud Waldorf schools’ focus on the individual human being and the social responsibility that students evidence—despite stereotypes among some of an “authoritarian” approach to education. Researchers also comment on the value for education of a concept of development that includes transformation or metamorphosis (versus linear progression), as Waldorf schools embody. Finally, they remark that, despite concern that Waldorf schools may “indoc-trinate” students in order to produce anthroposophists, only 1 to 2 percent of Waldorf school graduates in Sweden continue in anthroposophical training courses.

What Waldorf Education Stands For

A final chapter examines Waldorf schools as “cultural power factors,” which I take to mean their existence as social and political institutions. Here, Waldorf schools are examined not according to questionnaires and interviews, but according to prevailing concepts and theories of the role of education in society. Much of this chapter is heavy-going, even for cognoscenti; there is just

Waldorf school students said that their teachers attached greater value to human dignity, equality, and respect for the environment.

enough difference between the thinkers relevant to Swedish educational theory today and those relevant to the U.S. to make an American reader wish for a scorecard.

The report ends with a consideration of the value of the role or mission of

Waldorf schools, among other institutions that fulfill similar roles, in a global context. It is worth quoting the end of the report on this:

There are different “cultures of perception” in the world.... Waldorf education is one such particular culture of perception, cultivating specific forms of thinking, understanding and experiencing the education of human beings, as well as the world in general. Such non-mainstream cultures today need active protection and support from the state and economic spheres—unless we want to end up in a virtually totalitarian world system, a worldwide “monoculture of the mind.” (p. 94)

If we agree that a chief aim of education is to cultivate the humanity of our students in the face of a “monoculture of the mind,” then it is gratifying to discover that, in Sweden at least—and we can see much that is the same in North American Waldorf schools—Waldorf schools seem to do just this.

Reference

Dahlin, Bo. *The Waldorf School: Cultivating Humanity? A Report from an Evaluation of Waldorf Schools in Sweden* (available in English translation at www.waldorfresearchinstitute.org), Karlstad, Sweden: Karlstad University Studies, 2007.

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Disturbances in the Child's Relationship to Inner and Outer Pictures of Reality

Two pediatricians from a German municipal health office studied the capacity for pictorial perception among two thousand preschool children ages five and six prior to school entrance. In order to determine the children's cognitive maturity and their pictorial perception and reproduction abilities in particular, they administered the so-called *draw-a-person test*, in which the children were to draw pictures of a person. The drawings were later evaluated by the pediatric medical doctors according to specific criteria, e.g. head-torso relationship, number of fingers on each hand, dynamic or static quality of the drawing, depiction of eyes and noses, and so forth. In this manner, it was possible to distinguish high-performing from low-performing children in each of the tested areas. The children's scores were then compared to their average daily consumption of television and (in row C, below) to the daily extent of their "passive smoking," that is, the number of cigarettes smoked by their mothers and fathers in the children's presence. The following illustrations indicate alarming indications:

- A. Drawings by children who watched little to no television and were not smokers



- B Drawings by children who watched more than three hours of television a day:



- C Drawings by children who watched more than three hours of television and were "passive smokers":

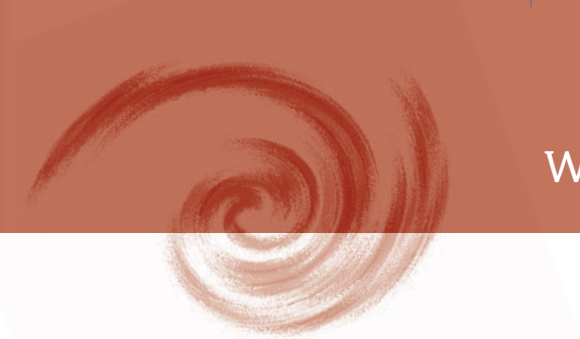


- D Drawings by children (not included in the study) with severe psychological or soul disturbances:



Frequent television viewing appears to lead to a significant retardation of the development of comprehension, a negative effect compounded by simultaneous passive smoking. In addition, certain visual perceptive abilities – and related cognitive development – appear to atrophy or be hindered by frequent television viewing and/or excessive video-game playing. The two medical doctors came to the conclusion that the rapid succession of images on the TV screen disrupts the child's perceptive ability to behold or view with attention; as a result, the development of an inner picturing process is prevented. The children are unable to inwardly picture (or "grasp") reality. The drawings in Row D were created by children with severe psychological or soul disturbances, who were not included in the regular studies; they suffered from family conflicts, divorce/custody proceedings, traumatic experiences, and so forth. The fact that Rows A through C successively approximate the images in Figure D is an indication of the emotional side-effects among children who watch a significant amount of television and are "passive smokers."

This edited and condensed research report can be found in Christian Rittelmeyer, *Kindheit in Bedrängnis*, Kohlhammerverlag, Stuttgart, 2007, pp. 78–80. The research study by the two medical doctors, P. Winterstein and R. Jungwirth from the Göppingen, Germany Health Office, is published in: *Der Kinder- und Jugendarzt* Nr. 37/ 2006. Rittelmeyer's recent research, "The Advantage and Disadvantage of Brain Research for Pedagogy" will be published in *Waldorf Journal Project, Number 12* in the autumn of 2008.



Work of the Research Fellows

Learning, Arts, and the Brain

The Dana Consortium Report on Arts and Cognition¹

Patrice Magnard

A recent report from the Dana Foundation, whose mission focuses on sharing knowledge about and sponsoring research on the brain, immunology, and arts education, offers the results of three years of research in seven areas concerning education in the arts and brain development. These areas of research include: how arts training influences cognition; music as it influences mathematical cognition and cognitive systems; dance and the development of the brain and of memory; and training in the arts and reading skills.

The research was conducted on children between the ages of four and seven. Different types of brain measuring were used, some familiar (e.g., electrodes on the scalp) and some sophisticated and new. For example, using advanced functional magnetic resonance imaging (fMRI) tools to determine which parts of the brain are active during different activities, researchers were able to point to brain development that is influenced by the arts and not influenced by other kinds of learning. Results also demonstrate levels of brain activity that reflect engagement or attentiveness during learning, including particularly the kinds of arts activities that hold children's attention.

The report validates scientifically what we know as Waldorf educators. Artistic activity stimulates motivation. Highly motivated children stay engaged in activities. Artistic activity stimulates both hemispheres of the human brain and deepens learning. The language of Waldorf teachers differs from that employed in the Dana report, but the report supports statements that Steiner made in the early part of the twentieth century, that modern science would catch up with his view of education and confirm the remarkable benefits it provides.

The difference between the approaches of the Dana Foundation and Waldorf education is the difference between materialistic science and an anthroposophical view of human beings. The first proceeds from cause to effect; the second begins with the wholeness of the child, which it allows to develop with the best that teachers and parents have to offer, knowing that all learning must be digested artistically, and that the engagement of a child in education is essential. Some might say that, regardless of starting point, proof of the value of the arts in education is now available. Others might conclude that one or the other view is definitive, creating both a distinction and a difference. The Dana report, for example, includes suggestions for how to improve test scores and increase brain capacity through use of the arts; these support the current "outcomes-based" approach to education. The report, therefore, is not likely to be useful to Waldorf educators beyond conclusions that demonstrate the power of the arts in education. The report reduces the arts, as a vehicle for a child's levels of engagement and balance, to a tool in service of scores and outcomes. Nonetheless, Waldorf teachers might use the report as scientific verification of their practices and continue the important task of enthusiastically approaching the human being as a mystery to unfold, not as a product to be generated. The arts are among the best educational means to assist this unfolding of human capacities.

Endnote

1. The complete report may be found at:
http://www.dana.org/uploadedFiles/News_and_Publications/Special_Publications/Learning,%20Arts%20and%20the%20Brain_ArtsAndCognition_Compl.pdf.

Waldorf Around the World

James Pewtherer

A meeting of the Hague Circle¹ took place recently at the Goetheanum in Dornach, Switzerland, within the context of the biennial “Pedagogical Section Working Days.” These large meetings provide an opportunity to delve more deeply into topics of importance for the world-wide Waldorf school movement, which now officially includes more than 1,000 schools.² This time we took up these three topics:

- Criteria for Waldorf Schools;
- Surveys of Waldorf Graduates in Germany, Switzerland, and North America; and
- An Introduction to Portfolios and Projects in Assessing Student Learning.

As the second century in Waldorf education fast approaches, our schools are increasingly scrutinized and measured by scales that are not of our choosing. These scales do not measure, in many cases, what we hold to be important. Our best validations are our alumni and those who populate our schools. As we face questions of the assessment of our students, the identity of our schools, and the validity of our approaches to teaching and learning, our responses must not be defensive. They must be based upon our observations, our experiences with our children, and what our graduates tell us and show us about themselves and their lives.

Criteria for Waldorf Schools

As you can imagine, the topic of criteria brought about lively and passionate discussion. How would you define a Waldorf school? Why would you need a definition? If you take away the elements of your school one by one, such as eurythmy or the college of teachers, at which point does it cease to be identifiable as a Waldorf school? The growth of Waldorf education, particularly in countries that lack the resources to train

teachers well and support schools confidently, confronts us with these questions because there are many who would use the name “Waldorf” without much sense of what it means.

Participants with many years of experience, representing several different cultures, sat side by side to consider such questions; everyone saw, as well, the dangers of having a list of criteria. One speaker—after Heraclitus—argued that Waldorf education must be seen as a process rather than as a thing. He then—after Paolo Freire in *Pedagogy of the Oppressed*—differentiated between education that works on a principle of “banking”—which is mainly concerned with transmitting knowledge—and that which is predicated on “posing” education—which has to do with a continual state of becoming. He suggested that the deciding factor in assessing the effectiveness of education comes down to what kind of people we are in Waldorf schools.

Other contributors led us in noting some of the qualities found in a Waldorf school community and in its teachers: interest, initiative, spirituality, and interpersonal relationships, to name a few. A long-time Waldorf school representative to schools around the world and a leader in the German Waldorf school movement, which now has more than 200 schools, also asked if there is an essential element for all Waldorf schools that, if missing, would make it impossible for a school to be a Waldorf school. Could a Waldorf school, for example, exist without a relationship to anthroposophy, or have a director instead of a circle of colleagues to guide the school? These questions seem particularly pressing when there is not a council of Waldorf schools whose representatives can deliberate and decide together how best to identify and then stand for the work that they do every day.

At the end of the conference, I found myself identifying three basic elements that would ensure

the integrity of what we are doing as Waldorf schools. The first is to find the principles of our education in *Study of Man* (more recently translated as *Foundations of Human Experience*). These include such principles as educating in light of body, soul, and spirit and educating in light of developmental realities and the needs of a child's changing consciousness. The second is the commitment to on-going self-education and self-development on the part of the teachers and staff of a school. The third is a commitment to collegiality in our work within a school, on the one hand, and, on the other, as schools within an association like the Association of Waldorf Schools of North America (AWSNA).

Participants agreed that a number of groups in different countries would draw up some suggestions, which will then be circulated to various school associations for consideration, amendment, and approval. These could then be used as appropriate in helping new schools in countries that do not have Waldorf school associations or similar supports.

Graduate Surveys

Many tens of thousands of Waldorf school graduates have made their way into the world over the last 80 years or so. Knowing what kind of adults they have become is of great interest to those of us who have taught them and also to those who want to know more about Waldorf schools. We can refer to our students and graduates as "people of initiative," but how do we know this? These questions and others have led to surveys in Germany, Switzerland, Sweden, and North America. Educators from three countries, including David Mitchell and Douglas Gerwin from North America, reported their findings during the Working Days conference.³

The lack of anything more than anecdotal information on our graduates is due chiefly to two reasons, according to the main researcher of the German report. First, the Waldorf school movement is too small and there has been little interest in trying to delve into the salient but seemingly ineffable aspects that characterize our educational aims. Second, the Waldorf school community itself has not been interested in the judgment of statisticians, mostly because there has been doubt that they would inquire into the

truly important results of childhood education. These reservations are now beginning to be overcome because of interest in these four areas for research:

1. An assumption that Waldorf education is health-bringing;
2. Protection against prejudices (e.g., Waldorf education creates anthroposophists or creates impractical artistic persons);
3. National governments, including especially at this time the governments of Eastern European nations, want information on the results of Waldorf education;
4. Waldorf school practices can be useful in other school settings.

The Findings

While the reports themselves are too long for me to give more than an impression here, a number of notes may be of interest. The German study focused on three age groups: those who are now ages 66 to 70, ages 43 to 62, and ages 33 to 40. The results were based on responses from 32% of the total surveys sent, more than 1,100 of about 3,500. The survey asked questions regarding these five areas of interest:

1. Why was Waldorf education chosen by their parents and why or why not did they themselves choose it for their own children?
2. What have been their choices in terms of life style, work and values?
3. What are their religious and spiritual orientations?
4. What has been the quality of their health?
5. What is their view of their own education and their experiences during school?

The Swiss study also provided some interesting findings. The survey turned up three principle motivations for attendance at a Rudolf Steiner/Waldorf school:

1. The pedagogical approach in the school;
2. Considerations of and appreciation for anthroposophy;
3. Dissatisfaction with state-sponsored education.

It is also significant that 80% of Swiss respondents felt that they had been "seen," that is, recognized for the individuality that they felt and feel themselves to be. Another common—and perhaps alarming—perception of graduates was

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that Waldorf education's lack of focus on quantifiable attainment and outer recognition is actually a strength because it reveals that learning is worth doing for its inherent benefits to the learner, regardless of competition or recognition.

The results were of great interest and Dirk Randall, head of the German study, wants to continue by finding a pool of public school graduates with a profile similar to Waldorf school graduates in order to properly compare the groups. This would help to address the aim of schooling from the Waldorf schools' point of view and avoid falling into the trap of being measured by criteria of public school education alone. He emphasized that the overarching value of such surveys and analyses is to move from the present and what we are toward the future and what we want to be.

Portfolios and Projects as Learning Tools

The Waldorf School of Pottsdam, near Berlin, has embraced an interesting and apparently productive and satisfying method of healthy student assessment as part of each student's education. From grades 7 to 12, students spend approximately ten weeks per year doing project work appropriate to their ages. At the same time, students compile a portfolio that documents what they have discovered, giving themselves, their teachers, and others an opportunity to become conscious of the process of learning. Perhaps of equal interest for us as teachers is the expectation that the students decide what goes into the portfolio. They select what best illustrates who they believe they are. From the beginning, then, students are obliged to engage in age-appropriate self-reflection. This development of self-knowledge is a tremendously important element in education and illustrates a principle which would be well worth further study.

This process may be seen to further Rudolf Steiner's tenet that all education is self-education. Students make more and more substantial presentations over the years, culminating in a senior presentation. The presentation is meant to showcase the process of the project which in turn is documented and made part of the portfolio. Each student asks, in an age-appropriate way, "Does this show the world who I am and the best that I can do?"

In senior presentations, students are obliged to consciously engage in three areas of assess-

ment: the cognitive (What have I learned?—important to the world); the artistic and practical (What does it tell the world about me and me about myself?); and the quality of life experience (What lessons did I learn along the way?). The audience includes not only family, students, and friends, but also experts in the subject, professionals, and community members, including people from other Waldorf schools.

Endnotes

1. "The Hague Circle was founded at Pentecost 1950 as working group and administrative college of the European Waldorf Schools. ... From 1951 onwards, representatives of the Dutch, English and German schools have met either in Stuttgart or The Hague ... in order to prepare conferences, and represent the interests of Waldorf Education internationally. Today, the Hague Circle, as an organ of the Educational Section [of the Anthroposophical Society], tries to foster the spiritual connection between the schools world-wide in their anthroposophical foundation." Source: http://www.anthromedia.com/articles/education_and_teaching/development_of_waldorf_education_in_the_20th_century/institutions_and_developments_to_date/.
2. Editor's note: Rudolf Steiner was the Director of the first Waldorf School and also spoke of Waldorf schools as "self-administered." The tension here between his example and his words leaves room for many possibilities in Waldorf school governance.
3. The North American *Survey of Waldorf Graduates, Phase II*, not covered here, is available at AWSNA Publications 518/634-2222, or publications@awsna.org. An article in Volume XII Number 2 (Spring 2007) of the *Research Bulletin*, entitled "Standing Out without Standing Alone: Profile of Waldorf School Graduates" by Douglas Gerwin and David Mitchell, summarizes these findings.

The Intercultural Waldorf School of Mannheim, Germany

David S. Mitchell

In an age of globalization, in which the world's population is growing and distances are shrinking, teachers have to find fresh ways to bring together highly disparate cultures. For instance, children from very diverse religious and cultural backgrounds can be brought together to study under the same roof, allowing children to experience—and come to respect—a great array of cultural traditions and festivals. A new inner-city Waldorf school in Mannheim, Germany, is attempting to form such a community. In the changing face of modern Europe, Mannheim is a city that has a total area of more than 90 square miles and a population of 324,000; of this total, twenty percent are immigrants attracted by the job market and fourteen percent are on welfare. This combination creates many social challenges.

As the second largest city in the federal state of Baden-Württemberg, Mannheim boasts one of Europe's main ports, an inland harbor on the Rhine River. Listed as the seventh largest industrial area in Germany, it is home to many international companies from all industrial sectors. The life of commerce is expansive, but Mannheim has been identified as one of the German cities having particular problems with its adaptation to new economic structures.

The city is also home to several Waldorf initiatives: a dual track K–12 Waldorf school with

more than 900 students; several Waldorf kindergartens; a Waldorf curative school; and a Waldorf teacher training college. To this list can now be added the Freie Interkulturelle Waldorfschule Mannheim (Independent Intercultural Waldorf School), founded to deal with the social and ethnic tensions of the city.



Fig. 2—Mannheim Waldorf School, Interior

The Mannheim Waldorf School (not to be confused with the Intercultural Waldorf School), the kindergartens, and the college are all housed in spectacular multi-million dollar buildings of anthroposophically organic design. The schools, which have gardens, sculpting studios, and large classrooms, are located in park-like settings. A separate building offers after-school artistic classes and other classes to children unable to attend the

Waldorf School. On the playground children meander among friends, chatting, jumping rope, and playing ball games. They



Fig. 3—Mannheim Waldorf School

are healthy, homogenous, and quick to say hello to visitors.

In stark physical and socio-economic contrast, the Mannheim district of Neckarstadt-West is a working class neighborhood with high population density. Here the percentage of foreigners is twice



Fig. 1—Waldorf Teacher Training University, Mannheim

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Fig. 4— The Intercultural School, Mannheim

as high as the city average. The majority of immigrants come from Muslim countries. In this district there is a high concentration of socially challenged households (both German and immigrant), and a high proportion of unemployed persons (21%) and welfare recipients. A high proportion of public school graduates is inadequately prepared for vocational training and cannot easily integrate into the job market. Women, in particular, need additional support when they look for vocational training or qualification. Although, on average, girls get better school grades than boys, they have problems getting access to the vocational qualification market, especially when they have immigrant backgrounds.

The children and adolescents in Neckarstadt-West, especially those between birth and the age of 14, are strongly affected by the poor socio-economic situation of this district. The annual reports of the city show that the most urgent needs or problems are child guidance and education. For children with immigrant backgrounds, the most pressing shortcoming is insufficient knowledge of the German language. Additional problems result from the public school system, which does not properly take into account the needs of immigrant children, who often find themselves growing up simultaneously in two different cultures. Many have to learn two different languages at the same time.

Visiting the Intercultural School

To address these challenges and other increasing problems in society, the Independent Intercultural Waldorf School was opened in the heart of the immigrant neighborhood. I had the opportunity to visit this school recently during a

stop in Mannheim. As my colleague parked the car, I looked around but could not locate the school. I saw a discount store, a Turkish supermarket, an Asian shop, a gymnasium, and a telephone center. A sign above a glass door that opened to stairs leading to the second floor of what had been a furniture salesroom was the only indication that a school was housed in this commercial building. The interior spaces were friendly and, because of large windows, full of light. The furniture was varied and had been donated by other schools. As I passed smiling teachers in the winding corridors, I could sense an air of excitement in the echoes of children singing in unfamiliar languages and playing folk tunes from distant lands on recorders.



Fig. 5— The Intercultural School, Mannheim

Currently, the school has about 150 students from twelve nations. Turkish is the mother tongue for approximately 50 percent of the students. The social background, education, occupation, and social status of the parents vary greatly. If parents cannot afford school fees, the school helps them as much as possible. Close contact with the parents is a priority of the school. The Independent Intercultural Waldorf School is a day school that takes a social-integration approach, demonstrating through its pioneering educational concept that



Fig. 6— Children from the Intercultural School, Mannheim



Fig. 7— Children from the Intercultural School, Mannheim

children from different backgrounds, nationalities, and religions can learn to live with one another.



Fig. 8— Children from the Intercultural School, Mannheim

The Differences in a Multicultural School

The school's multiculturalism is used as an educational opportunity. The interdenominational curriculum, focused on human values, enables the integration of intercultural issues in many subjects. Which fairy tales and legends are told? How are annual festivals celebrated and how can cultural variety be experienced in real life? Which themes are to be included in history lessons? These are questions with which the college of teachers engages intensely. Each festival must be approached in a new way, since cultural elements from all regions of the world enter the experiential worlds of children, parents, and teachers of this school. Monthly festivals are based on an expression of an open meeting of cultures and on mutual respect.

Special attention is paid to language learning. An important aspect of the intercultural integrative education practiced at the school is the cultivation of an environment characterized by sound verbal communication and the differentiated use of language. These are necessary preconditions

for helping the children to widen their verbal repertoires.

Lessons are generally taught in German. From class one (first grade) onward, children also receive English lessons. In addition, children have a subject called "foreign language instruction"—including Polish, Russian, Turkish, Croatian, and Spanish—so that many of the children meet their native language in school. Music, dances, and songs of other cultures are also taught. Cross-cultural issues are used consistently in the teaching material in various projects and group activities.

Several projects are available to the older classes, such as:

- Movement and coordination training
- Reading projects
- Training of the senses
- Prevention of violence / conflict resolution
- drama and role play / communication
- Forestry
- Farming
- Social work
- Education
- Horticulture ("Living nature")
- Specific assistance with delayed development in children
- Training the capacity to learn
- Expanding on content from subject lessons

Goals of the Teachers

The teachers express the following thoughts about the Intercultural School:

Our task is to create a school for all children, no matter what social class, which religion and culture—an education milieu to which all belong. Children should be encouraged to find both themselves and those different from themselves with

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empathy. Waldorf schools worldwide work using a consistent educational model based on promotion instead of selection; learning without fear; no repeating of years; and no exclusion of children or sending away to other types of school; schooling of sensory awareness; artistic teaching methods; foreign language instruction from the first class [grade] onward; and active, hands-on learning geared toward the child's development. Because of its human and individual orientation, we see Waldorf education as the foundation for our educational practice. We strive to make social aspirations based on the Waldorf school a founding impulse—at the same time we know that we must look at the actual social and cultural situation in Mannheim-Neckarstadt and must learn to adapt our Waldorf pedagogy. We must be open, flexible, and always ready to be corrected by the children and our own observations.

We want not only to teach the children, but to give them a habitat in which they can flourish intellectually and artistically, and develop practical skills in a learning community. A perception of humanity lives within Waldorf education that sees cultural differences as rich and diverse. This is important for the mental development of children.

We are interested in the varied cultural worlds of the children and look forward to their diversity. We seek to refine our view for the possibility of individual development in each child.



Fig. 9— Children from the Intercultural School, Mannheim



Fig. 10— Children from the Intercultural School, Mannheim

Study of the School's Validity

The Institut für Ausbildungsforschung und Berufsentwicklung (Institute for Educational Research and Career Development) in Munich was commissioned in the autumn of 2004 to engage in a study to document the development of the Intercultural Waldorf School. In an interim report on the evaluation, the commission came to the following conclusion:

The Independent Intercultural Waldorf School at Mannheim-Neckarstadt has already developed into a stable and well-functioning education facility. It has become an integral part of its town district and is enjoying growing demand. What began with a lot of idealism, 30 children, and two classes, today presents an education facility which functions well in every respect, where 22 teachers provide a full-time education to 150 girls and boys in six classes.

The parents support the school's intercultural and anthroposophical educational concept and are actively engaged in the process of shaping the school.

An extensive analysis of the children's educational and social development will soon be available, based on the commission's findings.

The Intercultural Waldorf School presents an excellent and intriguing model for inner-city schooling. Those interested may contact:

Freie Interkulturelle Waldorfschule Mannheim
Mannheim-Neckarstadt
Maybachstrasse 14–16
D–68169 Mannheim
Germany

E-mail: info@interkulturelle-waldorfschule.de
URL: www.interkulturelle-waldorfschule.de

The Health and Heartiness of Waldorf Graduates

Douglas Gerwin

Do Waldorf graduates enjoy better health as they age, compared to others in their peer group?

A recently published survey of graduates aged 21 to 82 from Waldorf schools across Germany concludes that former Waldorf students suffer fewer incidents of chronic ailments such as high blood pressure, diabetes, heart conditions including angina pectoris, and “arthrosis” or a general hardening of the organism. According to the survey, Waldorf graduates report a significantly lower number of these ailments even when compared to the top socio-economic stratum of German society, in which these conditions are generally less prevalent.

The survey forms part of a wider study of 1,124 Waldorf graduates published last year by two German research professors, Prof. Heiner Barz from the Heinrich Heine University and Prof. Dirk Randoll of the Alanus Hochschule.¹ It shows that 33% of the general German population between the ages of 50 and 60 suffer from high blood pressure, compared to 3% of Waldorf graduates in this age group. In another striking contrast, 45% of the general population complains of arthrosis in their joints, compared to just 5% of Waldorf graduates.

These statistical differences—one in nine or ten—were so striking that the authors of the survey decided to test their numbers against a more selective population with a demographic background similar to the Waldorf graduates. For this purpose, the researchers chose data that the Robert Koch Institute (RKI) had gathered from a group of 866 people aged 20 to 68, whose profile in terms of age, gender, and marriage status most closely matched a comparable group of 871 Waldorf graduates. In this comparison, the differences were less extreme but still statistically significant. Of the RKI group, just over 25% reported problems with arthrosis, compared to just under 10% of the Waldorf graduates. In regard to ailments of high blood pressure and angina pectoris, Waldorf graduates reported about half as many cases as the RKI group. The only condition for which both groups reported comparable levels was for hay fever, which just over 20% of the RKI group reported as having, compared to around 18% of the Waldorf group (see Table 1).

A more detailed analysis of the RKI and Waldorf groups revealed a further difference in trends when they were compared in three age groups: ages 30–37, 50–59, and 62–66. As illustrated in Table 2, the onset of these ailments

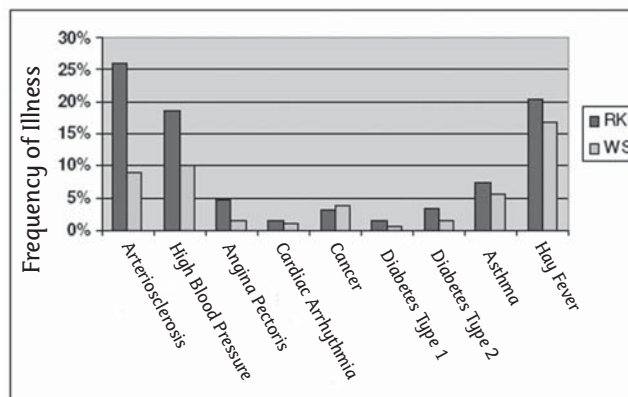


Table 1—Relationship to Various Illnesses Comparing Public and Waldorf Graduates

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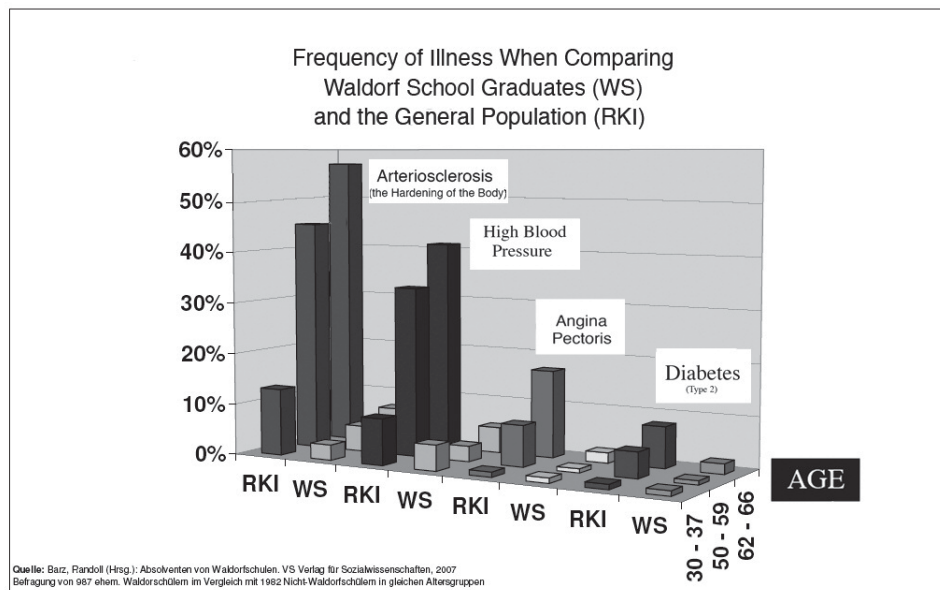


Table 2— Frequency of Illnesses Comparison

increases exponentially from one age group to the next among the general population, whereas for the Waldorf graduates the increasing trend towards onset is gradual—or in the case of blood pressure even reduced—as they grow older.

The researchers point to certain factors that may have influenced the data without however eliminating these striking differences. Among these factors:

1. The formulation of questions on the Waldorf survey was less specific and may therefore have generated fewer responses; by contrast the RKI survey included more synonyms for these medical conditions and may therefore have prompted more responses.
2. In both surveys, the incidence of illnesses were self-reported, rather than being diagnosed by a physician or health care professional.
3. The frequency of reported illnesses varied among different socio-economic backgrounds. Specifically, those with less education (lesser social status) report more cases of high blood pressure and general arthrosis. In this context, it is worth noting that 63% of the Waldorf group had taken the state Abitur exam at the end of high school, whereas only 3% of the RKI group had reported sitting for this exam.
4. The Waldorf graduates participating in this survey came exclusively from the former West Germany, whereas the RKI survey polled people from both former East and West Germany.

A more recent RKI survey in 2003–04 of Germans from both parts of the country provided a more nuanced picture of the nation's general health by separating responses both by gender and according to three social strata (see Table 3). In addition, the survey asked whether a physician had diagnosed various conditions, rather than simply asking the respondents to name the illnesses they suffered. Generally this latter survey showed that

a) in both men and women, the higher the social stratum, the lower the reported incidence of these illnesses.

b) women in all three strata reported higher levels of these illnesses than men, with the exception of high blood pressure, a condition in which the results are reversed.

Results from these three social strata were then compared with Waldorf graduates. Even if one were to assume that Waldorf graduates fell mostly in the top social stratum by virtue of their generally higher levels of education, the Waldorf graduates still scored significantly lower in the number of each illness compared to any of the three strata.

As Tables 4a and 4b show, about 18% of women in the top social bracket reported high blood pressure, compared to 9% among the female Waldorf graduates. Among men the difference is even more pronounced: nearly 30% of men in the top social bracket reported high blood

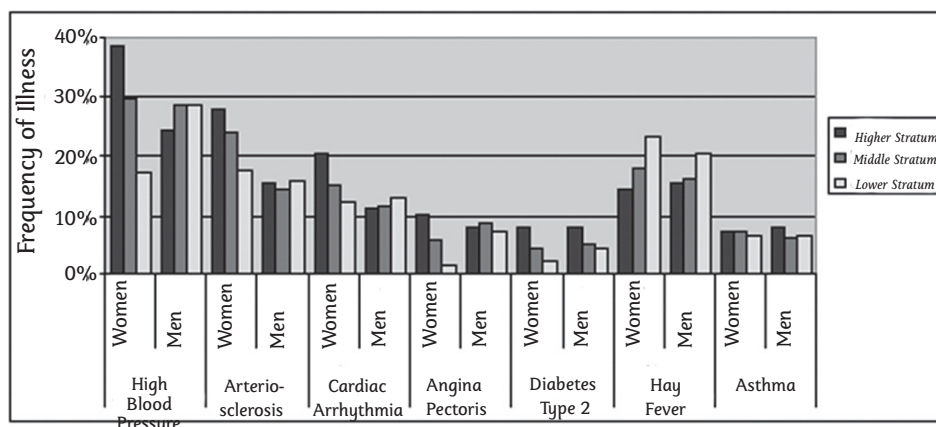
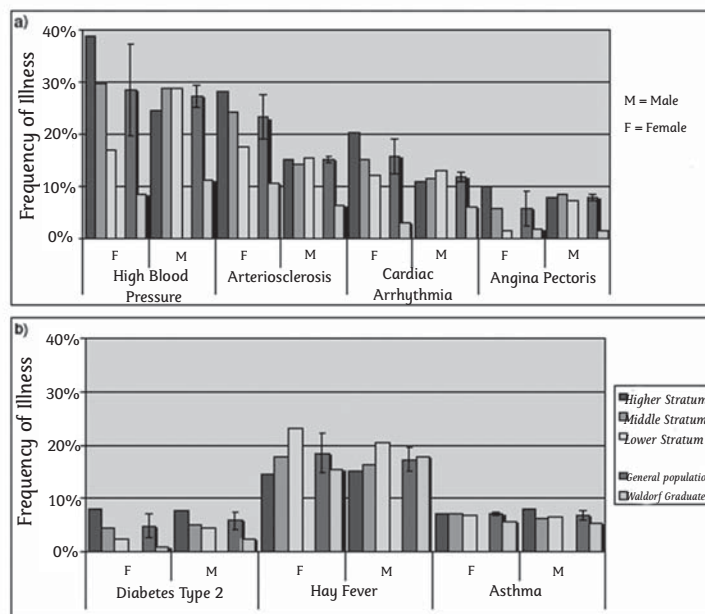


Table 3—Frequency of illnesses among men and women in the higher, middle, and lower social strata of the general population

pressure, compared to around 10% of the male Waldorf graduates. For conditions of general arthrosis, Waldorf graduates reported about half the number of incidents compared to respondents in the top social bracket. Likewise incidents of angina, diabetes, and asthma were fewer in the Waldorf group compared to all three social strata of the general population.

Interesting exceptions to the general trend could be observed in conditions of heart distur-

bances and hay fever. Among women, those of the higher social strata reported fewer incidents of heart circulation problems but among men the trend was reversed. However, in both ailments the number of Waldorf graduates reporting this condition was well below all of the general results. In the case of hay fever, the higher social strata reported higher levels of this condition, but the Waldorf graduates still reported fewer incidents of this ailment. Only among males did the



Tables 4a and 4b—Frequency of illnesses among men and women in three social strata of the general population (RKI) compared to former Waldorf students (WS). The bars showing average frequencies for the general population indicate the middle standard deviations with a vertical line ("I").

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Waldorf graduates report slightly higher levels of hay fever than the average of all three strata among the general population.

Finally a comparison of Waldorf graduates to the general population in both the former East Germany and West Germany showed that, overall, Waldorf students reported fewer incidents of these ailments than the population from either the eastern or western portions of the country.

For those familiar with Rudolf Steiner's statements about the healthy effects of Waldorf education, these survey results will come as no surprise. From the very beginning, Steiner indicated that education promotes health to the degree it cultivates a balance of intellectual, emotional, and volitional life in the human being, and it risks promoting illness not only in the child but later in the adult to the degree it does not. Indeed, in a lecture four years after the founding of the first Waldorf school, Steiner warned that "if we allow the child to think abstractly too much, then we encourage in the human organism the predisposition to premature sclerosis, an early arteriosclerosis."² In addition, Steiner suggested that the practice of the arts in education—or, more precisely, the practice of teaching artistically—would also contribute to more robust health both among students and, in the longer view, among school graduates.

The researchers themselves raise questions about other factors that might contribute to the health of Waldorf students, including the emphasis among Waldorf parents on a healthy home life, restricted access to television and computers, a more organic diet, longer periods of sleep, and possibly a lower consumption of cigarettes, alcohol, and other drugs. These factors, according to the researchers, may also play a significant role in the overall health of Waldorf students and therefore deserve further study.

Nonetheless, at a time of rising chronic illnesses among children—including the onset of adult-style diabetes—and reduced artistic practice at school due to greater emphasis on the testing of basic academic skills, these survey results merit serious examination. At a minimum they draw attention to the risks inherent in one-sided educational practices and reinforce other research (reported elsewhere in this issue of the *Research*

Bulletin) that shows just how crucial the practice of the arts is even in the formation of bodily organs such as the brain.

Endnotes

1. Heiner Barz and Dirk Randoll, *Äbsolventen von Waldorfschulen: Eine empirische Studie zur Bildung und Lebensgestaltung* (Wiesbaden: VS Verlag für Sozialwissenschaften, 2007). Elements of this study were reported in Volume XII Number 2 of the *Research Bulletin*. This present report is drawn from an article by Christoph Hueck on the health section of the survey.
2. Rudolf Steiner, lecture of November 8, 1923, *A Modern Art of Education*, GA 307.

Reports from Current Projects of the Research Institute

The Power of Grammar: A Working Weekend

Anne Greer

A few weeks before the Research Institute's Colloquium on English Grammar at High Mowing School (March 16–18, 2008), Virginia Buhr, the coordinator of this weekend, was given what many might consider an impossible task; she was asked to take exciting photographs of participants engaged in the study of grammar. For many, not only is English grammar "notoriously the most widely and deeply hated of all studies"¹ but also, some might add, the most boring.

Not so for the fourteen seasoned English teachers grappling with the questions of the why, how, when, and what of English grammar teaching. Virginia's assignment turned out to be an easy one. Excitement during the weekend was palpable.

Teachers from east, west, north, and south came ready—indeed, some came armed—with firm answers. Of all things open to question, surely grammar was not one of them. By the end of the weekend, there was widespread agreement that English grammar is probably the least consciously taught subject in Waldorf schools. We left replete with questions, all of us eager for further exploration.

Waldorf high school teachers share a deeply held belief that our task is to awaken students to life-long questions: How do I know what I know? How can I be a conscious participant in my own experience? We ask such questions and, with our students, struggle toward answers through language. How then do

we come to understand language and its role in what we know and how we know what we know? What is the meta-language with which we can talk about language?

My own teaching experience and observations based on visits to other classrooms have convinced me that, in teaching English grammar, teachers generally resort to dead concepts and to unexplored, outmoded prescriptive "rules." Much grammar teaching, particularly in our high schools, relies heavily on dusty sets of handbooks and workbooks.

Language consists of living phenomena. Waldorf methodology is premised on the understanding that students and teachers are engaged in a process of genuine discovery. The teacher should present phenomena, ask students to observe carefully, and, increasingly during high school years, observe, as well, themselves as observers. Together, teachers and students work toward becoming increasingly articulate about their observations. This rarely happens in a grammar lesson. Simply put, the meta-language used to describe English between the 17th and mid-20th centuries is based on Latin, a language long dead. The resulting concepts, now hardened, if

not atrophied, have limited ability to capture living, evolving English syntax.

During the 20th century, the study of linguistics was revolutionized. By the 1960s, exciting advances were being made in teaching approaches incorporating linguistic discoveries; these began to be offered in many schools. Perhaps the



Grammar Symposium meets with Anne Greer at High Mowing School

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resulting complexity was one of the reasons for the end of English grammar in public education in North America, Great Britain, and Australia. Because end it did, although not in Waldorf schools, where teaching grammar has never stopped. But those of us who remember being taught grammar generally teach it as we were taught, and those who have never been taught grammar muddle through in a mix of bewilderment and apprehension about not getting things right. “Getting things right” is a prescriptive approach bordering on the moralistic; living language demands a descriptive openness.

Rudolf Steiner had a keen interest in language. He found it most alive in speech, particularly in dialect. He admired its transformative properties, including the genius of inventing words, of changing nouns into verbs, and of embracing words from other languages. He deplored “abstract instruction,” asserting that there is “no better method of pushing children into materialism.”² When he spoke about grammar teaching, he was frequently negative:

...[Y]ou may be sinning against the healthy condition of the child if you occupy him for an hour with what is usually called grammar. If the children have to occupy themselves distinguishing between what one calls subject, object, attribute, indicative, subjunctive, etc.—all things in which they have only a half-hearted interest—then they are put into a state where their breakfasts are boiling in their organisms quite uninfluenced by their soul lives. ... Enteric illnesses are often caused by grammar lessons. . . . If I may speak plainly, the grammar lessons are just horrible. All the stuff which you find printed in books ought to be burnt. Something living must enter. . . .³

Steiner recognized, as has modern linguistics, “that all grammar already exists in the human organism.” Our task as teachers is to raise grammar to consciousness “in a living way” and, by so doing, we “work on an ‘I’-consciousness in the child.”⁴

What Is This “Living Way”?

Part of the answer can be found in linguistics. Linguistics professor Adam Makkai, in his

“Afterword” to the 1995 edition of Steiner’s *Genius of Language*, tells us that not only is linguistics “one of the most important disciplines that human beings have developed throughout the course of evolution” but that it is “the prototypical consciousness soul discipline for our time.”⁵

As English teachers, we keep up-to-date on the newest poets and the latest works of fiction, but we know little or nothing about the revolution that has occurred in the study of the English language and the new grammars that offer increased subtlety in their descriptions. According to British linguist David Crystal, the English language is currently experiencing its third revolution since the 5th century. By “revolution,” he means any combination of events that produces a radical shift in consciousness and behavior over a relatively short period of time. The first was the change from Old English to Middle English; the second, the change from Middle English to Modern English (from Chaucer to Shakespeare). This third, Crystal claims, is caused by the confluence of three major trends, each global in significance, which cumulatively have altered the world’s linguistic ecology: the extension of English as a global language with new varieties around the world; the realization that huge numbers of languages and dialects are dying, generating a sense of crisis and fresh initiatives toward preservation and regeneration; and the increasing use of Internet technology, which has supplemented spoken and written language, adding a further dimension of variety to our linguistic experience.⁶

While part of the answer in finding a “living way” must be an increase in the teacher’s linguistic understanding, the larger part can be discovered only by first-hand experience in the classroom. Back in the classroom on the Monday morning following our exciting weekend, Mary Ann Wells (Waldorf High School of Massachusetts Bay) experienced the interest of students who are free to engage in a broader exploration of grammar:

I walked into my 12th grade home-room and the students asked for a study time. I told them that would be wonderful as I had to get some work done because I had been away attending a grammar conference all weekend. Several of the students thought that was very exciting and I

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thought they were making fun of it—but they were indeed serious and a discussion ensued not unlike those had in Wilton. Johnny thinks grammar matters and cares deeply about correct usage. His very best friend Jahan sees the importance of correct usage and the rules of grammar but feels he knows them so he can speak any way that is comfortable and gets his point across. Augie wonders who invented punctuation and it went on and on. The entire 12th grade was engaged in a discussion about the importance of grammar and correct usage and they were fascinated that Waldorf teachers are researching and discussing it as well.

When seasoned teachers congregate, invariably there is sharing. Meg Gorman (San Francisco Waldorf School) delighted us all with a lesson on verbs liberally illustrated with stick figure personalities, bringing traditional terminology to life.

Jason Gross (Kimberton Waldorf School) began his exercise from transformational grammar with questions. If we are attempting a phenomenological approach to grammar, should we allow the students to find their own descriptions of language? If we label something, are we teaching only concept? What value does a label have? At what point, and how, do we present labels? Can we suspend jargon or labels and describe what a word or phrase is actually doing?

Wendy Bruneau (High Mowing School) invited us to take part in a writing exercise from *Image Grammar* by Harry Noden, an approach she uses with her classes. Noden developed his highly successful approach with his wife Jan when she was a Waldorf elementary school teacher in Akron, Ohio. *Image Grammar* is consistent in many ways with Waldorf pedagogy.⁷

Patrice Pinette (High Mowing School) shared examples of how language awareness enhances her creative writing classes, particularly in poetry.

The weekend wasn't all fun. It was also games. As warm-up exercises and for physical deepening, David Sloan (Merriconeag Waldorf School) brought us "Drammar"—movement explorations used in his drama classes, extended to grammar. In ludic delight, we discovered the balance between outer and inner, form and freedom, self and other.

Jane Wulsin (Green Meadow Waldorf School) was our lower school touchstone; she brought a clear picture of willing, feeling, and thinking as they work in body and soul during the three phases of child development. We recognized this as an invitation to the next stage of our work: to develop an understanding of how to awaken consciousness in appropriate ways at appropriate times, phenomenologically.

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2. Steiner, Rudolf. *The Genius of Language: Observations for Teachers* (Six Lectures given in Stuttgart, 1919–1920). Trans. Gertrude Teutsch and Ruth Pusch. Hudson, NY: Anthroposophic Press, 1995, p. 94.
3. Stockmeyer, Karl. *Rudolf Steiner's Curriculum for Waldorf Schools*, Forest Row: Steiner Waldorf Schools Fellowship, 2001, p. 21.
4. Steiner, Rudolf. *The Renewal of Education*, pp. 111–112.
5. Makkai, Adam. "Afterword: Rudolf Steiner on Language: A View from Modern Linguistics" in Rudolf Steiner, *The Genius of Language*, p. 102.
6. Crystal, David. *The Language Revolution*, Cambridge: Polity Press, 2004.
7. Noden, Harry. *Image Grammar*, Portsmouth, NH: Boynton/Cook, 1999.

Editor's note:

Anne Greer is preparing a source book on grammar teaching that will incorporate contributions from this colloquium with the results of her own years of research and experience as a Waldorf high school English teacher. Her book will be published by the Research Institute and will be available through AWSNA Publications.



Anne Greer shares her research with colleagues.

Teaching Sensible Science

Michael D'Aleo

The second week of the most recent cycle of Teaching Sensible Science began under unusual conditions. At 7 PM in Sacramento, California, on Wednesday, February 20th, 2008, a lunar eclipse was taking place as we resumed the work begun in the October 2007 session. The phenomena of the lunar eclipse, its timing early in the evening, and our location at Rudolf Steiner College created conditions whereby it was possible to observe the image of the eclipse both by looking upwards directly into the sky and also by looking down at the surface of a still pond. While we spent a large portion of time observing the eclipse under these different conditions, on the following morning we began to discuss these observations and to penetrate not only the conditions under which an eclipse occurs, but also the similarities and subtle differences seen by comparing the image in the sky with the one in the pond. Each observation, no matter how coarse or subtle, helps to build a picture of not simply a single "answer" but a multiplicity of relationships that can be summed up, even if not fully communicated, in the simple concept of eclipse or reflection.

The theme of reflection constitutes a key element in the physics curriculum of the seventh grade. Reflected images were one of a number of the central phenomena we experienced and made more conscious through keen observation, discussion, and conceptual development. For example, we observed that often the images seen when looking into a reflecting surface are very similar to those seen in the tangible world we experience daily. However, upon closer investigation we find that not only the images of objects are seen in the reflecting space but images of shadows as well. Is the image of a shadow any different from an image of an object? Is a shadow visible without seeing "it" on an object? Do we really see a shadow, or is this a concept used to convey that one part of an image is dark and another part is brighter? While at first these questions may

appear to be semantic, over the course of the week, even the most solid object, matter itself, was discovered to be more than just simply the given "stuff" of the universe. Most interesting is the fact that when we really take the time and care to investigate phenomena fully, both observationally and conceptually, our experience of the world becomes more intense, more acute, and we ourselves become an integral part of the experience. We also find that the phenomena and new technologies of modern science and engineering also take on a new relevance when investigated more thoroughly. They begin to appear as partial expressions of a new understanding of the world that is slowly bringing consciousness to those who take the time to pay attention.

The flow of the day in the Teaching Sensible Science course is central to helping teachers experience, understand, and embody the experience and concepts that they will later present to the students. The morning sessions, led by Michael D'Aleo, investigate the nature of our experience through observational exercises, discussions, and presentations. These are aimed at helping each teacher consciously awaken to his/her own inner activities of perception and conceptualization. It isn't new thoughts that are being developed but the activity of thinking that is being encouraged.

The morning sessions are preceded and followed by eurythmy guided by Barbara Richardson. Eurythmy provides an excellent complement to the morning sessions by allowing us to move our physical bodies with much of the same lively consciousness and with similar intentions as those cultivated through the activity of thinking.

After a long break for lunch, the afternoon is devoted fully to developing the experiments, demonstrations, discussions, and activities that are appropriate for the grade students in a Waldorf school. These sessions, led by Lylli Anthon and Gary Banks, are designed to find the age-appropriate means so that the students lay

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the foundation for their own experience of the rich phenomena of the world.

The third and final session for the Rudolf Steiner College cycle of Teaching Sensible Science was completed in June of 2008. The next cycle of Teaching Sensible Science is scheduled to begin in February 2009 (with subsequent sessions in June and October of the same year) in Saratoga Springs, NY. Teachers interested in signing up for

the course or seeking further information should contact Michael D'Aleo by email at

spalight@verizon.net

or by phone at

(518) 587-0457.

Report on the Online Waldorf Library

Marianne Alsop

The Online Waldorf Library continues to help facilitate research and answer questions on a wide variety of topics. In recent months these have included:

- Requests for data on Waldorf school graduates in Europe, including the U.K.;
- Requests for statistical information on the effectiveness of foreign language teaching in elementary schools;
- Middle school and high school sports programs;
- Computer use in the middle school;
- Middle school science adapted to charter school use;
- Teaching children with autism and ADD and including them in Waldorf classes;
- Mentoring in early childhood settings;
- School readiness;
- Forming care groups;
- School administration and finances; and
- Parent education.

Also, news that the Steiner Schools Fellowship will sponsor “academy” schools in the U.K., state-sponsored schools based on the Steiner Schools curriculum, has brought several inquiries for information.

Teachers and parents of children in Waldorf schools in New Zealand, Australia, the U.K., Hungary, Mexico, and North America have sought permission to use OWL articles in their respective

homeschools and classrooms. It is wonderful to know that our articles are useful and that, when necessary, they are translated into other languages. There are now more than 350 articles in the OWL database and more are added every week. Articles are easily found by going to the “Focus Search” page and clicking on “article” and the subject of interest.

The number of books in our search database is now well over 400 and we add new titles regularly. Books can be found through the “Focus Search” page by clicking on “book” and the subject of interest. The site visitor will also find information on purchasing these books.

Two more editions of *Pacific Journal* and the *Waldorf Journal Project* are now available for viewing, in addition to past issues of *Gateways* and the *Research Bulletin*. *Living Education*, published by Steiner Waldorf Schools Fellowship in the U.K., is available in an online edition through a link on the “Journals” page. The most recent issue of the *Waldorf Science Newsletter*, with all past issues, is also available.

Have a look at OWL! Let us know if there is something you are looking for or a question for which we can help you find an answer.

The Online Waldorf Library (OWL) may be accessed at

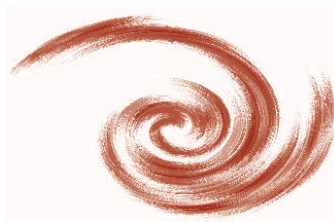
www.waldorflibrary.org.

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Grants from the Foundation for Rudolf Steiner Books

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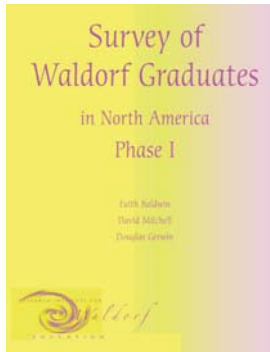
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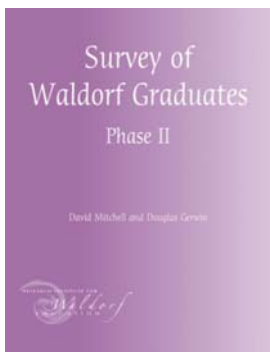
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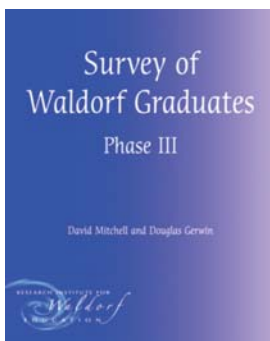
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This comprehensive study looks at Waldorf graduates from 1943–2005 and what they did following graduation from their Waldorf high schools: which values do they hold in life; what do they value in life due to their education; which honors have they achieved? Included are extensive comments about Waldorf graduates from professors who taught them in college and from employers who hired them. This survey compiles a profile of a typical Waldorf graduate.

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Phase III

This study summarizes recent research conducted on Waldorf education in Sweden, Germany, Switzerland, and North America. The full data are analyzed, compared, and criticized. Reflections on Waldorf graduates from professors are analyzed and constructive criticisms by graduates are offered in the spirit of support for the renewal and growth of Waldorf education.

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About the Research Institute for Waldorf Education

The Research Institute for Waldorf Education is an initiative working on behalf of the Waldorf school movement. It receives support and guidance from the Pedagogical Section of the School of Spiritual Science and financial support through the Association of Waldorf Schools of North America (AWSNA), the Midwest Shared Gifting Group, the Waldorf Schools Fund, the Waldorf Curriculum Fund, and private donors through the Rudolf Steiner Foundation.

The Research Institute was founded in 1996 in order to deepen and enhance the quality of Waldorf education, to engage in serious and sustained dialogue with the wider educational-cultural community, and to support research that would serve educators in all types of schools in their work with children and adolescents.

The Research Institute has responded to the call for research as a top priority of the Waldorf school movement by becoming a supporting organization of AWSNA and by co-sponsoring research projects with the Association and with the Pedagogical Section.

We support research projects that deal with essential contemporary educational issues such as the role of play in early childhood, attention-related disorders, trends in adolescent development and innovations in the high school curriculum, learning expectations and assessment, computers in education, the role of art in education, and new ways to identify and address different learning styles. The Research Institute has sponsored colloquia and conferences that have brought together educators, psychologists, doctors, and social scientists. We have published a *Research Bulletin* twice a year for the last decade, and we are developing and distributing educational resources to help teachers in all aspects of their work.

We sponsor the Online Waldorf Library: www.waldorflibrary.org, whose mission is to make available contemporary writings on Waldorf education, and we host our own site: www.waldorf-researchinstitute.org, where up-to-date research is posted.

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