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From the Editor

Douglas Sloan

The lead article in this issue addresses a concern of all committed Waldorf teachers, one that is painful and, at the same time, if faced unflinchingly, full of promise for creative breakthroughs; namely, the high potential for social conflict in Waldorf schools. The author, Dutch Waldorf educator, Christof Wiechert, is leader of the Pedagogical Section of the Anthroposophical Society. In his article, Christof Wiechert looks at the most common confusions that often lie behind conflict in the school, and points to what can be done to reverse them. In doing so, he brings out the rich resources also present in Waldorf education for teachers' inner renewal and development and for their building together genuine, supportive community. It is an article that will lend itself to contemplation and discussion among schools everywhere.

If Christof Wiechert's article looks at one form of assessment—self-assessment and renewal—the second article by Paul Zachos examines another form of assessment also of vital concern to Waldorf educators—the assessment of one's own teaching and of student learning. At a time when pressures are being exerted from many sides to submit children to standardized, high-stakes testing in all schools and at every age level, the question of what kind of assessment is truly educational becomes critical. Yet

it often remains unasked. Paul Zachos, in "Discovering the True Nature of Educational Assessment," takes up this question directly and with concrete examples. He shows that it would be an error if, in rightly rejecting standardized testing, we were also to reject the task of assessment itself. All depends on distinguishing between assessment that is educational and assessment that is non-educational. Waldorf education, he argues, has resources for developing forms of assessment that truly support education, and in doing so, has the potential for a much-needed contribution to the wider world of education. He invites correspondence and discussion of his article, and we hope that readers will respond.

Peter Lang's article, "The Kindergarten Child," looks at the special developmental and educational needs of the preschool and kindergarten-aged child. He shows that preschool education has specific and crucial educational-developmental tasks to fulfill. The accomplishment of these tasks is seriously hindered by two, widely prevalent, albeit opposing, notions of preschool education: on the one hand, the view that academic subjects should be introduced into these early years, and, on the other hand, the idea that preschool and kindergarten classrooms are really only holding areas for children

until the real educational work can begin in first grade. Peter Lang demonstrates the critically important educational and developmental principles involved in a genuinely Waldorf approach to the preschool years, principles that address the real needs of children. He offers a reminder to preschool and school teachers alike, as well as to administrators and parents, of just how important it is that these principles of early childhood education be recognized and supported. In a related vein, in "The Teaching of Science," David Mitchell describes from his own experience how science can be taught to the young child in a way fully compatible with and supportive of the child's own capacities and interests, and that, at the same time, lays the basis for a continuing and creative deepening in scientific understanding.

Alduino Mazzone takes up the problem pointed to by many knowledgeable observers that, while children require for their full and healthy development the experience of socially recognized "rites of passage," we live at a time when such rites of passage are disappearing because the social basis for them is in disarray. Alduino Mazzone explores the many resources in Waldorf education, especially in the understanding it can draw upon of the evolution of consciousness, that provide meaningful rites of pas-

sage experiences for the growing young person.

All of these articles invite comment and discussion and we welcome readers' responses.

In our current Correspondence section, Stephen Sagarin continues a conversation initiated by his article in the January 2003 issue.

We are also carrying in this issue a list of various studies that have been made of Waldorf education during the last thirty years or so. This is not a complete list and we hope to add to it in the future.





Wellsprings of the Art of Education: Three Reversals in the Work of the Waldorf Teacher

Christof Wiechert

From the very beginning, much depends upon our ability to correctly address our work and to understand that we must give ourselves a particular direction appropriate to our time,” says Rudolf Steiner in the first lecture of *Foundations of Human Experience*.¹ He then gives a picture of the prevalent role which egotism has to play in the development of humanity now. At this point in evolution, he explains, inner attention and self-realization are necessary. At the end of the lecture he returns to this, painting an unusual situation: “There can be a great difference, and it does not depend simply upon whether one teacher is more clever than another in superficial pedagogical techniques. Rather, the main difference in the effectiveness of teaching comes from the thoughts the teacher has had during the entire time of his or her existence and brings into the classroom.”² He goes on to point out how thoughts which are directed towards a child’s development, for example, work differently on the child than thoughts which do not.

What happens when a teacher forms such thoughts? “At the moment you have such thoughts, something within you fights against everything that is merely personality. At this moment everything that forms the basis of your personality is dampened. Something of what predominates in people because they are physical human beings is quelled.”³ We could say this basically brings us to the question of inner substance. The strength and quality of the Waldorf impulse depends on whether we confront ourselves inwardly or not and are able to engage in an inner struggle with “mere personality.” Are we

as Waldorf educators able to give ourselves that direction? Viewed this way, we simultaneously deal with the question of the contemporary relevance of the Waldorf school, for this does not depend on systems or new forms (although they certainly have to be there as well), but on ourselves. The way we relate to ourselves and to the world is what counts. This can give rise to some confusion. An attempt will be made here to characterize different types of this confusion.

Three types of confusion

A first type of confusion lies in the temptation to interpret the Waldorf impulse as a system: a set of actions, established forms, habits, and even a body of convictions or anthroposophical knowledge. We may call it anthroposophy, but that may only be true to a certain extent. There is a certain manifestation of anthroposophy which is rejected more and more by younger colleagues and parents. An example of this is the use of anthroposophical knowledge as a weapon to argue a *personal* point. Many people instinctively recognize this as a form of ideology which needs to be questioned, no matter who the person representing the ideology is.

A second type of confusion arises because Waldorf schools have taken on certain forms, for example, a fixed curriculum. This is necessary, otherwise the

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schools would not be able to exist. The confusion comes about when the outer form is taken for the thing itself, even when the original impulse no longer has anything to do with it. For example, when a colleague does not want to do the class play in the eighth grade but in the seventh grade, this sets up conflict with the traditional form: “without an eighth grade play it is not Waldorf.” This is, of course, an innocent example. There are certain forms, right into matters of pedagogy, which are no longer the expression of a true impulse of the art of education, but of a habit which can often not be traced to a specific origin anymore. When this is the case, people will have a hard time recognizing the true intentions of the Waldorf school.

A third type of confusion arises because anthroposophy rightfully values individual freedom very highly. Without the free human being there would be no anthroposophy at all. This “freer climate” is exactly the reason why many new colleagues find their way to Waldorf schools. In practice, however, it can easily happen that this freedom is confused with license, or even stamina, in pushing something through. Waldorf schools offer a lot of opportunity for this. We pay dearly for this confused notion of freedom because on average we are more prone to social conflicts than other schools. Put in a different way, the potential for conflicts in our schools is high, not because of anthroposophy, and also not because of the way we are organized, but because of ourselves.

Three reversals

In the final analysis, these areas of confusion stem from the way in which we do our inner work. How do I take myself in hand? How can I help myself in such a way that I come closer to my true self? I need help. A first way to bring about a reversal is to start asking questions and become a seeker instead of someone who has the answers and is all-competent. This is actually a first step on the path towards anthroposophy, whether one wants to recognize it as such or not.

Not so long ago many Waldorf teachers were led towards this question by destiny and had started this process of inner transformation. It was a time in which the inner path was not so much spoken about in schools, but individuals actually did walk the path of self-development and this, moreover, was a private matter.

Nowadays, many colleagues find their way to the schools without destiny having brought them to this point (and we leave aside here what the cause of that may be). It is part of being a teacher, however, to arrive at the realization, “*I can only teach when I learn to change myself.*” People may stick to

the opinion that this is everybody’s private business. That is true in the sense that nobody can demand of me that I go on a path of inner development. But I must honestly demand this of myself when I practice the profession of Waldorf teacher. At the beginning of the first lecture of *Foundations of Human Experience*, Rudolf Steiner puts it this way, “Dear friends, we can accomplish our work only if we do not see it as simply a matter of intellect or feeling, but, in the highest sense, as a moral spiritual task.”⁴ This implies a second reversal. But how does one go about this?

By way of example, let us look at the way the teachers’ meeting is structured. The structure of the meeting can itself be a source of confusion, as we all know. But this meeting is also the heart and soul of the school. The heart perceives, gives impulses and direction, and is an organ which is always learning. The same holds true for the teachers’ meeting. Rudolf Steiner calls it “continuously evolving education.” Today that implies that colleagues not only take up the question of continuing education together, but also that all colleagues get the opportunity to discuss these questions of transformation. Specifically, questions such as the following would be asked: How does a new colleague learn about the teachers’ meditations? Is the way one practices these professional meditations a scheduled topic of conversation? Is it possible to talk about this theme in the meetings?

This will obviously only be possible when the circle of teachers has practiced establishing the right *mood* in the meetings. Such a mood can only come about when colleagues agree to look upon the meeting as something which is just as important as the teaching itself. It is necessary to remind one another to practice the virtues of real listening (What does my colleague really want to say?) and of active silence (not being silent out of a lack of interest) and of keeping one’s speaking in check. (Is it really necessary for me to say something now? Do I speak to the point or do I automatically raise my hand to speak?)

When this happens, a space will be created in which all colleagues can feel safe, because their contributions will be heard and taken up. When this safe space is established and when one can talk about inner questions, it will also be possible to find a fruitful way to deal with anthroposophical content within the meetings. This is the third reversal: When the periphery creates a center which will radiate out again to the individuals, a common instrument for a common aim will have been created.⁵

A circle of teachers which strengthens itself in this way will break down the first type of confusion and anthroposophy will actually be something living,

working between individuals. Next to all the important things a circle of teachers has to achieve together, a *new commitment* is asked of us.

Renewal through Re-enlivening

Let us now look at the second category of confusion. Schools are by nature conservative, and Waldorf schools are no exception. This is, of course, a general judgment which needs to be qualified.

When we survey the development of the past twenty-five years, we see that considerable progress has been made in many areas. Movement education has experienced a strong impulse, ranging from juggling to complete circus shows. Strong developments have arisen through various attempts to connect schools with the world of work by means of doing practica, and also by other means. The artistic quality and craftsmanship in the handwork subjects have attained nearly professional standards. Steps have been taken to introduce experiential studies. There are schools which devote a whole evening every year to show the work done in eurythmy. Education in technical subjects has seen many outstanding achievements as well. Special-needs teaching has undergone several developments, ranging from various tutorial arrangements to the founding of independent, special-needs schools. Initiatives have been taken towards more integration and diversity. In connection with that, a particularly promising initiative is the founding and recent opening of an inter-cultural school in Mannheim, Germany. The search for alternative ways to do final exams and grading has resulted in various new forms. Furthermore, models have been developed to tackle the middle school anew, and new forms for high school are being created by many circles of colleagues. This list is by no means complete, but it demonstrates a strong power of initiative, worthy of the Waldorf schools.

Most of these initiatives are extensions of Waldorf pedagogy. In and of themselves they are very valuable, but they have not essentially touched the *core work* of the Waldorf school, the education in kindergarten through high school. The question arises: how can this energy, which is obviously there, also be turned inward? To a certain extent, the core work is at a disadvantage, because existing tasks have to be performed anew every day. In this case, one cannot speak of renewal. But one *can* speak of re-enlivening, which is an inner renewal.

Let us return once more to the topic of meetings. One often hears that what happens in the Thursday meetings takes teachers' last strength. It behooves us to look into the causes of this, and we must find solutions for this phenomenon.⁶

It is not our task here to answer these questions in

depth. But one phenomenon should be described. Rudolf Steiner often pointed out the necessity of self-knowledge as something which continues to build strength when one is on the path of self-educating. "Picture yourself rightly." One often experiences that the energy which enables one to know oneself (or criticize oneself) is actually there, but gets directed outward and becomes criticism of people or the world in general. It is as if we are dealing with a shadow thrown by the prevailing mindset. The result of directing criticism outward onto others, however, is that one is no longer capable of really meeting one's fellow human beings, and this applies to both colleagues and parents. Our ability to meet others becomes shrouded, and, as a consequence, colleagues become estranged from one another.

We have many opportunities to turn this situation around. Such a reversal can be brought about when we inwardly activate our *powers of recognition and appreciation*. Without this, a college of teachers will never become a community which gives energy and orientation to the individual. When that has been accomplished to a certain degree (something which is definitely the case in a number of schools) the way is open to the real questions which concern our daily interaction in the classroom. Then one can tackle questions such as: "How are we doing? Where do our strengths and weaknesses lie? What can we improve or change? Where do we fall short?" In this way our daily tasks will come to stand in the light of development. Teachers and school will become a living and developing organism. Here, too, we see a reversal. A reversal of direction away from the ordinary. That is what anthroposophical practice actually is. It demands self awareness and conducting oneself morally, and it is up to each individual to initiate that.

When steps have been taken to establish such a foundation, the need arises to look anew at everyday practice and the application of the curriculum from the viewpoint of pedagogical relevance. We can ask ourselves, for example, if we are able to give our teaching the necessary freshness by the way we relate to the material and the students. Such activity will lead to our students later remembering not only the class trips, class plays, and other highlights, but also the core work: the liveliness of everyday school. Inner initiative enlivens everything and counteracts the second type of confusion. Here, too, a new commitment is demanded of us.

The Search for a New Sense of Commitment

We should now look briefly at the third type of confusion. Teachers who administer a school themselves and who have to use their inner resources in

teaching, standing up for all they do, develop a stronger relationship to themselves. Being involved in an anthroposophical way of working *can* throw a shadow: it may result in a strong form of self-centeredness. And this, in turn, will hinder *community* development in our schools. At the close of the first course on Waldorf pedagogy, Rudolf Steiner summarized the inner prerequisites for being a teacher. Teachers have to work on harmonizing the following four attributes: *initiative*, *interest*, *devotion to the truth*, and the imperative *not to turn stale or sour*. It has been pointed out in another article that these four attributes correspond to the transformation of the temperaments, which do not properly serve self-education unless they have been worked on.

There is no mention of a fifth prerequisite, namely, “building a community of teachers.” This may seem strange today, but will become understandable when one looks back and apprehends the historical setting of the founding of Waldorf pedagogy. The personalities whom Rudolf Steiner addressed were practicing inner development. Apart from that, he had pointed out the enormous implications for social life at the opening of the first course for teachers. Furthermore, community building is contained as a seed in the above-mentioned four requirements, because the second one runs as follows: “the teacher should be a person who is interested in everything which concerns the world and the human being.”⁸ Nobody would like to admit to being a person lacking in interest. We experience *interest*, so to speak, as something which every human being is basically equipped with in our time. And yet it is formulated here as a fundamental requirement for teachers. This is obviously something that needs conscious tending. Therefore, there must be some part of us which needs to be educated to develop interest. When I observe what I do at those moments when I find myself not being interested in something, I can notice that I want to stay in my own little circle; I feel as if I have enough to deal with when I keep to myself. I close myself off. But when I persist and try to develop interest, I will experience something like a freeing from the narrow bonds of myself. This happens when I turn towards something else. I open up.

Imagine that one practices this newly discovered capacity with a colleague whom one usually shuns. Something new will open up. Persisting in this will lead to rich and new discoveries. Not only will I get to know myself anew, but I will also gain the sense of how I help to build community. This opens up a new appreciation of the necessity for all colleagues to partake in child study, not just those who know the child or just the “specialists.” One will also

understand anew what a blessing it is for a circle of teachers when the kindergarten teachers take part in the meetings. It should be a matter of course.

When this comes about, we will have started to tackle the third type of confusion. But the same thing holds true here also, namely that we have to find a way towards a new sense of commitment.

These remarks cannot lay claim to offering solutions for the way things are in individual Waldorf schools. They merely try to offer a few examples of the *inner practice of anthroposophy*.

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Christof Wiechert was born in 1945 and went to the Waldorf school in The Hague, the Netherlands. He studied pedagogy and geography and taught for 30 years at the Waldorf school in The Hague after that. During that time he was a co-founder of a state-certified, Waldorf training center. He was also on the board of the Anthroposophical Society in the Netherlands and developed a course on the Art of Child Study together with Ate Koopmans. He has lectured widely both in the Netherlands and abroad. He has been a member of the Pedagogical Section of the Anthroposophical Society since 1999 and became its leader in October of 2000. Christof Wiechert is married and has five children.



Discovering the True Nature of Educational Assessment

Paul Zachos

Testing and particularly standardized tests are increasingly identified as sources of a host of ills that afflict contemporary education. The ills have been widely catalogued and discussed.¹ Testing and standardization are not, however, in themselves, the causes of these ills; to think so would be an error and a distraction, because the real problem is far deeper and more widespread. It lies in the *non-educational uses of tests*, an almost universal, unhealthy practice.

The key to solving many of the problems that we associate with testing is the adoption of sound testing practices, in particular the use of what I will call *educational assessment*. In addition, I believe that the adoption of sound assessment practices by Waldorf educators can contribute to a renewal of mainstream education in the 21st century. In order to assume such a leadership role, we must first understand how tests are currently misused and how tests *could be* used to support teaching and learning.

The Proper Use of Tests

We teach because there is something that we wish our students to learn. That something can be seen as a *learning goal*. If we imagine the developing human being we will also imagine faculties or capabilities that we see as desired attributes of that being. These may be facility in reading musical notes, the ability to reason with proportions, or understanding how the political, economic, and cultural spheres interact. Such imaginings are a first

step in formulating practical *learning goals* that can be used to give direction to instruction.

Educational activities are justified because they contribute to the attainment of worthy goals for learning.² Similarly, only tests that contribute to the achievement of learning goals can truly be considered educational. *Educational assessment* is, and should be, exclusively, the process of finding out the extent to which specified learning goals have been attained. When we use information about students' levels of success in attaining our goals to decide what we will teach and how we will teach it, we are serving a truly educational purpose; our assessment results are being used to support teaching and learning.

The educational value of assessment information lies just in the appropriateness and availability of that information for use in planning and improving instruction. Use of assessment information for other purposes (e.g., to decide whether to pass or fail a student) is necessarily a *non-educational* use of testing! When we evaluate a piece of student work by considering its desirable and undesirable features and assign a grade to that work, when we add up the number of items answered correctly on a test and give a score, no matter how noble our intentions are, no matter how carefully we have thought through our formulas, we are not serving a direct educational purpose because these grades are not directed to achieving learning goals. We may in some way be serving our school, our children's parents, our need to control student behavior, or a college admission process, but we are not serving the process of learning.

Current testing practices usually do not provide information that can be used to plan and improve instruction for the group of students who are being tested. Typically, tests are given when instruction is complete, at the end of a unit, section, semester, or school year. These assessments are known as *summative assessments*. That is, they provide a summary of past learning. Summative test results, by their very nature, cannot be used to support teaching and learning for those being tested. At best, instruction can be improved for future classes. Post-instruction tests may support some learning if test results are provided to students with detailed feedback regarding specific learning goals, but they cannot influence instruction because instruction on the topic of interest has already come to an end.

The best time for educational assessment is before or during the process of instruction, while opportunities for instruction and learning still exist, not after instruction has ended. Such assessments are referred to as *formative assessments* in that they are conducted in the course of instruction and so have the possibility, indeed the role, of influencing the direction and nature of instruction. But simply conducting formative assessments, rather than summative assessments, is not sufficient to assure the productive role of assessment in education. Tests cannot be useful for planning instruction (whether they are teacher-made or are conventional, standardized, or high stakes tests) when they do not provide information about the extent to which specific *learning goals* were attained. Without clearly specified learning goals and a sense of where students are at with regard to those goals, teachers do not have the basis for crafting instruction that fits the students' educational needs.

As a result, instead of having tools with which to maximize learning, we typically end up with scores that only serve to rank students based on the number of test items they answered correctly or how well we feel that they performed some task. The fact that a test is administered in school does not mean that it is serving an educational purpose. On the contrary, reflection and observation on this issue will show that most of the testing that occurs in schools is non-educational!

An Example of Educational Assessment

What does truly educational assessment look like? For several years now, my colleagues and I at the Association for the Cooperative Advancement of Science and Education have been working on the broad goal of developing the creative scientific capacities of secondary school science students. Our program is directed toward developing the capabilities of students to conduct scientific inquiry and

discover scientific concepts through their own investigations. The program is founded on our belief that in establishing scientific concepts for themselves, students form a personal relationship both to nature and to the scientific search for truth. Specifically, we work to help students attain the abilities needed to rigorously observe and describe their observations, to reason with proportions, to organize and analyze information, to build and test concepts, and to realize the impact of their own actions and thinking on their judgments and conclusions.³

We do this by presenting students with phenomena that give opportunities to experience natural forces at work (for example, floating and sinking objects, patterns of shadows over the course of the day and the year, and the balancing of objects on fulcrums). We pose challenges that require students to observe, conceptualize, and bring order to their representations of the phenomenon. From the students' responses we can assess their level of competence with respect to a variety of *core capabilities* and *concepts*. For example, we are interested in students' predictions and reasoning concerning whether a cube will float or sink in a given liquid when a larger cube of the same weight has just been shown to sink in that liquid. Students are asked to predict whether the smaller cube will float or sink, or whether there is not enough information to make an accurate prediction. (In many cases, the last option represents the most scientifically defensible choice.) Students must also provide the reasoning that underlies their answer. This task requires them to organize a system of judgments and conclusions somewhat along the following lines: *The larger cube has sunk because it is denser than the liquid in which it was immersed. The smaller cube, weighing the same as the larger, must be even denser and so will surely also sink in the same liquid.*

One learning goal that can be assessed through observing student performance on the above activity is the ability to conceptualize the density of solid objects. Density is a central scientific concept that underlies competent performance in all of the natural sciences that are to be studied in high school, and so we consider this a worthy learning goal. Students' predictions and reasoning concerning the density of the cubes can be characterized in part by using the following scale of competence:

Conceptualizes Density of Solid Objects

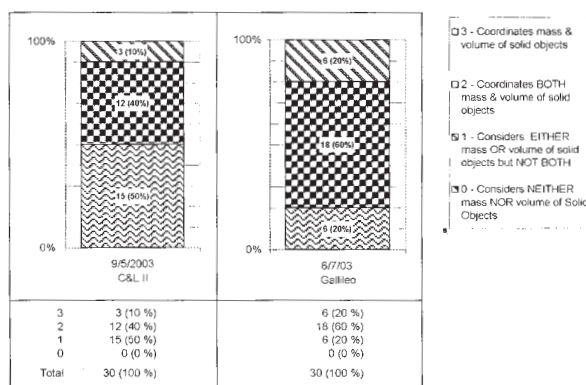
- 3 Coordinates mass and volume of solid object
- 2 Considers both mass and volume of solid object
- 1 Considers mass or volume of solid object, but not both
- 0 Neither mass nor volume of solid object is considered

(A similar learning goal exists that deals with conceptualization of the density of liquids, and another

exists that concerns understanding the relative roles of the densities of the solid object and the liquid in floating or sinking.)

Students' performances on the task described above provide a basis for using the scale of competence to infer the students' conceptualizations of density. The scale provides considerably more than a way of indicating that some students are doing better than others. It serves the diagnostic role of telling us, specifically, what students have attained or what they are lacking in knowledge or skill. It provides information that is immediately translatable into instructional action. From this information, a teacher can form a picture of the ability of the class or of individuals to conceptualize the phenomenon. The figure, below, represents one possible visualization of the performance of a full class on the conceptualization of density of solid objects:

Conceptualizes Density of Solid Objects



This report provides graphic and numeric representations of the proportion of students who are functioning at each level of competence on the conceptualization of solid density scale at two points in time. This provides the opportunity to observe a progression in attainment and to consider whether expectations for student attainment were met or not. In the on-line information system from which this screen image was taken, one can 'drill down' into each of the scale levels in the bar graph to identify the individual students performing at each level, and, thereby, see who is most in need of additional instruction.

Thus, educational assessment can give the teacher information needed to plan an appropriate lesson directed to both the class and to individual students. The teacher has an empirical basis for lesson planning, but is, at the same time, free to use discretion in creating an imaginative response to the facts of student performance. We recommend to teachers that such assessments be administered as a pre-test (to determine what needs to be taught and to whom), and, over the course of instruction, to

gauge its success. A post-test can provide an ultimate evaluation of the degree to which instruction was successful.

We discourage teachers from grading student work based on attainment of learning goals such as this one. We recommend that teachers make a point of telling students that they will not be graded on the basis of whether their answers are correct or incorrect. If the teacher *must* assign a grade based on these assessment tasks, we encourage the teacher to assign the grade based on whether students complete all the items in the assessment, whether they provide neat and clear responses, and whether they use complete sentences (or try to) when they are asked to do so. There are many reasons for this; let us consider only three:

- In order to have the best information for instructional planning, we want to know what students actually believe and think, not what they think is the 'right answer' that will please the teacher.
- If students are concerned about whether they have the 'right answer' for the teacher they will not be able to focus their full attention on the phenomenon and the problem at hand.
- By not grading students for their attainment we protect the students' relationships to the natural phenomenon from contamination by the desire for social approval.

Thus, we have a truly educational assessment. By giving teachers careful preparation in administering such tasks and in objectively interpreting student performance, we achieve the rigor and reliability of information that is the hallmark of standardized tests. Furthermore, we do so without inducing many of the undesirable consequences associated with standardized tests. Teachers in public and independent schools are currently using these methods and finding them both illuminating and helpful.

Students cannot prepare for such an assessment task simply by memorizing concepts. Rather, they must be fluid and flexible in applying their concepts and reasoning capabilities to the phenomenon of interest. We believe that the development of the capabilities assessed through such activities requires that the teacher inspire interest, attentiveness, and personal engagement with phenomena. Those who may have "crammed" the facts related to density and floating or sinking can find themselves worse off in dealing with such tasks than those who have not. Zachos, et al, found that students who were not explicitly working with a prior concept of density, but who were thinking in a lively fashion, were able to recognize the necessity for coordinating weight and size of objects, and so began to formu-

late a concept of density of their own, in order to solve the problem at hand.⁴

We find that most secondary school students, at first, do poorly on the challenges associated with this assessment activity, even in the upper grades of high school. Although most have been taught as early as the eighth grade that floating and sinking depend on density, and most can even rattle off a formula for density [Density = Mass/Volume] and use it to calculate values, they do not effectively *apply* the concept of density to the phenomenon. Some do not take the mass or volume of the cubes into consideration at all and claim that there is not enough information to know whether the small cube will float or sink because they don't know what the cube is made of. Others spin hypotheses concerning the properties and behavior of molecules in the cubes but cannot relate them practically to the forces operating in the phenomenon. In neither of these cases are the students able to apply what they have learned in school to the real life task. A test that rated students on whether or not they can recall or calculate the formula for density given above, or one that looks for a particle theory of matter as a higher level of explanation, in and of itself, would fail to show that the student's knowledge is very shallow indeed and, in fact, useless in the practical situation.

The Quandaries of Educational Assessment

We often hear that some learning goals cannot be assessed. By contrast, I suggest it is more productive to think in terms of some learning goals being more difficult to assess than others. There are a number of reasons for this. First, we must consider that learning takes place in the inner life of the human being. Learning processes are by their very nature not observable, and that is true to varying degrees for learning outcomes as well. Consequently, in order to see whether goals for learning have been achieved, we must often engage in a process of inference from the evidence of observable student performance, much as a scientist infers invisible laws and principles from observable natural phenomena. Assessment information may be derived from homework, lab reports, tests, essays, and even classroom conversations. But, like scientific investigation, sound judgments concerning student performance require careful observation, precise conceptualization, organization of observations, rigorous inference, and clear communication. Teachers are typically not trained to engage in these types of activities regarding student performance. It is possible to obtain honest and illuminating information about any learning goal, although in gener-

al, we find that the less observable the outcomes of a learning goal, the more challenging will be the process of making valid inferences about the attainment of that goal.

We also hear arguments that we must wait some number of years—I have heard as many as 30—before we can adequately assess the impact of our teaching. Perhaps this is true, yet there is little point in waiting until next year or after high school is completed to assess whether a child has attained the core concept of density. How the child performed in classroom discussions yesterday, what she wrote on her essay last week, and the question she is asking right now are the living basis for forming pictures of what she needs. These pictures can be the most crucial sources to inform decisions for planning and improving instruction. Schwartz points out that, “if we accept the premise that the child is a being who unfolds his capacities over the course of time, then it follows that the most valid assessments to be made of a child's development are compiled over the long periods of time.”⁵ This, to my mind, is a good reason to assess over time, as often as is practical and wholesome, and in diverse ways as a basis for making valid judgments of student attainment.

Typically, the teacher does not have the time or the expertise to construct rigorous assessments such as the one described in the last section, and for this reason our association has made a commitment to develop assessments for core concepts and capabilities, assessments that are ready—with appropriate professional preparation—to be put to use in educational settings. There is an art and a science to preparing useful educational goals, creating valid assessments, and conducting sound evaluations of educational activities. For example, it is important that educational assessment information be timely, reliable, and communicable in order for it to be useful to the teacher and the educational community.

In summary then, *educational assessment* is best seen strictly as the process of obtaining information that serves as evidence that *learning goals* have been attained. This precision of definition allows us to see clearly into the nature of the problems of testing and find ways to overcome them.

The Potential Contribution of Waldorf Education

There are a number of contributions that Waldorf education can make to the educational community-at-large. These contributions include ways for teachers to develop a deeper understanding of the child and a sense of the child's relationship to the larger scheme of things—to nature, history, and to

the fulfillment of personal destiny in social life. Notions of the integration of thinking, feeling, and willing, sensitivity to cycles of wakefulness and sleep, and understanding of the inner dynamics of the human body in its threefold aspect, are all virtually absent outside of Waldorf education.⁶ Concerns for the profounder aspects of human values and meaning take us beyond finite *learning goals*. These aspects are, in fact, in a realm that can be considered the source and justification, the higher purpose of learning goals. Learning goals by their nature spring from human values and are tools for striving toward valued ends. Because of its explicit confrontation with such larger concerns, Waldorf education holds the potential of offering a richer set of goals or expectations for learning and human development than is found in conventional educational settings. The step must be taken, however, from higher values to setting and working consciously with finite learning goals (e.g. conceptualization of density). That a learning goal is finite does not mean that it is not important. Educational programs must always deal consciously and effectively with finite learning goals.

In the domain of pedagogy, Waldorf schools have pioneered the practice of child study, an approach that the larger educational community is just beginning to explore systematically. The depth of understanding of the stages of the child's development that characterizes Waldorf education is also missing from most conventional classrooms. The argument for sensitivity to developmental stages in the educational life of the children was made cogently by Inhelder and Piaget, who provided a wealth of supporting empirical evidence for its importance.⁷ However, if anything, there seems to be increasing insensitivity to the question of developmental appropriateness of instruction outside of Waldorf and Montessori schools. Interest in promoting emotional intelligence and multiple intelligences are two other areas that could be enriched with the fruits of almost a century of pedagogical practices pioneered in Waldorf schools. Attention to student temperament in educational diagnosis and planning are still to be fully discovered by the educational mainstream. Clearly, Waldorf education has received and put into practice powerful indications for pedagogy. But pedagogic approaches and technique exist because of their anticipated contribution to the achievement of learning goals. In order to establish whether these approaches and techniques are worthy and effective we must establish their contribution to the attainment of worthy learning goals.

What I find to be largely missing in Waldorf education is sound, rigorous knowledge—even consciousness—of what the child has and has not attained, that is, the extent to which goals for learning have

been achieved. This is not surprising for a community which has, for the most part, not been working explicitly with educational goal setting and educational assessment as I have defined them. Waldorf educators should not avoid such educational considerations, and indeed attention to them would put Waldorf education in a position of leadership and give it the possibility of bringing new insights and perspectives into learning and the purposes of education to the educational mainstream.

The Law of Educational Program Transformation

There is a law of educational program transformation and Waldorf schools are becoming increasingly subject to this law. The law states that: *The nature of the assessment that is used to evaluate an educational program determines the curriculum and instruction of that program.* This law dictates that when you use a certain test to decide whether an educational program is successful, teachers will start changing the program so that students will do well on the test. This law is the basis of the phenomenon of “teaching to the test.” The fact that learning goals are not stated and worked with explicitly does not mean that they do not exist. What typically happens when this is the case is that the capabilities needed to do well on a test become the default learning goals. They then drive the instructional program in an unconscious and typically unintentional way. Students' attention and ingenuity turn away from confrontation with the subject matter and the real world to “psyching out” the teacher and the test. In this way, conventional tests blindly drive educational programs through their implicit learning goals.

To assure that Waldorf programs are effective mediums for the attainment of worthy learning goals—and to make possible the larger contribution of Waldorf education to the renewal of the educational enterprise world-wide—I recommend that a number of steps be taken:

- Develop clear statements of the goals of Waldorf education;
- Establish by argument and otherwise, the worthiness of these goals; and,
- Develop productive ways to assess the extent to which these goals are being achieved via *educational assessments*. The results of these assessments should be such that they would be of direct use to teachers in planning and improving instruction. They should also be such that they provide rigorous ways for teachers to communicate with students, colleagues, and their communities about student progress in attaining valued attributes, and how to best realize the students' potential.

This would be an ambitious enterprise, but I believe, an enlightening experience as well. One might begin it by considering core learning goals for year- or semester-long track classes. In these classes, capabilities are developed that we assume students should have available to them for their work in the main lesson blocks. Information on the extent of achievement of these goals could be the basis of fruitful collaboration between track-class and main lesson teachers and a basis for rigorous, fact-based child study leading to remediation or enrichment where needed. Because little has been done in this arena, the possibilities and freedom for creative approaches to both are quite broad. Another possibility would be to make explicit the learning goals implied in an existing curriculum such as *form drawing* that is unique to Waldorf education. The study of students' form drawings would have an added value in that form drawing provides information that can be used diagnostically to reveal student readiness for instruction in other curricula. In any case, it should not end up that the success of Waldorf education is judged by conventional, standardized tests. Meaningful educational assessment could be Waldorf education's response to the challenges and problems of standardization.

Conclusion

There is nothing that human beings can create that cannot be misused. So it is with methods of assessment and evaluation. Affecting change in human beings is always, as they say, "a risky business." The physician is enjoined to "do no harm," and we in education must take heed to follow the same prescription. By making sure that our assessments are purely "educational" we can go a long way toward realizing the ideal of doing no harm and hopefully attaining some good as well. Ridding Waldorf schools of educational assessment would undermine sound practice in Waldorf education. It would impede the impulse of Waldorf education that is directed to deep knowledge of the child.

I have presented some ways to think about educational programs and particularly ways to think clearly about student assessment. I have argued that *educational assessment* based on *learning goals* is both necessary and beneficial. It is my hope and intention in presenting these ideas to begin conversations on productive approaches to educational assessment in Waldorf education. I look forward to being part of such conversations.

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The Kindergarten Child

Peter Lang

***Editor's Note:** Last year the Paris-based Organization for Economic Cooperation and Development announced the results of its Program for International Student Assessment, known as PISA. One of the results of PISA has been a demand on the part of politicians to call for the increased teaching of academic subjects and imposition of standardized testing at every age level. The kindergarten has especially been subject to these pressures. In contrast to these demands, Peter Lang addresses the unique needs of the preschool and kindergarten child.*

The kindergarten has come into the public arena. In the political debate about the consequences of the conclusions of the PISA study, the kindergarten is, in many cases, not understood as a place of development in which children acquire the essential, vital, basic skills needed as a foundation for future school learning. Time spent in kindergarten is often characterized as "cuddly education" and "wasted time." According to a series of articles about the new education catastrophe in Germany in *Der Spiegel* (a German weekly news magazine), the dogma remains that kindergarten involves only playing and no learning, and, that as a result, a kind of cultural malnutrition takes place. The call for beginning school earlier is becoming louder, and, at first glance, may even appear logical. However, logical does not always mean appropriate or just. For this reason, it is more urgent than ever that, in the immediate future, the developmental needs of

young children be highlighted and examined in order to see what requisites for kindergarten education emerge. At the same time, it can be shown that in Waldorf education, kindergarten is a time of thorough preparation for future learning in school and in life. Children are individuals who develop and who, with their talents, inclinations, interests, and also handicaps, want to go their own ways.

In order to facilitate this process in the best possible way, they need competent adult role models, loving and secure relationships, and their own rate of development. Children do not fit into the timetables of the adult world, nor do they fit into purposeful political or economic agendas. Children are capable of learning, joyful at learning, and ready to learn. Their developmental windows are wide open, especially in the preschool and first school years. That is where the responsibility arises for adults to shape the child's world in such a way that at least these three main components permeate their upbringing:

1. Comprehension: Children should and want to know and learn to understand the world in its interconnectedness; therefore, the methodology here should consist of simple and easily grasped

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associations that lead into the ever more complex.

2. Application: Children gain trust in their own growing powers and abilities primarily when they get many opportunities to do things themselves and master tasks themselves. When help is needed, it should, of course, be forthcoming.

3. Meaningfulness: Children should develop a sense of meaning in their own actions, feelings, and thoughts, step by step. That requires qualified role models in childhood and youth as an orientation and accompaniment on their path.

School-readiness should be determined by the actual physical and mental development of the child, and this is not necessarily in step with legal regulations or economic considerations. Before school readiness, it is not specific, testable knowledge that the child needs. Quite the opposite is true! The time before school, free from formal learning, allows for the development of basic skills on which later formal education and training can build. These skills make it possible for the future youth and adult to arrive at a position where he or she can master the demands of daily life in the best possible way. They are the requisite foundations for further specialization. Before school readiness, children neither need nor do they tolerate one-sided intellectualization. The same applies to so-called "cuddly education." Children need the mindful attention of parents and of well-trained educators to give them orientation. Only in this way can they find their own paths.

Waldorf Kindergartens as Skills Centers

Waldorf kindergartens have always been understood to be not just safe havens: They are intended to better the developmental conditions of each child and afford him or her a happy and learning-intensive childhood.

In Waldorf pedagogy, there are seven skills areas that are highlighted for children up to age six or seven:

1. Body and Movement

Scientists and teachers have established that more than half of all first-graders have problems with posture or balance, or are overweight. Many children suffer from lack of movement; their large motor and fine motor skills are insufficiently developed. But the human being's mental and spiritual orientation and balance correspond to his or her physical flexibility and mobility; those who cannot maintain physical balance usually have problems with mental balance. Also, the ability to move definitely influ-

ences the acquisition of speech. The ability to comprehend something and then go towards it permeates perception, widens the horizon of a child's experience, and activates the speech development process. Children who learn active, versatile movement are also preparing the way to more skillful thinking. That is why special attention is paid in Waldorf education to ensure that children get much varied physical movement. Regular walks, games, or gardening also belong in this domain of movement as do finger games and handwork (such as sewing or embroidery).

Tips on method: Perception of the body, development of bodily sense of self, and the motor and fine motor skills come about, for example, by walking, climbing, and jumping rope, gardening and kitchen work, by playing simple musical instruments, and doing simple woodwork such as building a bird-house.

2. The Senses and Perception

Virtual worlds are becoming epidemic. They present us with qualities that never occur in reality. In order not to fall for these deceptive images, we must depend on our senses more than ever. We need an enhanced perception skill. Our children require an alert consciousness for all that happens around them and to them. What develops is the trust in one's own power of perception. That is why dependable, unadulterated impressions are especially important in current times. Even media skills, which are desirable later, must be developed through a pedagogical foundation. "Media skill," according to Joseph Weizenbaum, an American computer expert from M.I.T., "means the ability to think critically. One learns critical thinking solely through critically processed reading and that is conditional on a high level of speech competence."

In the Waldorf kindergarten, children first discover and explore the real world with their senses and thereby get to know and learn to understand simple, perceptible connections. In this way, along with their own joy of discovery, they also gradually experience elementary laws of nature. Such fundamental requisites as these should be present, at the least, before children enter into more complicated, abstract connections. Therefore, computers or television in kindergarten can in no way promote media skills needed later.

Tips on method: Nurture the human senses by creating harmonious surroundings, among other things, with soothing blends of colors and materials, and by utilizing healthy, organic foods and natural materials.

3. Speech

Thinking and speaking are closely connected. We can express what we are thinking through speech. With speech we can express our feelings, give names to all things in the world, and enter into discussions with one another. However, this instrument requires early, active, and careful nurturing. Children learn to speak in a speaking environment. This depends, first of all, upon the personal relationship between those speaking and those listening. If a child perceives warmth of soul and language from the adults, then this enables the child to also develop good, clear speech. *When* a child begins to speak varies according to the individual. But all children need good speech role models in order to grow in their language.

Songs, stories, verses, finger games, and rhymes have an important place in a Waldorf kindergarten. The children playfully learn the language and become at home in it. The speech of the educator should, therefore, be loving, clear, imaginative, and age appropriate. Baby talk does not have a place here, nor does the use of abstract explanations.

Tips on method: Good speech role models, clear, vocabulary-rich and imaginative speech, songs, verses, finger games, rhymes, correct naming of things such as plants and animals, daily storytelling or reading from meaningful stories, fairytales, and so forth, allow the children to develop their language skills.

Take time to listen to them and do not correct their speech. From these activities, joy for reading and reading ability will emerge.

4. Imagination and Creativity

The paradox is omnipresent. All around us, more and more aspects of life are being standardized, prefabricated, and defined. On the other hand, human social development is unthinkable without imagination and creativity. Will we soon even still be capable of these two capacities? How do we acquire and maintain them? A wealth of ideas, mental/spiritual flexibility, and imagination are required of adults (and rightly so) to enable them to shape their lives and work, and kindergarten is the time to invest in the development of these faculties. Everything imaginative, everything artistic, vitalizes and expands the soul and consciousness of human beings.

Development and care of childhood imagination takes on concrete form in the Waldorf kindergarten. There are many non-standardized and "barely finished" toys that stimulate children's creative powers. Stories animate the children to translate what

they hear into play. Daily playtime is ample enough for the children to be concentrated and spur each other on to finding joy in activities.

Tips on method: Use toys and play materials that stimulate the imagination, such as rocks, boards, pieces of wood, large pieces of cloth, and scarves. Have regular playtimes in the forest or garden, with variations in games such as role playing and puppet plays. Tell inspiring and motivating stories that can then be translated into the children's play. The archetypal trade stories should be told and a relationship developed to them through play. Provide opportunities for pretending to be shoemakers, carpenters or tailors (the archetypal trades).

5. Social Ability

Social cohesiveness must be learned. Without social competence, the healthy life of an individual person and a society is inconceivable.

Children are social beings from birth and will studiously acclimate themselves to social relationships. These learning processes begin in the family and continue in the kindergarten. As more and more children are growing up in one-child families, often with only one parent, with the result that their social field of practice is limited, the kindergarten must thus now, more than ever, become the basis for social experience. Social interaction is always a matter of bringing the interests, desires, and needs of the individual into a relationship with the group or community. On the one hand, individuals must be able to bring their own abilities and intentions, and, on the other hand, the needs of everyone else should have a place. For this, rules, agreements, and trust are necessary. Children need communities in which they can orient themselves and learn as many of these social rules of life as possible.

A Waldorf kindergarten is such an environment. The children learn that there are rules as well as a structure-creating rhythm to the day and week that lead to single children or groups taking over certain tasks (such as tidying up or setting the table). The children orient themselves by imitating the teacher. Through this process, they also learn to take responsibility and to use their own creative space that has resulted and, at the same time, they get practice in useful activities.

Tips on method: Mixed-age groups offer opportunities for children to help each other. Help children to take over tasks such as rinsing the dishes, tidying the room, watering the plants. Foster social orientation by telling meaningful stories and through encouraging role playing father-mother-child, fire-fighting, hospital, store. Help children learn to give, receive, and share. Have children experience

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parents helping in the kindergarten, for example, repairing toys, organizing festivals, or doing renovation work. Practice solving conflict, for example, by apologizing when it is called for.

6. Motivation and Concentration

Today many children, youth, and adults suffer from nervousness, hyperactivity, and a lack of concentration. Their enthusiasm has been limited as well as their ability to connect themselves with certain activities for a given period of time. In science and education, the causative factors (pathogenesis) have long been sought and researched. At the same time, there has been an effort to get to know and strengthen the healthy and stabilizing factors (salutogenesis).

The Waldorf teachers' tasks are to identify habits and impressions that are harmful to the development of the small child and to keep them away from the child (for example, television at an early age). At the same time, their educational efforts are directed toward health-promoting factors. For instance, they recognize the young child's desire for learning and activity and stimulate that desire and the child's natural tendency to imitate through role modeling. Interesting and stimulating possibilities for activity have a motivating effect on the children. Regular repetition and rhythmic, creative elements in the daily kindergarten routine, as well as regular attention to seasonal changes highlighted with festivals, all, therefore, help the child to develop the ability to concentrate.

Tips on method: Encourage self-created play and have toys that stimulate initiative and offer manifold possibilities for play. Help children get to know processes from beginning to end and participate in them themselves (for example, in baking, laundry, and gardening). Help children experience appropriate activities having to do with adult daily life instead of unplanned, senseless, or unhealthy activities.

7. Ethics and Moral Values

In order to shape their own lives, children, like adults, need mental/spiritual orientation, values, and tasks with which they can internally connect. Children need rules, rituals, clarity, and truthfulness. They want to experience adults who are engaged and involved and can give them moral orientation without preaching. However, today many children find only the standards of a fun-and-recreation-oriented society in their surroundings without any supporting commitment.

Waldorf pedagogy consciously incorporates ethics and morals into its educational approach. It recog-

nizes that children need a supportive environment to absorb the good, beautiful, and true, just as they need respect for other people, other cultures, and nature. Children must also learn that the experience of respect, beauty, and truth is linked to personal engagement and involvement.

Tips on method: Prepare and celebrate festivals. Provide opportunities for loving contact with nature. Provide opportunities for practicing charity and "loving thy neighbor," gratitude (verse before meals), and helpfulness. Enable children to experience their parents' involvement in the community and in the kindergarten. Help them to learn respect for differences. Provide opportunities for hearing and singing songs and saying verses from other cultures.

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THE TEACHING OF SCIENCE

David Mitchell

Waldorf education works with the developmental stages of growth in children. The harmonious unfolding of the personality depends on the healthy maturation of each developmental stage, and each progression builds upon the one before it. Strengthening a child's later cognition in science begins with the building of a strong foundation in the early years, initially by parents and family and later by teachers.

Preschool children are informed about the world through their bodily or sense impressions. The wonder in the world passes directly into their physical, sensory organization through every experience they encounter. Impressions are stored as cellular memory as the organs of the body are being sculpted. Young children have a feeling of "oneness" with the world, and the world is their teacher. These sensory engravings later become the basis upon which scientific cognition is founded.

What can parents do to help their children? Parents have the opportunity to enrich this time of development by surrounding their children with beauty, rhythm, and activities that appropriately stimulate the senses. The nourishment the parent provides for the child builds security in the world and allows for the gradual awakening of the individuality or self. In the early years, everything coming toward the child from the environment requires adult attention and discretion; sounds, tastes, light sources, and all outer impressions which could possibly overstimulate the child's sense life and throw it into imbalance need to be monitored.

Stimulation of the Senses Astute Observation Rigorous Training in Thinking Phenomenological Thinking

To constructively aid development, adults could arrange activities so the children are consciously exposed to different smells (acrid, sweet, pungent), tastes (salty, sweet, sour), surfaces (smooth, rough, soft, and so on). However, parents should be cautious that their efforts do not overstimulate the child through too much structured activity. Additionally, too much conversation with the child regarding conclusions or ideas relating to the sensory impressions should also be avoided. They could be encouraged to practice balancing on logs and stones; they could jump rope and be introduced to other games requiring rhythmic movement and spatial awareness. Warm, cool, hot, and tepid should become living experiences, and lightness, heaviness, bigness, and smallness should be understood through wakeful activity. All of the primary senses need to be set to work. A good place to do this is the kitchen where science underlies every activity.

The children can experience the smell of yeast as the bread rises (fermentation) as well as the transformation of the bread as it is being baked; they could, on special occasions, experience the old traditional kitchen tasks of boiling fruit and jelling jams with pectin, the caramelizing of sugar, the separation of whey from milk, and the aroma of eggs being fried or custard being baked with nutmeg. In the kitchen, the mother and father become resident chemists, and if they ensoul their activity with love, they will fill the child's soul with warmth, and will help the child develop a loving relationship for learning and experimenting as he observes and imitates the parents. These participatory activities

become the foundation stones for later-acquired scientific thinking.

The ages between three and five are the time when the children are learning to comprehend weight (mass)—but understanding it directly through their limbs and senses. Once, at a birthday party for one of our four children, I made the mistake of cutting the birthday cake disproportionately. My four-year-old daughter complained to me that her older sister had received a larger piece. Quietly, I reached over and cut hers in half and said, "There, now you have two," and she was satisfied. This would not work with a child past the age of seven.

Try never to answer a child's scientific questions with dead or fixed concepts. A young child does not have the ability to fully comprehend scientific abstraction. Children need living pictures that fill their souls with wonder and surprise, not dead abstract reasoning. Their inner imaging becomes vitalized when an observation awakens a feeling of reverence. Reverence and a sense of wonder are the groundwork that Waldorf education uses to build its science curriculum.

It is interesting to consider the derivation of the word "science." It evolved from the Latin word *scientia* which means "knowledge." In science, knowledge is acquired through observation. The task for teachers and parents of young children is to create the conditions to experience wonder and love from all that they meet in the world. Most every Sunday, when our four children were small, my wife and I would take them for a walk around the neighborhood "ring road" in wooded southern New Hampshire. On every stroll the children darted from side to side noticing new growth, patterns in the flow of the small stream, the sound of our feet shuffling through snow at different temperatures, the shape of seed pods, and the crunchy quality of dead plants in January. We said very little but acknowledged their treasures. This type of activity in early childhood opens capacities needed for science when they reach puberty.

How does one observe? The word "observation" has the roots of two words within it—"serve" and "object." This is the key to the activity of looking at something; we ask the children "to serve the object." In other words, we ask them to put aside their feelings, their sympathies and antipathies, their preconceived notions, and to ultimately allow the phenomena themselves to speak directly to them, to fill their souls.

Some of the activities which help lay a healthy foundation for scientific thinking in the elementary school child involve activities in nature—walks where

the child's observation is stimulated to notice the seeds in the swaying grasses, the pattern of the bark on different trees, the glitter within a rock, the geometry of a particular leaf or flower, the reflection in a puddle, and so on. The important thing at this stage is not to allow judgments or concepts to become fixed. Rather, let the observations stand, expand upon them, and provide opportunities for experimentation and comparison. The children do not require overt adult direction; they need merely to live into the world of nature freely, allowing their own experiences to build. Friedrich Schiller referred to the thinking capacity thus developed as the foundation of what, in later life, is called "spieltrieb" (playful thinking).

Some years ago I presented a lecture on patterns in water movement and "Vibrella Flowforms" to the *Philomorphs* at Harvard University. Attending my lecture was Professor Philip Morrison, chair of the physics department at M.I.T. Dr. Morrison was the former group leader of the Manhattan Project at the University of Chicago and is a columnist for *Scientific American* magazine. After my talk, he lingered and we entered into conversation. He mentioned to me in encouragement, "Many of the most important scientific discoveries have been made by scientists at play." I am certain he was referring to this quality of uninhibited "playful thinking."

In the Waldorf first grade the children meet the metamorphosis of the butterfly and the wisdom imbedded in the various fairy tales. Minerals are available in the classroom as are a terrarium and plants that require human care and consciousness. Academically, the teacher refrains from dry facts or platitudes and strives to build up inner pictures of living organisms. The children's minds are allowed flexibility and expansiveness. The "wholeness" and security in the world is emphasized.

In the second grade the class meets the fables. In a fable, such as "The Wolf and the Lamb" by Aesop, the teacher can ask questions which the class can answer out of the children's own collective observations. How do the wolf and the lamb walk? Both walk on four feet. What are their skins like? The lamb has soft, white, fluffy wool, and the wolf has rough, matted, shaggy fur. What are their teeth like? The lamb has small chisel-shaped front teeth (incisors) which it uses for cutting grass. The wolf has predominantly sharp pointed teeth (canines) which it uses for ripping meat. Both have flat, strong back teeth (molars) for grinding and chewing. How do they live? The lambs live in groups or herds and are dependent on each other for safety. The wolf is a loner and hunts independently for his daily meal, but can also travel in packs to overwhelm prey. In such a way the second grade teacher

can build up objective and accurate pictures from within the animal kingdom which will return in future zoology classes.

The third grade is involved in farming, gardening, house building, measuring, weighing, analyzing soils, identifying grains, and other practical activities which develop and solidify their scientific knowledge. This particular year finds the children going through physical changes. Their heartbeat slows down to a 4 : 1 ratio with their breathing. This is the ratio of the adult.

Also at this age the psychology changes; the children are able to discern a separation between the self and the world. The special tree no longer has a name—it is now objectively a tree! The children begin to lose the complete trust in the world that they had in the early years of childhood. They undergo a transformation from the imaginative, moral treatment of the kingdoms of nature to one in which they stand opposite natural objects in a more objective way—and they now need to understand them. This is developmentally the right time for a more objective science to be taught.

The fourth grade meets this need through the main lesson on zoology that continues into the fifth grade when botany is also added. The question for the teacher is, "What is expressing itself in the plant?" The plant should be examined as an integral part of its environment, but again pictures should be the vehicle for this knowledge, not dry, dead facts.

While teaching botany to my fifth grade, I asked the class one day what a seed was. One of my more imaginative students replied, "A seed is a little box with its lunch inside." The image contained in this response is greater than the fact it conveys. It is an example of metaphorical thinking and is another building block for the scientific reasoning that will blossom in the teenage years.

In the sixth grade, mineralogy is introduced by way of the qualitative character of particular landscapes. Limestone landscapes such as the Mammoth Cave area in Kentucky are compared with granite landscapes such as the White Mountains of New England. What are the distinctive plants of each? How does each landscape react to acid rain? What are the different qualities of granite and limestone? Physics—including acoustics, optics, heat, magnetism, and static electricity—is introduced in the sixth grade as well. Optics is evolved from their experiences with watercolor painting and acoustics from their experiences with music. The children are now asked to accurately describe the phenomena from the demonstrations. These observations then lead

to the discovery of the laws which underlie the phenomena.

Precise, accurate observations (free of attempts to figure out "what is causing it" behind the senses) are the activities which are reinforced for the next two years in the seventh and eighth grades as chemistry is introduced, physics is deepened, astronomy is explored, and human physiology is studied.

The Waldorf approach to these subjects is different from what you yourself might have encountered in public or traditional private school education. Historically, the scientific method is taught by the teacher or the textbook, wherein a hypothesis is presented and the students are told to prove it. This method is linear, has predictable results, and does not stimulate everyone. Physicist Victor Weisskopf objected to this sterile approach when he said, "Science is not flat knowledge, formulae, names. It is curiosity, discovering things, and asking why. . . . We must always begin by asking questions, not by giving answers." And he adds, "You can teach only by creating interest in what is around you, by creating an urge to know." The German poet/scientist Goethe said even more strongly, "Hypotheses are lullabies for teachers to sing their students to sleep!"

Therein is the reason that Waldorf schools use a totally different approach. Waldorf teachers begin with a phenomenon that the students observe. They then take their observations inward and later accurately write what they saw. The class discusses the observations, thinks about them, wrestles with them, perhaps repeats the experiment, and then strives to arrive at a conclusion. Why did such and such happen? In this process, the students' thinking is active. They arrive at the concepts through their own inner thought activity and worked-at judgment. They rediscover what a Cavendish or Priestley is credited with discovering, but they own the experience of finding it themselves, they own the concept they have derived. Later, the acquired activity of thinking will be of use to them in life when encountering problems requiring discrimination, whether they continue to study science or not.

In the ninth and tenth grades of a Waldorf high school, rigor is applied to the thinking. Now the students must do more than just observe. They must bring discipline to their thinking. There must be logic in their statements. They must understand the workings of the internal combustion engine. They must know the glands of the endocrine system and how they function. They must comprehend the properties of metals and understand chemical reactions. Their thinking must become vital, and they must appreciate that it is a thinking which takes the

laws of nature and imagines their applications in new ways not found in nature that has created our modern world. They must learn to value their own thoughts.

When a foundation of observation and disciplined thinking is established, the Waldorf high school science teacher introduces a new type of thinking, while still strengthening and building upon the first two. This "new" thinking is called phenomenological thinking. Quite simply it can be explained as follows: first, the phenomena are carefully observed; second, the rigors and the laws of thinking as well as previously gained concepts in science are considered and the phenomena are contemplated; third, everything up to now is laid to rest, the mind is cleared, and the phenomena themselves are allowed to speak. The student quietly observes what comes forward while keeping the mind from straying. Finally, the student will write what the phenomena revealed in his life of thought. This activity opens one up to new possibilities.

This type of thinking is freed from the senses and allows the universe to speak directly through to the individual. It is a type of thinking that is truly moral and can be the fertile ground for the "new" science of the twenty-first century.

The aim of much conventional education is to lead the child into particular fields of knowledge. Waldorf education has the opposite aim—it strives to transform fields of knowledge into "education" in a way that encourages the child's healthy development.

Science teaching needs teachers to utilize new techniques based on the old wisdom. This requires a combination of kindling the sparks of imagination, quieting the soul so the inspiration can be heard, and presenting intellectual material so that intuitive truths can be experienced. When we do this we attend to both content and character. We help students move from apathy to wonder, from wonder to knowing, and from knowing to gratitude.

School. In 1997, he was selected as one of Amgen Corporation's two "Outstanding Teachers in Colorado." He has been selected to appear in eight different *Who's Who* publications. He has edited numerous books and has authored the following: *Will-Developed Intelligence*; *The Wonders of Waldorf Chemistry*; and *Resource Guide for Waldorf Teachers*. Together with John Petering he has written and edited the *Waldorf Science Newsletter* since its inception twenty issues ago. David and his wife, Anniken, have four grown children and live in Boulder, Colorado.

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Evolution of Consciousness, Rites of Passage, and the Waldorf Curriculum

Alduino Mazzone

I would like to broaden the context in which "rites of passage" may be discussed and, in this article, will approach an exploration from two perspectives: the developments in human consciousness over long periods and a relevant approach for gaining spiritual knowledge today. I believe that a discussion of rites of passage will be more fruitful if considered in the light of longer-term evolutionary developments and their recapitulation in each individual's biography.

Firstly, I want to recall Rudolf Steiner's view that developments in the post-Atlantean epochs have resulted in the diminution of people's awareness of the spiritual world. He points out, further, that this gradual loss has occurred in parallel with both an increased capacity to perceive the sensory world and the development of intellectual thought.¹ Initiation training in the Mystery centres in different cultures aimed to re-establish awareness of the spirit.² A distinction must be made between initiation and rites of passage. The former refers to an experiential relation to the spiritual world, while the latter refers to one of many developmental passages in one's lifetime, of which one could be an initiation into the Mysteries.

The process of emancipation from an unchosen experience of unity with the spirit may be identified from the time when humans began to build an identity of their own from within and no longer derived their sense of self primarily from the cosmos, the gods, nature, their ancestors or from the

family group. The loss of atavistic, clairvoyant consciousness was accompanied by the appearance of a new faculty of thinking.³ This historical progression is recapitulated by every human being and these developments may be observed by Waldorf class-teachers and high school teachers, to varying degrees, in children's development throughout their school-life.

Secondly, I want to acknowledge the serious work of modern writers and practitioners in this field and establish, from those sources, a working definition of rites of passage. For example, in the *Encyclopaedia of Religion*, the anthropologist Mircea Eliade, writes:

Rites of passage are a category of rituals that mark the passage of a person through the life cycle, from one stage to another over time, from one role or social position to another, integrating the human and cultural experiences with biological destiny, birth, reproduction, and death. These ceremonies make the basic distinctions, observed in all groups, between young and old, male and female, living and dead.⁴

As Eliade infers, rites of passage are relevant to more than just adolescents because all stages of life have their transitions. Groff⁵ has cited others, such as Joseph Campbell and Margaret Mead, to assert that the loss of rites of passage in mainstream, Western society has contributed to various social pathologies. One commentator, Malidoma Somé (a Dagara shaman and academic from West Africa),

has made the point that ritual is "the soil" upon which a community's future grows. "When ritual is absent, the young ones are restless or violent, there are no real elders, and the grown-ups are bewildered."⁶

This does not mean that rites of passage are completely absent from the cultural mainstream. For example, graduating from high school, getting a driver's license, the first sexual experience, voting for the first time, or even getting drunk are all seen as rites of passage. Indeed, many of the dangerous or unhealthy behaviours in which young people engage can be seen as misdirected manifestations of a natural or even healing impulse. This includes separation from family, initiations and ritualistic activities, special hairdos, clothing, piercing, tattoos and other accoutrements, consciousness-altering drugs, confrontation of fears, danger, and death, and testing of personal limits.⁷

David Lertzman, writes about "Rediscovery," a culturally based, outdoor education program run in the traditional territories of various "first nations," and highlights the value of experiencing rites of passage through adventure and wilderness activities for youth (both indigenous and non-indigenous). He comments about the importance of rites of passage and notes that:

When these times of transition are marked, ritualised, witnessed, and supported, it creates a kind of experiential map of self-development. Without proper rites of passage, people can become disoriented and lose their way in life's journey. It is as if their life map is incomplete.⁸

A broader context for a distinction between initiation and rites of passage should become apparent in the following consideration about the roots of Waldorf pedagogy; mainly in the Mystery tradition (such as the Egyptian temple schools and the Greek Mystery centres). These were the places where acolytes were prepared for initiation. Communion with or experiencing the nearness of the spirit was more common in the far past and Mystery training made this more conscious. Steiner noted that:

We have to remember that the Mysteries of ancient times were of such a nature and character that in the Mystery centres an actual meeting with the Gods could take place.⁹

Steiner further commented that "the principal of initiation is that, even during his life, man can ascend to the spiritual worlds and learn what takes place there."¹⁰

When the pupil realised himself to be a microcosmic reflection of the greater macrocosm, his relationship to the natural world deepened. That is to say, "the Spirit of Nature was actually perceived in the Mysteries—man felt himself at one with the whole of Nature."¹¹ But the relationship to the world was never one of a detached observer, rather, "There was always a moral element present when man took cognisance of the physical world around him."¹² Nor should it be assumed that Mystery training only took place in cloistered halls, for "...in the past pupils had been led up to mountain tops and downward into deep clefts of the Earth; and they made great efforts, exerting themselves inwardly in all sorts of ways, hoping thereby to rouse the soul within them..."¹³ Thus, self-discovery and Initiation took many forms, but the end was a realisation of oneself as part of the World-All.

In the epoch of the Sentient Soul, the soul-spiritual was drawing more deeply into the life-bodily members, resulting in a gradual sharpening of the senses. Experiences that drew the soul closer to the elements, or heightened awareness of spiritual beings working in the earthly kingdoms of nature, were sought out by those seeking Initiation; for example, by braving snow and ice, rain and fire, and wind and storm on land and sea. The *Epic of Gilgamesh* highlights the human need to confront the forces of nature and seek immortality (for example the affirmation of continuity of the spirit following bodily death) and likewise the confrontation with elemental powers is portrayed in many Nordic sagas.

There is evidently a great fascination in our own times with certain types of physical challenges that are reminiscent of Sentient Soul initiation practices. Self-selected sporting trials, such as rock-climbing, caving, sailing, skiing, sail- or snowboarding, sky-diving, surfing, and many others, all provide challenges to the physical body that call forth endurance, courage, and a greater knowledge of one's own limits. To what extent could a sufficiently developed program in Spatial Dynamics or Bothmer Gymnastics provide the type of physical challenges that would satisfy the Sentient Soul needs of young people?

Mystery experience changed as the relationship between humans and the beings of the spiritual world became more distant (or as the old Mysteries became decadent). The end of the Ephesian Mysteries in the fourth century B.C., for example, was a further marker of the transition to Intellectual Soul development.

That is the important change in the nature of the

Mysteries that meets us when we pass from the ancient East to Greece. The ancient Oriental Mysteries were subject to the conditions of space and locality, whilst in the Greek Mysteries the human being himself came into consideration and what he brought to the Gods. . . . There the first sign of personality makes its appearance.¹⁴

Mythological stories and legends from Greece, such as Perseus and Medusa, Theseus and the Minotaur, The Twelve Labours of Hercules, and the adventures of Odysseus, as depicted in Homer's *Odyssey*, are descriptions of Initiation trials that indicate, in imaginative form, the pupils' struggles to transform and master aspects of their astral nature. Initiation into the Mysteries faded into the background following the death and resurrection of Christ "...not that Initiation ever ceased; it was the form in which the candidates found their way that changed."¹⁵

In the Medieval period of the Greco-Roman epoch, "...here and there were individuals, living simple, humble unpretentious lives...whose pupils were scattered in various directions in accordance with karma...."¹⁶ and these were the unlikely hierophants who initiated the pupils that sought them out. Some wonderful descriptions of Mystery centres in the Middle Ages may be found in the lecture cycle just cited. However, with the dominance of the Western intellectual tradition in an increasingly secular formal education—an education that was for a long time conducted by learned clerics—and by the incorporation of rites of passage in sacraments like baptism, communion, confirmation, and so forth, the need of the populace for connectedness to the sacred was satisfied.

The training role of the medieval guilds (the Freemason lodges being one example) maintained an element of initiation in the passage of young men along the path of apprentice, journeyman, and master. In this training, an attempt was made to provide instruction about universal meaning while mastering the skills in the various trades. At its best, it provided the ultimate in holistic education because young people were challenged and supported to learn with their whole being: their will, feeling, and thought. In the process of acquiring a wealth of practical skills and knowledge through training, mentoring, and oral instruction, something even more important transpired: they learned how to be human beings within their culture.

During the High Middle Ages the pursuit of the artes liberales was at its zenith. Recall the School of Chartres, in which scholarship, artistry, and moral action were fostered through a study of the Seven

Liberal Arts. This broad liberal education fulfilled the needs of the whole person because learning was not yet materialistically based, nor had it become intellectualised. With the advent of the universities in Europe, the pursuit of academic excellence followed a staging process—for examples, degrees from Bachelor to Master to Doctor—and this form continues to this day. The ideal of the "Man for All Seasons," inspired by Renaissance Humanism, led to the "well rounded" training of the courtier. However, the broad education of the "Head, Heart, and Hand" was only available to the privileged few, the gifted, well-to-do, and the leisured classes (such as the nobility). Recall that free, compulsory and secular secondary education was introduced only in the middle of the 20th century in some Western countries.

The Consciousness Soul epoch dawned during the Renaissance and, along with awareness of personality, the fragmentation of religion, art and science began to be experienced, especially with the rise of empiricism. From the middle of the 19th century, materialistic thinking began to be accepted as normal. In this 5th post-Atlantean epoch, cultured westerners began to experience in their souls, together with feelings of greater cosmopolitanism and individualism, an increasingly distant relationship to the religious and spiritual life. In contemporary times, sacraments, rituals, and rites of passage are more often considered to be hangovers of a former age when people's religious and moral life was conditioned and contained in the broad arms of "Mother Church."

However, in the early centuries of the 5th post-Atlantean epoch, significant changes also took place in the "esoteric underground." The Michael age began (1879) and Kali Yuga ended (1899), and this enabled more people to have the possibility of such threshold experiences as seeing the spiritual within the material. A resurgence of interest in esoteric knowledge was evidenced by the emergence, in the late 19th and early 20th centuries, of various "esoteric" movements (among them the Theosophical, and later the Anthroposophical, Societies). The Rosicrucian activity continued—and Rosicrucian initiates helped their pupils to maintain—a balance between their spiritual and earthly natures. This had been a goal of initiation training in the Mystery centres. Waldorf pedagogy fits comfortably within the Mystery schooling tradition in a way that is appropriate for contemporary times.

Although a patriarchal Church's embrace is no longer considered by many to be appropriate or relevant, the yearning for security, predictability, and

guidance continues to linger. In countries once exploited by European imperialism, the initiatory practices and rites of passage of indigenous people have been rediscovered and are providing meaning to those estranged by materialistic values. The nature of the predicament being faced at the start of this millennium may be characterised as one of "holy insecurity," a situation in which people do not really want to return to the limitations of the past, while the present is filled with uncertainty, and there is no clear vision of the future.

I doubt that the hoped-for benefits of reintroducing traditional rites of passage can be achieved by what, in some cases, seems to be reverting to Sentient or Intellectual Soul practices. Today, religious rituals or like-experiences are still available for families that want them. Most young people can benefit greatly from participating in outdoor adventure activities. These activities also serve the aims of regular school curricula. The building of self-confidence, social cohesiveness, cooperative behaviour, leadership, survival skills, and so on, can be achieved without the necessity of creating a special rite. Confidence and self-development also arise when people voluntarily serve others and are recognised for it. Many students find relevance and meaning by participating in community projects, joining local land-care groups, or become volunteers for emergency services, fire fighting, St. John's first-aid, and others.

Steiner presented teachers with the task of grappling with the challenging spirit of Waldorf education. He was aware that, in their consciousness, children inevitably experience a descent from heaven to earth. It is one of the crucial tasks of teachers, as they accompany children from grade to grade, to help "member" them into the evolutionary stream of time. They do this by traversing the past and presenting an imaginative retrospective of the descent from a spiritual all-one-ness to an earthly alone-ness. This mirrors what happened through the epochs and happens again in childhood and youth.¹⁷ Teachers can introduce appropriate experiences because in all curriculum areas, content can be found that will inform the young: "This is where humanity has been, this is where we are, and these will be some of your future challenges."

Curriculum requirements in the Waldorf high school offer countless opportunities for achieving outcomes in personal growth, but while one can hope that this "growth" will occur, it should remain an unintended by-product of the students pursuing their normal studies. Only then can the claim be made that Waldorf schools provide an edu-

cation towards (spiritual) freedom.

While a gradual maturation does take place (and is always a wonder to behold), the twelve-year Waldorf schooling process is not a rite of passage, yet it gives meaning to "rites of passage." Increasing maturity does not just provide greater freedom; it also strengthens and empowers young people for undertaking greater responsibility in life. They must still go out "into the world" and meet the challenging demands of the times, but this "going out" should already begin at school because the hindering powers do not quietly wait for them to leave before recruiting them to their causes!

Today, initiation involves grappling with issues of both personal survival and world survival. What the individual needs is also what is needed for the world. Students should be encouraged to find their own unique link between self and world for herein lays their "mission." Many possible examples of challenges to be faced can be found and presented to, or selected by, students as choices, perhaps, for a Year 12 Project (which may be considered an example of a rite of passage). Here are suggestions of generic themes with which students can begin to grapple:

Confronting the media. This will involve being initiated into the power of the media—how it is useful and how it manipulates and exploits—and learning to use, counter, or survive its illusory power.

Confronting ecological realities such as the unsustainable nature of modern industrial culture in ecological, socio-economic, and existential terms. The issue at hand is the transition to sustainability in all these domains.

Confronting inequalities in the social order. Grappling with Steiner's Threefold Social Order ideal can leave students with profound questions: how can I use this knowledge and understanding to order my own values, to help identify the position held by the spheres of culture, rights, and economy around me, and to provide a basis for how I can contribute to my society?

I have covered, albeit with broad brush strokes, several facets of the theme of "rites of passage." Much more discussion is needed in our profession before any conclusions can be drawn about what is appropriate in our schools. Waldorf schools occur worldwide, and teachers (with the support of their students' parents) must decide on what are appropriate activities to challenge their students. A deeper understanding and an acknowledgement of the diverse needs of adolescents should be the starting

point for decisions affecting their physical and spiritual health and safety.

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Alduino Mazzone is one of the founding teachers of the Mount Barker Waldorf School (in South Australia, 1979). After many years teaching as a class teacher, he now works in adult education and as an educational consultant.





BOOK REVIEW

All Work and No Play...How Educational Reforms Are Harming Our Preschoolers, by Sharna Olfman (Westport, Conn.: Praeger, 2003).

William Ward

When you hear the prominent political slogan for educational reform, "No Child Left Behind," do you feel, "It's about time!" or do you shudder? The positively slanted sound bite would evoke a universal outcry if this egalitarian impulse meant conditioning the youngest children within a system that systematically undermines the love of learning characteristic of childhood. Plausibly laudable goals of "educational excellence" based on "universal standards" and "accountability" (read "high stakes testing") may have the rhetorical ring of good stuff. What if the unforeseen consequence of well-meaning educational reform results in narrowing education to mere teaching to tests oblivious of individual differences and blind to the childhood gifts of wonder and imagination? The disconnect between the economic-political-technological agenda for educational reform and the essential nature of childhood has never been greater. The remedies are poison.

In this context, *All Work and No Play...* belongs in the hands of every parent, educator, and policy maker who questions the fundamental assumptions underpinning our educational system. Editor Sharna Olfman, Ph.D., partner in the Alliance for Childhood and editor of the book series *Childhood in America*, has harvested a definitive body of research on the meaning of children's "play" by leading experts from a variety of disciplines, including those of developmental psycholo-

gy, learning and developmental disorders, developmental neuropsychology, neurology, and educational philosophy and policy. For young children the fundamental, indispensable role of symbolic play as the life's blood of sensory integration, socialization, creative imagination, and intellectual development is established with scientific certainty and existential urgency at precisely the cultural moment when play is most threatened by virtual substitutes, educational policy, the acceleration of childhood, and a host of diffuse societal fears.

It would be wrong to infer from the title that this book may be of primary interest to childcare providers. The challenges to the existing educational paradigm raised by *All Work and No Play...* expand the language of discourse about educational reform beyond the box of the information processing metaphor that determines much of educational policy and budget priorities. This well-documented book uses the insightful research surrounding play/imagination/creativity to confront the reader with fundamental questions about the nature of consciousness, the relationship of the will to brain development, the integrated balance of emotional intelligence with academic development, and, ultimately, how we view the self.

The spectrum of thematically connected essays in *All Work and No Play...* are grouped under four major headings: "The Power of Play in Early

Childhood Education"; "Wired Classrooms/Wired Brains"; "Building Blocks of Intellectual Development: Emotion and Imagination"; and "A Mental Health Crisis among Our Children: the Rise of Technologies and Demise of Play." Dr. Olman's colleagues in the Alliance for Childhood were pioneers in taking a courageously critical stance against the early introduction of computers in elementary education in their publication *Fool's Gold*. Their prophetic warnings have since been born out by subsequent research.

This anthology seeks to "reclaim the language of *standards* and *accountability*, and ground that language in principles of child development and humane pedagogy in the service of educating children to be caring, ethical, creative human beings, who prize humanity and nature, and who will be masters rather than servants of the technologies they help to create." Several well-known exponents of Waldorf education are included among the diverse contributors, including Joan Almon, Christopher Clouser, and Jeffrey Kane.

Taken together, the perceptive and eloquent essays of *All Work and No Play...* expose the fallacy at the heart of current education policy. They advocate the core importance of play for the development of the *self* connected with life, meaning, and purpose, where thinking is not information processing but "infused with emotion, sensory and bodily kinesthetic experience, artistry, imagination, and

soulfulness." Education which fails to recognize the dynamic energy of play as a positive force for lifelong love of learning does not recognize the wisdom of childhood and offers stones instead of bread as tests displace the exploration, wonder, and health of play.

William Ward has been a class teacher for twenty-six years at Hawthorne Valley School in upstate New York, completing three cycles of grades 1-8 before starting his fourth. He is a graduate of Columbia College with a background in English literature. He received his MA in Elementary Education from the Waldorf Institute of Adelphi College. He has written a number of plays inspired by the Waldorf curriculum, lectures on Waldorf education, and is a guest teacher trainer for the Sunbridge College summer intensives.





To the Editor:

Stephen Sagarin Responds

I thank Lucas Zay (*Research Bulletin*, June 2003) and Christof Wiechert (*Research Bulletin*, January 2004) for their thoughtful responses to my essay "No Such Thing: Recovering the Quality of Rudolf Steiner's Educational Work" (*Research Bulletin*, January 2003). I agree with much of what each writes, and I do not find that their points contradict most of what I wrote.

I am uncertain, for example, where Mr. Wiechert's disagreement with me lies; it is not in what I wrote. I believe Mr. Wiechert misunderstood my primary purpose in writing. I wrote this essay to combat the "objectifying consciousness" that would turn "Waldorf education" into a thing, a brand name. Wiechert does not address this central point, but uses the term Waldorf education as if it had not been called into question.

Also, I did not ask the question Mr. Weichert addresses, "What is really new in the Waldorf school?" It seems beside the point to argue about originality. Without Plato, no Aristotle; without Galileo, no Newton. Could you or I have studied Galileo, however, and become Newton? Of course not. Paradigm shifts have both necessary histories and necessary innovators. Genius and originality are matters of perspective. We are far more in need of a perspective that shows Rudolf Steiner in history, however, than we are of one in which he is seen to be infallible and autochthonous. Similarly, I believe we are in danger of rationalizing bad, outdated or misconstrued educational practices as correct—and ignoring great strides in educational practice in the wider world—because they fit or do not fit our

notion of something called Waldorf education.

Lucas Zay mentions the necessity for the "seed called Anthroposophy" within Waldorf education. I agree that there could be no Waldorf education without anthroposophy, but this discussion merely relocates my argument to another word or concept.

Mr. Zay suggests that my essay may be a "mental exercise in reduction," but my aim is exactly the opposite. As my essay states: "Waldorf education simply cannot be seen as the accumulation or collection of some (even infinite) number of defining characteristics. To indulge such a fragmented view is to give credence to a reductionism that Waldorf education stands against." By showing the consequences of objectifying something that we call "Waldorf education," I hoped to demonstrate the consequences of all such objectifications.

Further, Mr. Zay writes, "I am not concerned about name preferences ... as long as one is willing to give [these schools] a name." I disagree, and I look forward to the day when teachers everywhere teach from an understanding of the wisdom of humanity without the need for labels.

Finally, I would like to amend one part of my essay. I wrote that Rudolf Steiner "never" referred to Waldorf education as such when, as the *Register of Rudolf Steiner's Collected Works* shows, on a number of occasions he did. I regret this error and thank Douglas Sloan for drawing my attention to it.

Sincerely,

Stephen Sagarin



WHAT STUDIES HAVE BEEN PUBLISHED ON WALDORF EDUCATION?

Through the years, a number of academic and other forms of theoretical and empirical studies on Waldorf education, Waldorf schools, and Waldorf pupils have been conducted and published by universities, by school authorities in a number of countries, by the schools themselves, and by others, describing, investigating, and discussing Waldorf education.

The following is an incomplete list. We plan to add to it in future issues.

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PLANNED AND ONGOING STUDIES

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OWL Report for Research Bulletin

www.waldorflibrary.org

Marianne Alsop

The past months have been busy for the Online Waldorf Library (www.waldorflibrary.org). We continue to pursue our goal of providing free access to the many resources that may be of help to Waldorf class and specialty teachers in countries where Waldorf resources are scarce or expensive to obtain. We now average 2,000 visitors a month, with the majority of our visitors coming from the United States and Canada. International usage is continuing to be strong with The Philippines, Peru, Turkey, Croatia, and South Africa posting the greatest increase of site visitors. Newly added to our list of countries with visitors to the site are Kenya, Andorra and Trinidad/Tobago.

There are now almost 300 curriculum-related books in print listed in our search database. Pages on the site that receive the most interest continue to be the Search Database (46% of the visitors), the Journals page (39%), the New Resources page (5%), the Links page (6%), Research (3%), and the Contact Us page (1%). The most popular search engines directing viewers to the site are Yahoo (48%), Google (27%), and MSN (21%), with eleven others in much smaller percentages. The most used keywords bringing visitors to the site include "waldorf," "education," "library," and "research." On the Journals page, the following journals continue

to be of the greatest interest to OWL visitors:

Gateways, the *Research Bulletin*, articles from the archives of *Education as an Art*, the archives of the *Waldorf Clearinghouse*, and the *Waldorf Journal Project*.

The OWL site will soon have a new look. With the increasing number of articles, books, dissertations, and the soon-to-be-included "Foundations of Waldorf Education" series, it was time to redesign the site and become more user-friendly by upgrading the search data base. We have received many positive comments and continue to work towards improving all aspects of the web site. Please do not hesitate to contact Marianne Alsop at owlibrary@sbcglobal.net with comments or suggestions.



About the Research Institute for Waldorf Education

The Research Institute for Waldorf Education (formerly WERI) is an initiative on behalf of the Waldorf movement. It has received 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, the Midwest Shared Gifting Group and the Waldorf Schools Fund.

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 movement by becoming a supporting organization of the Association of Waldorf Schools of North America and by co-sponsoring research projects with AWSNA.

During the past six years, we have supported research projects that deal with essential contemporary educational issues such as 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 six years, and we are developing and distributing educational resources to help teachers in all aspects of their work.

Summary of Activities supported by the Research Institute:

Research Projects

Art in Human Development
Attention Related Disorders Research Project
Exploring the Four Polarities in Child Development
Evaluation of the Urban Waldorf School in Milwaukee
Waldorf High School Research Project

Colloquia and Conferences

Towards Wholeness in Learning, 1996
Pathways of Healthy Child Development, 1998
Waldorf High School Research Colloquia,
2000-2001

Resource Development

Computers in Education—handbook for teachers
Being on Earth—a book for scientists and teachers
Online Waldorf Library—a website of resources for
Waldorf education
Themes in Waldorf Education—compilation of
Rudolf Steiner's indications on teaching
language arts and mathematics

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