Revolutionary Change in Education
Montessori’s Discovery of How Children Learn

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Master Teacher
Program Director, Age of Montessori

Authentic Montessori education and training for parents, teachers, teachers-to-be and anyone who interacts with children
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In Maria Montessori’s view of education, its real purpose is to provide “external support for the soul in progress of evolution.” This attention to evolution of the soul is the real revolutionary change in education.

An Introduction to Maria Montessori

Maria Montessori turned traditional educational thinking on its ear, and the reverberations are still being felt as more and more people understand what she really did. Originally a medical doctor, the first woman physician and surgeon in Italy, Montessori had her own private practice, taught at a women’s college in Rome and went back to university for further study. She studied philosophy and psychology, became the Chair of the School of Anthropology at the University of Rome, and became a specialist in the nervous diseases of children.

She undertook to try and educate a group of young children considered to be mentally deficient and uneducable. She used a series of hands-on materials she developed herself along with materials from her predecessor, Dr. Eduard Seguin. Within a year, she presented these children at the state exams in Rome. They passed the exams with flying colors and exceeded many of the normal children. While admirers flocked to compliment her for the amazing results, she began to consider what was wrong with traditional education that held normal children back to the degree that her “deficient children” could outperform them.

In 1907 she got the opportunity she had long desired: to try out her methods with normal children. She began with the children of a Roman tenement and the results amazed even her. Not only did the children learn, but their personalities became more organized and the children became self-disciplined, better coordinated and more joyful. She had uncovered the true nature of the child, mysteriously hidden under generations of misconceptions.

By providing an environment filled with interesting and developmentally appropriate materials for the children to use, they began to focus and work. The simple acts of their own self-selected work demonstrated previously unseen characteristics. People came from all around the world to see Montessori’s “New Children.” What began with one classroom in Rome has now spread to tens of thousands of classrooms in nearly every nation on earth.

Why? How and why did the observations of one woman, trained as a medical doctor rather than as an educator, develop into a set of principles that are successfully applied throughout the world to children of all ages? What is the secret? Maria Montessori’s primary consideration was never
to find a better curriculum or a better “method.” Her interest was always focused on the human personality and how it developed and evolved over time.

Montessori was able, as a scientist, to free herself from preconceived ideas of what education was “supposed to be,” and more importantly what the children to be educated were supposed to be like. She prepared an environment of child-size furniture where the children had the maximum freedom and some interesting materials to work with, and she observed them. She allowed the children to show her their spontaneous actions and interests. She allowed children to be her teachers, and this is how the Montessori Method was born.

Montessori was a doctor and a scientist. She learned so much about children, not by thinking up grand theories, but simply by observing and experimenting. Over time she tried many different materials in her classrooms, but only those which stood the test of time remain. Only the materials that children on every continent continually go back to and like to use are still in today’s Montessori classrooms.

Montessori, Dr. Elisabeth Caspari and Mary Ellen Maunz

Dr. Elisabeth Caspari and her husband Charles, met Maria Montessori during World War II in India, where they found work at an American boarding school. Caspari had taken the Montessori course in Adyar, India, in 1941. During their four years together in India, both a professional and a personal friendship developed. The two European ladies soon became fast friends and spent every afternoon together for the next four years.

In 1979 Elisabeth Caspari and Mary Ellen Maunz met and developed a fast friendship. Caspari was nearing her 80th birthday and Mary Ellen was already a trained Montessorian. In January 1980, precisely 73 years after Montessori opened her first school, Caspari and Maunz began a Montessori teacher training course that was the genesis of Age of Montessori. The course is based faithfully on the materials originally given by Dr. Montessori. Maunz and Caspari remained close friends and collaborators until Caspari’s passing in 2002.

Montessori and Education

To put into a nutshell what we are going to be looking at in this white paper, Maria Montessori discovered that

> Education is not what the teacher gives; education is a natural process spontaneously carried out by the human individual. And is not acquired by listening to words but by experiences upon the environment…. Human teachers can only help the great work that is being done.

To bring about real improvement in education, it is the child we need to look at and empower, not the teachers. This understanding permeates Montessori schools throughout the world. Does it enter the schools of education? Have young college students on the way to becoming teachers been exposed to these ideas? I wanted to know, and took a small sample of students from a university in Minnesota and from teachers already employed in Chicago. I asked them to define “education.”

The responses covered a large range of thought and you may find your own views among the different answers.
A Wide Range of Views of Education:
A Comparison between Traditional and Montessori

Definitions of education
So what does a twenty-first century, educated person believe about the purposes of education? The students and teachers I asked had not been involved in Montessori training. I was not their teacher. These were typical students and teachers in traditional programs. Here are some samples of what they wrote, and the contrasting ideas of what Montessori education offers.

Education as factual learning of separate subjects
“I believe my definition of education entails the facts that a person has learned in all the different subjects.” Here is the idea of education based on “just the facts.” Facts are good, but integration into something meaningful is better. Psychologist Mario Montessori Jr., grandson of Maria, explains:

A common misconception is that young children are inexperienced and incapable of dealing with abstractions and should be given the world in bits and pieces, from the immediate environment to the more distant, complex situation…. This view, however, DOES NOT correspond to the way children acquire knowledge! They learn tremendous amounts of information without any teaching at all. They have seen it all and the absorbent mind has stored images. What each absorbs is unique to individual interests and awareness.

In much of traditional education, each hour of school is a different subject with little or no attempt to demonstrate either relevance to life or connection between the subjects.

Integration entails bringing all parts of something together. Yet in our educational system, we routinely encourage students to gain an astonishing array of random facts with little understanding of their significance or guidance as to what to do with them. Contrast this to Maria Montessori’s ideas of keeping the focus on development through bringing content to children at special times when their brains crave it through hands-on means that are vitally interesting.

Montessori education as integration
Integration of “the facts that a person has learned” into larger patterns brings meaning. If one has random facts but no context of personal meaning, learning becomes a waste of time. Montessori works to make everything learned a personal exploration. For young children, Montessori’s goal was what she called synthetic movement, which she described as “movement ordered and directed by the mind to an intelligible purpose.”

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So here in one simple lesson, we have integration of the facets of the developing child:

- **Spirit** – The inner teacher drives the process. We have allowed the child the freedom to listen to her inner teacher and follow it in her decision-making for what lesson she will do on a particular morning.
- **Emotions** – The child sees something that interests her and she genuinely desires to do it.
- **Mind** - Her mind is engaged as she follows the sequence of the lesson, constructing her own understanding as she repeats the lesson.
- **Physical** - Her body is active as she gets the materials from the shelf and does the hands-on operation.

One of Montessori’s first revelations was that appropriate developmental work does not tire the child, but rather refreshes and empowers her to want more.

An essential point in the Montessori system is that the child’s work is self-chosen – whether it be sweeping a floor, counting beads, doing the number rods as shown above, placing movable letters in order to form a word, or tracing leaf shapes. If we observe children engaged in such activities, we see that there is complete integration of physical activity, desire, mental activity as well as the spiritual refreshment that comes from engaging in meaningful work.

The word integrity is closely related to the word integration. Only an education that integrates all the parts of a person, as well as all the subjects she studies, promotes integrity. A review of the headlines in newspapers over the last years reveals that an absence of integrity seems to be one of the negative hallmarks of our culture, from college students cheating to industrial leaders stealing to elected officials caught in bold-face lies. Is it possible that our educational system may be a contributing cause?

**Education as knowledge**

Another Minnesota education student offered this idea: “My definition of education would be what a person learns about in a setting where learning is the most important element. I also believe education could be defined as the information taught to students to increase their intellect.” This definition reveals perhaps the most common conception of education – as a primarily mental exercise, to “increase the intellect.” The first part of the definition also confines education to school, to “a setting where learning is the most important element.” Federal programs that try to stimulate educational progress are largely based on test scores of students rather than any measure of personal development as human beings.

Montessori wrote specifically about a vision of education that goes beyond the increase of intellect and the preparation for passing exams:

My vision of the future is no longer of people taking exams and proceeding on that certification from the secondary school to the university, but of individuals passing from one stage of independence to a higher, by means of their own activity, through their own effort of will, which constitutes the inner evolution of the individual.
Montessori education as self-mastery

For Maria Montessori, the goal and purpose of education is to help life in its development. In her many writings, Montessori says again and again that education is helping each child reach whatever stage of independence is possible and right for him.

For example, as she describes the activity of taking a hike she writes: “Let the teacher not lose sight of the fact that the goal sought is not the immediate one – not the hike – but rather to make the spiritual being she is educating capable of finding his way by himself.”

I remember my now grown-up son at just barely three, when he first realized he could hoist a gallon jug of water all by himself. What sense of self-mastery he had! If anyone tried to help, he jealously guarded his task, crying out “Mine, mine!” It was not the water that was his; it was the mastery. Each small victory gives the child self-confidence. A path of education comprised of small victories, where we break complex tasks into smaller, easily manageable tasks, enables the child to fully internalize the sense that “I can do it all by myself.”

Education as life-long learning

Another student said, “Education to me is making sure each child feels capable, is connected and is able to contribute.” This definition focuses on education as an inclination toward lifelong learning, and reflects a strong emphasis on the feelings of success and self-esteem.

A succession of small victories leading to greater levels of independence, like Montessori education provides, surely deepens the inner sense of success and confidence. When a child feels comfortable in the learning process and learns to enjoy learning, he wants more. When you love learning, you never stop learning. When you learn to love doing well, you keep doing well. The motto of our first school was:

Learn to love to do well and you shall.

Praise and the nurture of self-esteem, however, have to be authentic. In Montessori, we praise a child if the child asks for it, rather than as a regular fact of school life. It is far more important that he learns to act from internal satisfaction rather than external praise. Children who are praised for being smart are at especially high risk for failure later when certain subjects are hard for them. If a child wants and needs praise and you genuinely want to give it, it is better to praise the effort and the hard work.
Education as information from a teacher
Another student said, “Getting an education means that you’re being taught things, whether it’s just everyday tasks, to math, science, social studies and English.” This is similar to education as facts, but this definition is especially interesting to consider because of the words “being taught.” It is passive. The phrase “being taught” refers to the common educational paradigm of the teacher and the textbook being the fount of information and knowledge for the child/student.

Montessori’s view
Maria Montessori offers the precise opposite vision of education. The activity of the child is his teacher. The role of the teacher is to put the child in contact with the elements of the environment that his sensitive periods are driving him to master.

When we refrain from guiding the subjugated child step by step, when, liberating the child from our personal influence, we place him in an environment suited to him and in contact with the means of development, we leave him confidently to his own intelligence.

He will choose the tasks conducive to his development and persist in them, attracted and guided by his interest towards a sensory material which leads him to distinguish one thing from another, to select, to reason and to correct himself. [The] acquisitions thus made are not only a “cause of internal growth,” but a strong propulsive force to further progress. vii

The power of development lies within the child – not in the teacher, not in the curriculum. This power is a force that we often fail to notice or to understand. Montessori wrote:

There is a force within the child that will save him…. It is this force, for instance, which leads him to touch things in order to become acquainted with them, and we say to him, ‘do not touch’; he moves about to establish his equilibrium, and we tell him to ‘keep still’; he questions us to acquire knowledge, and we reply, ‘do not be tiresome.’ We relegate him to a place at our side, vanquished and subdued, with a few tiresome playthings…. He might well think: ‘Why does she, whom I love so dearly, want to annihilate me?’ viii

Why, indeed? We will explore this question in greater detail in “The Specter of Prejudice.”

Education as the agency of developing potential
Yet another student said: “Education is a very dynamic, complex concept. It can mean many different things to different people. To me, education should have the goal to help individual children reach his or her potential.” This comes closest to my own personal definition of education and Montessori’s definition of the role of educator, which I like best, from her book Spontaneous Activity in Education:

I believe that the work of the educator consists primarily in protecting the powers and directing them without disturbing them in their expansion; and in the bringing of man into contact with the spirit which is within him and which should operate through him. ix
The carefully prepared environments we find in Montessori schools offer hands-on materials for the child to explore all of the subjects, from reading, writing and arithmetic to biology, music, art, geography and geometry. While the teacher presents demonstrations of how to use the materials to each child, each is free to choose what he needs when he needs it. Until you see with your own eyes the rhythm and peace that comes from this kind of classroom, it is hard to imagine.

Montessori’s writings clearly reveal that she is more than an educator. She is truly what Montessori’s friend and student Elisabeth Caspari liked to call her, a “Mother of Humanity.” Her goal was not for children to read, write and compute better— although Montessori children do these things and do them well—but to build stronger human beings.

**What to teach? How much to teach? When to teach it?**

In traditional education, the teacher has a curriculum to follow and specific dates to follow in order to accomplish her goals. Some of the children get it and receive good grades, while others do not and receive failing grades. Wonderful traditional teachers around the globe go to great lengths to make certain their children understand each lesson. We acknowledge and honor them.

Montessori teachers teach lessons to individual children to meet specific needs of development. In determining the exact parameters of how much we give to the child, Montessori provides guidance born out of her long years of experience:

> To quench thirst, it is not sufficient to see or to sip water; the thirsty man must drink his fill: that is to say, must take in the quantity his organism requires; so to satisfy this kind of psychical hunger and thirst, it is not sufficient to see things cursorily, much less to “hear them described”; it is necessary to possess them and to use them to the full for the satisfaction of the needs of the inner life. x
While in many traditional classes the teacher is at the blackboard showing and asking, the Montessori teacher is moving quietly around the room, assisting individual children to find just the work their minds are ready to tackle.

Each child is following his own inner teacher, developing the skills and interests that are unique to him or her when the interest is highest during what Montessori called “sensitive periods in development.”

The curriculum is human development, which includes but is not limited to reading, writing and computing. The technique is self-motivated action with concrete materials that clearly teach clear concepts. In Montessori we give children real work consisting of concrete materials and experiences that absorb them at whatever stage and interest level they are experiencing.

**The great match**

Much of traditional education around the world remains stuck in the paradigm of teachers teaching and children passively giving the required answers. We can only find the “great match” of external material to internal developmental need by preparing an environment that allows many motives for activity, and allows the child the freedom to select what he needs.

The materials Montessori designed facilitate human development and they teach many facts and skills in the major areas of practical life, sensorial development and cultural studies, language and math. Yet learning to use the materials is not the end goal.

This fact stands revealed as the basis of all psychical construction and the sole secret of education. The external object is the gymnasium on which the spirit exercises itself, and such “internal” exercises are primarily “in themselves” the end aim of action. Hence the solid insets are not intended to give the child knowledge of dimensions, nor are the plane insets designed to give him a conception of forms; the purpose of these, as of all other objects, is to make the child exercise his activities.
The child exercising his own growing powers is the point here; it is the process that matters, not the product!

Part of the equation of Montessori classrooms is the fact that not all children pick the same lessons. Not every child is attracted to the same thing at the same time. The choices the child makes are expressions of his individuality. All children learn to read and write, but some are far more interested in music than they are in geography. Some children prefer geometry to biology.

Education for development
While many Montessori schools are beleaguered by parents demanding specific academic results and parents send their children to Montessori schools for better academics, Maria Montessori clearly understood that what the child learns is secondary. Internal construction is and will always remain the primary goal to those who truly understand what she was saying.

Montessori suggests that the spirit of a child that grows under the guidance of its own natural pattern becomes fortified, grows vigorously, and manifests itself in equilibrium, serenity and self-control. These are qualities most of us want for our children. In this view of education, its real purpose is to provide what she called “external support for the soul in progress of evolution.” This evolution of the self is the real evolutionary question in education.
In contrast to education that nurtures the inner self, she writes that “education that suppresses the true nature of the child is an education which leads to the development of anomalies.” Violence and failure are anomalies. They are not normal. Happy children, learning and progressing according to an inner timetable and rhythm of development, is normal.

Now children as they are ordinarily known – unstable, lazy, disorderly, violent, stubborn, disobedient, etc. are ‘functionally’ ill and can be cured by a hygienic form of psychic life. In other words, they can be ‘normalized’…. In consequence of this normalization the children do not become ‘obedient to a teacher who gives them lessons and corrects them, but they find their guide in the laws of nature, i.e. they start again to function normally…. What is usually called ‘the Montessori Method’ revolves around this point.”

Education then, is an intrinsic part of human life. Its function is to offer external support for the evolution of the soul.
Natural Characteristics of the Child

When the independent life of the child is not recognized with its own characteristics and its own ends, when the adult man interprets these characteristics and ends, which are different from his, as being errors in the child which he must make speed to correct, there arises between the strong and the weak a struggle which is fatal for mankind.

For it is verily upon the perfect and tranquil spiritual life of the child that depends the health or sickness of the soul; the strength or weakness of the character; the clearness or obscurity of the intellect.

And if during the delicate and precious period of childhood a sacrilegious form of servitude has been inflicted upon the children, it will no longer be possible for men to accomplish great deeds.\textsuperscript{xiii}

Maria Montessori

Maria Montessori was nominated for the Nobel Peace Prize three years in succession. It was for more that opening successful schools for children. It was for her broad understanding and fiery declarations of the real importance of childhood as a stage of development vital in its own right.

Through her nearly fifty years of work with children, Maria Montessori brought the world a new vision of the importance of the early childhood years in the formation of humanity. Despite international acclaim for her work, she protested against being called an important educator. She said that, at most, she was merely an interpreter for the child. She did not invent a method of education; she had discovered the true nature of the child when left free to develop naturally. She had discovered the real power of evolution in human development – how children learn.

The natural characteristics of the child

As a result of many years of scientific observation, and perhaps more importantly the astute interpretation of what she saw, Montessori discovered what she believed were the natural characteristics of the young child.\textsuperscript{xiv} Among the chief characteristics she noted are the following:

- Amazing ability to concentrate and repeat activities that are of deep interest at specific levels of development. We see children in Montessori classrooms stay focused for several minutes to several hours on specific lessons that engage them.
- Desire and ability to make choices. Children in Montessori schools choose their work every hour of every day.
- Desire and ability to restore order and put things away. Montessori classrooms exist as orderly places precisely because children like to put their work away.
- Preference for work with learning materials rather than play with toys. Carefully designed materials answer developmental needs which are as compelling as breathing and eating to the growing child.
• Indifference to rewards and punishments. In early classrooms Montessori saw that children really could not be bothered with honors and did not respond to punishment, but rather to intelligent redirection.

• Love of silence. Children enjoy silence and are willing participants in short games of making silence.

• Profound sense of dignity. Don’t we all crave respect and our dignity, at any and all ages?

• Self-discipline. When a child chooses a lesson and stays with it until he is finished, choosing not to respond to other children and their work, he is exercising self-discipline.

• Spontaneous interest in writing at about age four and reading soon thereafter. The early urge to write by stringing sounds together has become a hallmark of Montessori classrooms, with reading those words coming soon afterward.

• Sense of joy and strength from appropriate work. Children are refreshed after work that is a great match to their emerging developmental needs.

Self-construction within the child
As Montessori observed and learned about the mysteriously unrecognized qualities of the young child, she also discerned what she believed were the processes of this interior self-construction. She wrote that, “Our first teacher, therefore, will be the child himself, or rather the vital urge with the cosmic laws that lead him unconsciously. Not what we call the child’s will, but the mysterious will that directs his formation—this must be our guide.” xv

As she became more conscious of what great treasures the child contains and how these treasures have been largely unrecognized, it became clear to her that traditional conceptions of education were bankrupt. In 1949 she wrote:

Education today causes the individual to dry up and his spiritual values to wither away. He becomes a cipher, a cog in the blind machine that his environment represents. Such preparation for life has been absurd in every age; today it is a crime, a sin.

An education that represses and rejects the promptings of the moral self, that erects barriers and obstacles in the way of the development of intelligence, that condemns huge sectors of the population to ignorance, is a crime.

Since all our riches come from man’s labor, it is absurd not to regard man himself as the most fundamental of our riches. xvi

These are strong words. Yet a quick look at the most recent National Assessment of Adult Literacy shows that as of 2003, 40% of adults in the United States are living lives of social and economic disadvantage because of poor reading skills. This group of 90 million people was educated primarily in our schools. Only 13% of the adults tested could read and understand relatively complex documents.
The 2009 National Assessment Educational Progress (NAEP) reports that the United States is managing to teach only about one-third of its children how to read and compute at basic levels of proficiency and above. More than 60% of twelfth graders cannot meet proficient levels in reading. And this is after one quarter of U.S. high school students have dropped out.

In this highly technological world of the 21st century, 2009 NAEP scores show that only 21% of high school seniors test at or above proficiency in science. Our educational system is in trouble and we see evidence almost every day in the newspaper of the attempts to find a remedy. Conscientious educators wrestle with the problems every day. Many teachers, such as best-selling author-teacher Rafe Esquith, find successful solutions to reach their children. Yet rarely do we see any serious public questioning of the system itself. Rarely do we see discussion about the goals of education, its purpose and what the role of the teacher really should be.

We have discussed the purposes of education from various points of view. Let us now examine the role of the teacher from Montessori’s point of view.

The role of the Montessori teacher
Montessori held deeply spiritual ideas about the nature of the child and the unique power that resides within the child’s soul. This power is the living energy of humanity’s development. Attention to this inner power, rather than to a curriculum of facts and skills, changes everything in the equation of education. She wrote that the goal of the teacher was not so much the imparting of knowledge as the unveiling and developing of spiritual energy.

There is a profound change, then, in the role of the teacher. Montessori defines the role of the teacher as that of serving the spirit. We do not seek to serve the child’s body because he needs to learn to do things for himself. We do not seek to think for the child because he must learn to think for himself. We do not seek to make decisions for the child because he has to learn to make decisions within the context of a safe and secure environment, where the choices are all constructive.

We have to help the child to act, to will and to think for himself. This is the art of serving the spirit, an art which can be practiced to perfection only when working among children.

The evolution of the human soul is the hidden heart of education
The essential question is what is the soul Montessori speaks about? What is the process of its evolution, for which Montessori would have us build external supports? The Oxford American Dictionary defines soul as: “the spiritual or immortal element in a person.” The word “spirit” is defined as “a person’s mind or feeling or animating principle as distinct from his body.”

The words soul and spirit do not necessarily relate to religion. Author Paul Beyers points out in his article, “The Spiritual in the Classroom,” that religions are answers to the universal human questions about the creation and meaning of life. “Spiritual on the other hand refers to the universal personal concern for these questions.” Exploring these questions about the meaning of life is a core part of our essential humanness.
Montessori essentially describes the evolution of the soul in great detail throughout all of her writings. The titles of her books describe various aspects of this evolution or development: The Secret of Childhood, Formation of Man, The Absorbent Mind and Spontaneous Activity in Education, to name just a few.

From my reading of Maria Montessori, which has been a constant part of my life during the past forty years, I believe she is telling us that the human soul is truly the hidden heart of education. She is telling us that the recognition and acceptance of this soul and a reorganization of education to honor the inner life of humanity is among the most imperative tasks facing the human race.

**Education as help to life and defense for the spirit**

We care for the bodies and the physical strength and well-being of our children. We educate their minds. We offer socialization for their emotional development. How do we care for, or educate, the soul? How can we have integration and integrity if we ignore one major component of being?

Yet the soul is something we often neglect. Montessori explained: “The most human of all the needs of the child is neglected – the exigencies of his spirit, of his soul. The human being who lives inside the child remains stifled…""xxi

From the perspective of being a medical doctor, Montessori suggests an intriguing parallel between discoveries in physical health that have changed our world and discoveries in psychic health that modern psychology and her own work have brought forth. “Experimental medicine has solved many problems concerning physical health. Experimental science, concentrating upon the study of normal man’s psychical activities, should likewise lead to the discovery of the superior laws of life and of health of mankind."xxii This is precisely her goal. This is a concept that bears a closer look.

She explains that the individual who sees clearly within feels the need for an inner life, just as the body feels the need for the material life of food and sleep. When the soul no longer feels its needs for an inner life, it is similar to the physically dangerous situation of the body in which it no longer feels hunger or pain.

It is real children, their personalities, their needs, their ‘guiding instincts,’ as Montessori called them, which need to be our guide as parents and teachers. As I see it, perhaps the simplest and most profound definition of the Montessori Method is her own explanation of her work as the search for the proper treatment, or “external support,” for the soul of the child in its evolution. In a sense, Montessori sees true education as a form of healing or normalization for the soul. In my years of Montessori, I have seen and still see children being healed of chronic misbehavior, of attention deficits, of dyslexia and all manner of emotional wounds.

We spoke earlier about anomalies. What if much of what we see around us in the way of educational failures and violent behavior are anomalies? Montessori laments that the social conditions produced by our civilization apparently create obstacles for the normal development of humanity, hence the violence and turbulence we see.
This is because our civilization has not yet devised means of defense for the spirit similar to those devised for the body through hygiene.

Such a simple but profound consideration! Yet we live in a time when the prevailing culture tends largely to deny or ignore the spiritual side of life. Therefore, what Maria Montessori places at the very heart of education – the soul of humanity – is not even part of the public dialogue for improving education. Great progress is being made in higher education in considering the spiritual impetus in life and the power of transformational education. Sooner or later, this effort will filter down to lower levels of education and will meet the ideas and ideal Maria Montessori first wrote about in the first decades of the twentieth century.

**Practical application of recognizing and honoring the child’s inner development**

Let’s look at an example. One mother shared the story of her three-year-old daughter with me. The little girl came into the bathroom one morning and saw her mother’s small box of hairpins. She picked it up and dumped it on the floor. The mother said her first response was to slap her daughter’s hand for being so thoughtless of her mother’s belongings. But knowing a little bit about Montessori she decided to wait and watch. Her daughter proceeded to pick each pin up with what we call the pincer grip, using her thumb, forefinger and middle finger.

*Child using the pincer grip with tweezers*

The child picked the pins up one by one and then dumped them out and repeated the process four or five times. Then she smiled at her mother and ran off for another adventure. The child made a routine of doing this every morning for the next two weeks. Then suddenly she was finished. She never came back to the hair pins. So what just happened?

In this little drama of the child’s fascination for one specific thing in her environment, the child was experiencing a sensitive period for developing the pincer grip, the grip she will later apply to holding a pencil.

A message from her brain went out, this is the time! She sought something in her environment that provided an opportunity to develop what she unconsciously needed to develop. The hair pins were the perfect match. She used them for as long as the sensitive period was in effect. Once she had made the necessary acquisition, once her coordination had reached its perfect development, she no longer had need of the materials. We see this happening every day in Montessori schools.
This is why we offer presentations but allow the child to choose his occupations. Only his interior development knows what it needs to fulfill the particular cycles at the particular timetable of that individual child.

But what if the child had not been allowed to touch? What if her mother had slapped her hand for pouring the pins on the floor rather than watching the cycle unfold? The child might well have had a tantrum, defending herself and her need to do such developmental work in the only way she knows, by crying. If such a situation is repeated, the sensitive period may be over and the child might not develop the grip at the time her brain required. In such cases, her handwriting might never be quite as nice as it would have been had the opportunity to develop the grip been available.

Montessori’s message—more than a method
Elisabeth Caspari, personal friend and student of Dr. Montessori and my own mentor from 1979 until her passing in 2002 at age 102, never tired of reminding her students: “Montessori brought a message, not a method.” Montessori herself explained:

If we were to eliminate not only the name “method” but also its common conception, things would become much clearer. We must consider the human personality and not a method of education. For the word “method” we should substitute something like this: ‘Help given in order that the human personality may achieve its independence….”

If we tell our children what to do and what to think all during their school years, how can we expect they will be able to go out and make good decisions as young adults? We want our children to succeed in life, not just in getting good grades in school. We want them to find and become the fullness of their own unique potential. Education is not a cookie-cutter process when we think in terms of individual potential. We have to engage their own ability to think and ponder and decide what is most interesting to them.

The fundamental fact of Montessori’s method
What was it that Maria Montessori saw that others had missed? She writes about the “fundamental fact” which led her to define her methods. It began with the observation of a little girl about three years old deeply absorbed in a set of solid cylinders.

“The expression on the child’s face was one of such concentrated attention that it seemed to me an extraordinary manifestation.” The child performed the cylinder block activity, consisting of taking the cylinders out, mixing them up and replacing them. She repeated it forty-four times, amidst all kinds of potential distractions. She remained at it until something inside was finished; then she looked around as if she had just awoken from a refreshing nap.
The first time I discovered this aspect of the child’s character I was stupefied, and asked myself if I had not found myself in the presence of an extraordinary fact, a new and marvelous mystery, for many psychological theories crumbled before my eyes.

It was believed – and I believed it too – that children were incapable of fixing their attention on any object for long. Yet before me, a four-year-old girl, with every indication of the deepest attention, was putting cylinders of different dimensions into a wooden frame.\textsuperscript{xvi}

As time passed, Montessori she saw this same phenomenon of deep concentration more and more frequently. She explains that she soon regarded it as a regular and constant reaction to specific experiences in the classroom.

And each time that such a polarization of attention took place, the child began to be completely transformed, to become calmer, more intelligent, and more expansive; it showed extraordinary spiritual qualities….

It was as if in a saturated solution, a point of crystallization had formed, round which the whole chaotic and fluctuating mass united, producing a crystal of wonderful forms.\textsuperscript{xvii}

This crystallization process does not occur through teaching – it occurs through the child’s individual activity. As teachers, our job is to prepare the environment where such developmentally important activities can occur. It is not our task to “form” the child. It is our task, rather, to assist the child’s development with appropriate materials for him to accomplish his inner goals himself. Thus Montessori gave us the universal call of childhood: “Help me to do it myself!”

So we begin to understand more clearly how education is properly a function of life. We see why children need an environment of freedom for the spontaneous development of their own power and for the evolution of their souls.

This deeper look at how children learn brings parents to take a long, hard look at the education their children are getting. It excites the interest of educators and men and women considering becoming teachers. It is being adopted by school districts around the nation and expanding throughout the world.
The Specter of Prejudice

Why the mysterious lack of seeing the true nature of the child? According to Maria Montessori, there is a deeply rooted, universal prejudice held by adults regarding their children. We adults somehow forget what the real work of the child is – to build the man or woman of tomorrow – and we do not fully understand the delicacy and the process of this work. She succinctly states the nature of the problem:

A prejudice has found its way into the adult – the notion that the life of the child can be changed or improved only through teaching. This prejudice impedes the understanding of the fact the child constructs himself, that he has a teacher within himself and that this inner teacher also follows a program and a technique of education, and that we adults by acknowledging this unknown teacher may enjoy the privilege and good fortune of becoming its assistant and faithful servants, by helping it with our cooperation.xxviii

This statement marks a profound shift of the role of teacher, whether in the home or in the classroom, from one who has the responsibility to build the child to one who humbly assists the work of the child.

Characteristics of prejudices about children

• A fundamental feature of these prejudices is the idea that the child needs to be filled with knowledge and virtue, and can be changed or improved only through teaching.

• Adults think that children are empty, waiting to be filled, that we must correct all their defects, that we must do everything for them.

• In the adult’s superior role as creator of the child, pride then develops and children are seen to owe a huge debt of gratitude to the adult.

• There is the prejudice that young children should not be allowed to do any form of real work, but rather should only play in certain well-established ways.

Underestimating the importance of the work of the child

There appears to be a general lack of understanding that children construct themselves. Montessori was fond of quoting the English poet William Wordsworth: “The child is father of the man.” When we learn more about how this construction takes place, we will work more in harmony with the child’s needs and many childhood tantrums do not need to take place.

We do not always realize the urgent, time-sensitive nature of the child’s work of developing the human being. In recent years, research on the brain has confirmed the existence of what Montessori found in 1907, that there are sensitive periods when the child truly needs certain kinds of external activity in order for brain functions to fully develop.

The bottom line is that for adequate or optimal development to occur, the brain requires sensory experience. Sensitive periods in development are references to a timetable for this development.
within the brain. If the right stimulus isn’t available at the right time for an emerging function, the child suffers what Montessori called a “dropped stitch.” That dropped stitch can be as vitally important as vision itself.

A sensitive period for human vision occurs during the first year of life. A growth spurt for neurons (brain cells) devoted to vision begins between two and four months and peaks at eight months. By the 8-month mark, each visual neuron in the normal eye has made connections to 15,000 other neurons. But what if something prevents the eye from seeing properly?

In the 1970’s, Dr. David Hubel and Dr. Torsten Weisel from Rockefeller University won the Nobel Prize exploring this question. They sewed one eye shut in newborn kittens. Several weeks later, they opened the eyes. But the eyes that had been closed remained blind, even though they were otherwise perfectly normal. What was lacking was sensory stimulation during the sensitive period for the development of the eye.

**Adult prejudice about children’s capacity to do meaningful work**

Why do we think children are “only children” and that the work they do is of so much less importance that adult work?

If therefore, one day it is discovered that the child is a great worker, who can apply himself to his work even with concentration, who can learn by himself, teach himself and who possesses discipline within himself; this seems to be like a fairy tale. It does not evoke surprise; it only appears utterly absurd.

No attention is paid to this *reality*, and hence no conclusion is reached to the effect that in this apparent contradiction may be hidden an error on the part of the adult….

The greatest difficulty in the way of an attempt to give freedom to the child and to bring its powers to light does not lie in finding a form of education which realizes these aims. It lies rather in overcoming the prejudices which the adult has formed in this regard.

Maria Montessori readily admitted that she, too, was a victim of the same prejudices, until her eyes saw and she accepted what she saw. Only little by little did she accept that there is an entirely different set of norms when children are given freedom in a prepared environment. There has been the universal repetition of the phenomena of little children in Montessori schools becoming calm, highly intelligent workers.

The crux of the prejudice has innocent enough origins, the simple facts of the differences between adults and children. The key to this problem is to be found in the fact that the human personality has two shapes and two separate goals, that of the child and that of the adult.

**The child’s work and the adult’s work**

Let us examine the difference between a child’s work and the work of the adult. Imagine for just a moment that you are lying on a beautiful white sandy beach. The sun is warm on your body and the sound of waves crashing is soothing to your ear. Your child is quietly building a sand castle.
Now imagine that some large person comes along and brings along a wheelbarrow and a shovel. He says that it is his beach and if you want to use it, you have to fill the wheelbarrow with sand. He offers a little wheelbarrow and a small shovel for your child.

You groan and agree to fill the wheelbarrow. You begin working. So does your child. You are sweating and grumbling about filling the wheelbarrow. It is hard work and once you are finished, you are going to take a swim and relax!

Your child on the other hand begins work with a grin. As soon as he gets the wheelbarrow full he dumps it over and begins again. Such fun!

What is the difference? The child is working for his own inner satisfaction. If he were not digging with the little shovel he would be digging with his hands or a stick, or building in the sand. He works for an interior reason, the environment simply affording the means. If you told him he had to dig the hole, he might well resist.

**Goals of adults and the goals of children**
The work of the adult has as its aim and external goal to perfect the environment, to get the job done. Get the sand loaded; the quicker the better and if someone else will do it, fine.

We spoke earlier of the ideas many adults hold as sacrosanct: that children are flighty, lazy and disorderly, they cannot concentrate for longer than a few minutes and so on. We may think they are capricious and have tantrums over nothing. Let’s look at one of the examples of a tantrum Montessori writes about in *The Secret of Childhood*.

A child was being bathed by a baby-sitter and got utterly hysterical. The mother had told the baby-sitter that the child loved her bath and that should be an easy part of the evening. So, what went wrong? The reason is clear to the child but a total mystery to us, unless we understand certain factors in early childhood development.

Young children have deep-seated need for order in their environment. The mother always bathed the child facing the spigot. The baby-sitter, however, bathed the child with her back to the spigot. This simple little detail violated the young child’s powerful sense of order. It simply was not right to her. And so she cried out for relief in the only way she knew.

The adult blamed her for being spoiled or just plain naughty and disagreeable. Montessori explains that many childhood tantrums originate in similar acts of defense for the psychic development that depends on external order and finding the external activity that matches internal growth.

**Reality - children will be naughty sometimes**
Now of course, children will be naughty sometimes. Not every childish tantrum is because of some repressed sensitive period. Children will get tired and mischievous and will sometimes willfully disobey. They will fight with siblings because they do not yet know how to resolve problems. They will shout and scream because they do not know how to put their needs into
words. They will hit because they do not know how to channel anger constructively. They will sulk when they do not get what they want because they have not yet learned delayed gratification.

So we adults sometimes do all these things, too! Life is life and Montessori was fully aware of the realities of daily life with children and the pandemonium, what she called the “little hell,” that sometimes breaks out in groups of children.

Many years of dealing with the chaos and seeing it transformed into calm order have given Montessori teachers tools to facilitate this shift from chaos to order. It is sometimes a difficult and time-consuming process to get a class into order. On occasion we find children who are simply not capable of bringing themselves under control. They may simply need an extra six months before they are ready to join a group.

No educational system is perfect for all children. Yet we find in Montessori sound principles that experience shows actually work. In every case, it has been the child who has taught the adults what he needs to be able to live and learn in peace.

People tried to give Montessori credit for the children
One of Montessori’s long-time frustrations was that many people believed that she had done some wonderful thing in the incredible manifestations of accomplishment seen in her schools. In actual fact it was the children who had revealed something deep and true in their nature.

They thought it was I who had solved the problem. The mentality of these people could not conceive that the nature of childhood can offer a solution that we adults cannot solve….

The correct thing to have said in the face of such facts would have been, ‘Let us study these phenomena, let us work together in order to penetrate into the secret of the human psyche.’ But it was impossible for them to understand that from the depths of the child’s soul we can draw something new, something useful to all of us, some light that would clarify the obscure causes of human behavior….

They insisted on thinking that I was the cause…. The facts, in their opinion, had to be some adult’s achievement; somebody had either to produce them or imagine them.xxx

Every aspect of what we call the Montessori Method was developed from years of observations of children and experimenting with what environments and what materials gave the best results. And those results keep repeating themselves, all over the globe, year after year. When we give children the tools they need, at the time they need them and we give them freedom to take what they need, they build themselves in strength and harmony.

School as a preparation for life
Maria Montessori reminds us that school is far more than the facts and skills we all legitimately want our children to learn. “To consider the school as the place where instruction is given is one point of view. But to consider the school as a preparation for life is another. In the latter case, the school must satisfy all the needs of life.”xxx
We come back full circle to the idea of the evolution of the soul and the integration of body, feelings, mind and spirit in our approach to the child. This is a fundamental broadening of the vision of education and its purpose.

Unconscious prejudice is capable of blocking the full flowering of the individual child’s development and hence, that of society. Society is built out of you and me and all of us together.

The questions are really quite simple:

• Are schools doing the best possible job meeting all the needs of our children?
• Are our children being raised to express all the potential that they have?
• How might society look if all children developed their maximum potential?

Come study with us at Age of Montessori!
If the answers to these questions interest you, come and study Montessori teacher training with us at AgeOfMontessori.com. We offer a full early childhood teacher (ages 2 ½ -6) certification program with a combination of online and in-person study. We also offer a complete study of Montessori for parents, educators, administrators and anyone interested in knowing more of the great treasure of Maria Montessori’s message. Check our website for more news on our online Montessori webinars and resources

About the author
For twenty-two years Mary Ellen Maunz worked with Dr. Elisabeth Caspari, foremost student and personal friend of Maria Montessori. Since 1979 Mary Ellen has spent many years teaching in both early childhood and elementary classrooms, has run a large private Montessori school, and has trained hundreds of Montessori teachers around the world.

An acclaimed speaker, presenter and internationally recognized authority on the Montessori Method, Mary Ellen has lectured and taught on four continents. She is the author of numerous articles, presentations and publications on authentic Montessori methods. She served on the Montessori Accreditation Council for Teacher Education (MACTE) Commission and Board of Directors for ten years.

Today, as the founder and program director of Age of Montessori, Mary Ellen continues to spread the authentic original method and message of Maria Montessori. To keep up-to-date with Mary Ellen, sign up for the Age of Montessori’s monthly Heart of Montessori newsletter.

vii Maria Montessori, *Spontaneous Activity* p. 195.
viii Maria Montessori, *Spontaneous Activity* p. 192.
ix Maria Montessori, *Spontaneous Activity* p. 194.
x Maria Montessori, *Spontaneous Activity* p. 154.
xi Maria Montessori, *Spontaneous Activity* p. 154.

xii Maria Montessori, *Spontaneous Activity* p. 46.
xv Maria Montessori, *From Childhood*, p. 21.
xxii Maria Montessori, *Spontaneous Activity* p. 292.
xxiii Maria Montessori, *Spontaneous Activity* p. 13.
xxiv Maria Montessori, *Formation* p. 9.
xxv Maria Montessori, *Spontaneous Activity* p. 67.
xxvi Maria Montessori, *Spontaneous Activity* p. 73.
xxvii Maria Montessori, *Spontaneous Activity* p. 68.
xxix Maria Montessori, *Formation* p. 66.
xxx Maria Montessori, *Spontaneous Activity* p. 86.
xxxii Maria Montessori, *Education for* p. 11.