Human Development –

Passages to

Montessori Adulthood

AMI JOURNAL

2020
Editorial Team

David Kahn, Executive Editor
Joke Verheul, Managing Editor
Aurora Bell, Editor
Proofreaders: Carolina Montessori, Joke Verheul, Renee Ergazos
Design: Toon van Lieshout, C03, Amsterdam

Original material © 2020 by the Association Montessori Internationale (AMI).
No content from this publication may be reproduced without permission from AMI.

The AMI Journal is grateful to the Montessori-Pierson Publishing Company for permission to reproduce primary texts by Maria Montessori. We would like to express our gratitude to Baiba Krumins Grazzini for her generous sharing of essential knowledge and material from the legacy of Centro Internazionale Studi Montessoriani, also known as “Bergamo”. Thanks are also due to the North American Montessori Teachers’ Association (NAMTA) for access to its archival materials.


ISSN: 1877-539X

Acknowledgments

This journal has an extraordinary range of contributions on an enriching range of topics, brought together in an adverse time. I would like to extend a special thank-you to Lynne Lawrence and Joke Verheul for being so receptive to this approach to the journal, which breaks away from the traditional discourse for an AMI Journal. Joke’s ability to find the right art and article resources and her editorial specificity for data is commendable. Our outside editor, Aurora Bell, always gives her attention to style and structure with the joy and dignity of her craft. For this journal we had a vast number of articles that gained visual impact from Toon van Lieshout’s layout skills. Thank-you always to Renee Ergazos for her help in the editorial process.

I would be remiss if I did not acknowledge the dedication of my wife, Barbara Kahn, who gives without charge her absolute best effort to shaping my first drafts.

David Kahn

AMI Board

Philip O’Brien, President
Ian Stockdale, Treasurer
Lynne Lawrence, Executive director
Jennifer Davidson
Henk Franken
Christine Harrison
Jacquie Maughan
Patricia Miller
Jennifer Shields
Junnifa Uzodike
Opening Remarks

Here between the hither and the farther shore
While time is withdrawn, consider the future
And the past with an equal mind.
(T.S. Eliot, “The Dry Salvages”, 1941)

Twenty-twenty, twenty-twenty — what a great rhythm — a year in which the Montessori community was ready to dance to an inviting beat, celebrating the 150th birthday of Maria Montessori. Then came COVID-19 and because of it and other startling global events, not least the important focus on the fact that still in the year 2020 a person can be prejudicially treated due to the colour of their skin, the belief system that they hold and the gender that they are, a new awareness and urgency emerged in our work. Many initiatives were affected, events were postponed, where we would have met in person and engaged in lively conversation, recognizing that special spirit in each other’s “Montessori mind”. Paradoxically perhaps in these times, we are confirmed in our conviction of the necessity of following in the footsteps of Maria Montessori: her advocacy for reform, a revolution in education — a complete breaking away from received traditions, if we want to offer education that supports our natural human development in a just and equitable world. We are even more acutely aware, in this year twenty-twenty, of Maria Montessori’s philosophy, her strong commitment to a harmonious world filled with respect for one another, for Planet Earth and particularly conscious of our individual and collective responsibility to uphold this vision. These times have demonstrated that education, which humankind has determined is a fundamental human right, can so easily be “pushed aside” by competing economic interests and ingrained prejudices both conscious and unconscious.

Montessori Education is driven by incredibly committed people, but we must set our minds to touching the lives of more children and adults across the globe and we must tackle those issues that still stand in the way of equitable and inclusive access to a Montessori educational approach. How can we reach more children including those in underserved, under-valued and marginalized populations whose ability to access quality education is so much harder than it should be at the start of twenty-twenty? How can we support our elders who are deserving of a healthy, dignified and active life to the very end? How do we ensure that the deeply embedded principles of responsibility and stewardship for Planet Earth and our Cosmos find even greater resonance in the future? We are at a critical juncture. We have to step up our resolve to develop, within ourselves, an ever greater and more finely nuanced understanding of Montessori principles and we must increase our capacity to deliver it in practice. The pathway to a better world is education, education that evokes global citizenship, love, respect and appreciation of others and of Planet Earth. It is AMI’s mission to build on Maria Montessori’s legacy; to deepen our knowledge, to embrace all of life and human development in our studies and advocacy.

We hope that our friends and partners will continue to consider her legacy with deep commitment, continue to question how we can all, each in our own way, bring this legacy to a wider audience, whilst gaining deeper knowledge along the way. What has Maria Montessori really left us? An inspirational vision of human development? A mission as to how to best serve human children in a healthy process of growing and becoming? A philosophy on how to help children and adults build a society that values all people? A call to action for an approach that leads to ecological sustainability? An education offering a life-changing vision, from birth to adulthood, throughout our lives? Once we have interrogated these questions, quested for greater knowledge and re-affirmed our values, we can all choose our own particular path and continue our journey together — our learning curves will be many and rewarding.

In that spirit I invite you to reflect on the articles in this Journal and use them as seeds for your own continued exploration of the work that lies ahead and express the hope that our celebrations of Maria Montessori’s birthday are but a prelude to elevating our joint commitment and knowledge in service to humanity.

We are extremely grateful to David Kahn, to whom we turned when considering the production of this Journal. A Journal to mark the 150th birthday of Maria Montessori was no small undertaking and AMI’s managing editor, Joke Verheul and I, called upon David for his considerable expertise, breadth of experience and history in the movement and requested that he become the Executive Editor. Having created the conceptual framework, David has worked many, many hours, researching articles, embellishing and expanding on the theme and refining content and linkage; for all this and more AMI is extremely grateful to him for volunteering his time over many months. Our hope is that you too will find hours of stimulation and reflection from the articles sourced for your enjoyment.

Lynne Lawrence
Executive Director,
Association Montessori Internationale
‘Hey you!’ a friend cried out as he floated down the river on his boat. ‘Be my companion. Jump on and enjoy the star-studded night sky.’ I jump into his flowing consciousness, the rustling sound of ideas finding connections and movement on the stream, the sound of nocturnal crickets. The panorama blurs as we float and wonder at the life surrounding us.

Montessori pedagogy builds as we recall the wonder of the ‘planes of education’. What is the coherence of the flowing ideas, these ideas in motion? The what for and wherefore of the philosophical questions gather points of consciousness along the river open to a bigger convergence of Montessori wisdom. We form a community of Montessori thinkers trying to do just that in 2020 with adolescents.

Listen to the trailblazers of the Montessori past and present. ‘Life is a series of rebirths.’ A landscape sign reads ‘Welcome to the Century of Adolescents’. There are changes in Montessori philosophy created by the revelations of development. After welcoming the adolescent plane into nature’s whole, we reach the outer world of a loving universe and the inner reality of world consciousness. We respond to ‘Man, the Unknown’, which is simply the desire to learn more and to work harder, making our world better for the next Montessori generation, rowing around the shoals, finding the peace that the night sky provides. The lighted way opens to our gift of discovery.

David Kahn

For easy navigation of this journal, simply click on the title or page number of any article in the table of contents and you will be brought swiftly to the right location. At the end of each article, with one click on you can return to the table of contents.
# SECTION 1

Flow of Consciousness of Social Direction and History of Thought

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editor’s Remarks&lt;br&gt;The Vision of Montessori in Perpetuity&lt;br&gt;David Kahn</td>
<td>15</td>
</tr>
<tr>
<td>An Approximal Point of Origin of Montessori Reform&lt;br&gt;The Secret of Childhood&lt;br&gt;Maria Montessori</td>
<td>16</td>
</tr>
<tr>
<td>To Save Displaced Children and Young Refugees&lt;br&gt;Montessori’s Early Initiatives for Children at Risk&lt;br&gt;Erica Moretti</td>
<td>18</td>
</tr>
<tr>
<td>Launching a Montessori Journey, at the Headwaters&lt;br&gt;Teacher Preparation&lt;br&gt;David Kahn</td>
<td>26</td>
</tr>
<tr>
<td>The Primacy of the Four Planes Psychology over Cosmic View&lt;br&gt;David Kahn</td>
<td>30</td>
</tr>
<tr>
<td>Maria Montessori’s Cosmic Vision, Cosmic Plan, and Cosmic Education&lt;br&gt;Camillo Grazzini</td>
<td>32</td>
</tr>
<tr>
<td>Introducing Abs Joosten, the Spark of the Montessori Revolution&lt;br&gt;Molly O’Shaughnessy</td>
<td>42</td>
</tr>
<tr>
<td>A. M. Joosten&lt;br&gt;Montessori Trainer-Philosopher&lt;br&gt;selections from Albert Max Joosten&lt;br&gt;Non-Violence and the Child&lt;br&gt;The War on Poverty&lt;br&gt;The Child’s Right to Develop</td>
<td>44</td>
</tr>
<tr>
<td>What Does Montessori Have to Do with Anthropology?&lt;br&gt;Diversity, Observation, and Revolution&lt;br&gt;Maribel Casas-Cortes</td>
<td>54</td>
</tr>
<tr>
<td>Maria Montessori and the New Education Fellowship&lt;br&gt;A Paradoxical Presence&lt;br&gt;Bérengère Kolly</td>
<td>62</td>
</tr>
</tbody>
</table>
SECTION 2

Through the Gateway of the Third Plane and Fourth Plane of Development

Interdependency (aka the Unconscious Exchange of Services)
Baiba Krumins Grazzini

Early Articulations Toward Advanced Learning for the Third Plane and Becoming an Adult

Maria Montessori’s Special Lecture
A Lecture Given at the Montessori Congress in Oxford, England, 1936
Maria Montessori

A New Education for the Secondary School
A Public Lecture Given at Utrecht, January 18, 1937
Maria Montessori

Small Steps and Quantum Leaps Along the Way to Erdkinder

Charting the Way to Adulthood
Developmental Chart Series
David Kahn

Human Tendencies
Authentic Guideposts to Human Characteristics Across the Planes
Xavier Angelo P. Barrameda

Metacognition
Inviting the Democratization of the Adolescent
Paige M. Bray and Steve Schatz

The Lifelong Impact of Cosmic Education When Taught from Age Six to Twelve
Guadalupe Borbolla

An Interpretive Summary of an AMI 12–18 Diploma Course Design
Laurie Ewert-Krocker

For Families
Remembering Our Humanity as We Support Adolescents
Laurie Ewert-Krocker

The Emergence of Montessori Core Principles
Uma Ramani

Montessori Adolescent Construction for the Future
David Kahn

Psychodisciplines
Baiba Krumins Grazzini
# SECTION 3

## Legacy and Academy

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Appeal of Pure Legacy: A Direct Orientation to Montessori Vision</td>
<td></td>
</tr>
<tr>
<td><strong>The Legacy Catcher</strong></td>
<td>169</td>
</tr>
<tr>
<td>A Tool Kit for Trainers and Trainees to Improve and Keep the Montessori Legacy Alive and Well</td>
<td>170</td>
</tr>
<tr>
<td>David Kahn</td>
<td></td>
</tr>
<tr>
<td><strong>A Science of Peace</strong></td>
<td>174</td>
</tr>
<tr>
<td>Annette Haines</td>
<td></td>
</tr>
<tr>
<td><strong>On Becoming a Citizen of the World</strong></td>
<td>180</td>
</tr>
<tr>
<td>Can Montessori Achieve Its Aim?</td>
<td></td>
</tr>
<tr>
<td>Kay Baker</td>
<td></td>
</tr>
<tr>
<td><strong>Academic Integration: A Confluence of Formal Studies and the Flow of Montessori Legacy</strong></td>
<td>189</td>
</tr>
<tr>
<td><strong>Montessori: A Spiritual Path</strong></td>
<td>190</td>
</tr>
<tr>
<td>Ruby Lau</td>
<td></td>
</tr>
<tr>
<td><strong>The Montessori Cosmic Vision and the Judeo-Christian Tradition</strong></td>
<td>198</td>
</tr>
<tr>
<td>Sofia Cavalletti</td>
<td></td>
</tr>
<tr>
<td><strong>Maria Montessori’s Moral Epistemology</strong></td>
<td>204</td>
</tr>
<tr>
<td>Solving the Problem of Moral Relativism</td>
<td></td>
</tr>
<tr>
<td>Patrick R. Frierson</td>
<td></td>
</tr>
<tr>
<td><strong>Montessori Adolescents and Community-Engaged Work</strong></td>
<td>218</td>
</tr>
<tr>
<td>Inherited Projects at Colegio Montessori de Tepoztlán</td>
<td></td>
</tr>
<tr>
<td>Guadalupe Borbolla</td>
<td></td>
</tr>
<tr>
<td><strong>Me, Myself, and Cuenetepc</strong></td>
<td>222</td>
</tr>
<tr>
<td>Aarón López Flores</td>
<td></td>
</tr>
<tr>
<td><strong>Technology and Its Use in a Montessori Environment</strong></td>
<td>224</td>
</tr>
<tr>
<td>John McNamara</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 4
Montessori Evolving

Glimpses of the Fourth Plane: Montessori Evolving

Youth Impact Forum
Adolescents Have the Capacity to Change Their World
Judith Cunningham

From Infancy to Graduate School
A Sustainability Institute for All Seasons in South Africa
Murray Williams

Adolescents, Educateurs sans Frontières (Esf), and Selfless Adult Service
The Magic of Side-by-Side Collaborative Work
Lesley Ann Patrick

Architecture: Montessori Evolving

Designing Environments that Support the Developing Child
Gerard Leonard

Montessori Architectural Patterns
Benjamin Stæhli and Steve Lawrence

Inclusive Education: Montessori Evolution

Inclusive Education in the Age of COVID-19
Silvia C. Dubovoy

The Special Needs Child from the Montessori Perspective
Nimal Vaz

Montessori for All at Cornerstone
Liesl Taylor

Montessori Developmental Principles to Support the Needs of the Elderly
Jennifer Brush and Michelle Bourgeois

Lockdown learning highlights how schools fail to build on children’s natural ways of learning; through their independent curiosity and learning approaches
Angeline Lillard

Through the Darkness to the Light
Hope for the World’s Children
Paula Lillard

Epilogue
The next steps...
Introduction for Section 1

This AMI Journal is structured as a unique compilation, a ‘mixed genre montage’. The writings of Montessori (primary sources) are followed by a history, the Messina earthquake narrated by historian Erica Moretti. This is followed by first impressions of the Bergamo Montessori Training Course. The next article presents the cosmic viewpoint and the four planes of education. A. M. Joosten, a legacy trainer, describes the social reform perspective which is basic to Montessori. Maribel Casas-Cortes applies anthropology to Montessori scholarship.

Section 1 is not the usual retrospective, but rather a juxtaposition of points of view that fit together, not sequentially, nor with the same angle or lens. Its streams and rivulets evoke diverse exponents which reveal a unity of perspectives inviting Montessori thinking into the twenty-first century.
# SECTION 1

## Flow of Consciousness of Social Direction and History of Thought

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editor’s Remarks</td>
<td>15</td>
</tr>
<tr>
<td>The Vision of Montessori in Perpetuity</td>
<td></td>
</tr>
<tr>
<td>David Kahn</td>
<td></td>
</tr>
<tr>
<td>An Approximal Point of Origin of Montessori Reform</td>
<td>16</td>
</tr>
<tr>
<td>The Secret of Childhood</td>
<td></td>
</tr>
<tr>
<td>Maria Montessori</td>
<td></td>
</tr>
<tr>
<td>To Save Displaced Children and Young Refugees</td>
<td>18</td>
</tr>
<tr>
<td>Montessori’s Early Initiatives for Children at Risk</td>
<td></td>
</tr>
<tr>
<td>Erica Moretti</td>
<td></td>
</tr>
<tr>
<td>Launching a Montessori Journey, at the Headwaters</td>
<td>26</td>
</tr>
<tr>
<td>Teacher Preparation</td>
<td></td>
</tr>
<tr>
<td>David Kahn</td>
<td></td>
</tr>
<tr>
<td>The Primacy of the Four Planes Psychology over Cosmic View</td>
<td>30</td>
</tr>
<tr>
<td>David Kahn</td>
<td></td>
</tr>
<tr>
<td>Maria Montessori’s Cosmic Vision, Cosmic Plan, and Cosmic Education</td>
<td>32</td>
</tr>
<tr>
<td>Camillo Grazzini</td>
<td></td>
</tr>
<tr>
<td>Introducing Abs Joosten, the Spark of the Montessori Revolution</td>
<td>42</td>
</tr>
<tr>
<td>Molly O’Shaughnesssy</td>
<td></td>
</tr>
<tr>
<td>A. M. Joosten</td>
<td>44</td>
</tr>
<tr>
<td>Montessori Trainer-Philosopher</td>
<td></td>
</tr>
<tr>
<td>selections from Albert Max Joosten</td>
<td></td>
</tr>
<tr>
<td>Non-Violence and the Child</td>
<td></td>
</tr>
<tr>
<td>The War on Poverty</td>
<td></td>
</tr>
<tr>
<td>The Child’s Right to Develop</td>
<td></td>
</tr>
<tr>
<td>What Does Montessori Have to Do with Anthropology?</td>
<td>54</td>
</tr>
<tr>
<td>Diversity, Observation, and Revolution</td>
<td></td>
</tr>
<tr>
<td>Maribel Casas-Cortes</td>
<td></td>
</tr>
<tr>
<td>Maria Montessori and the New Education Fellowship</td>
<td>62</td>
</tr>
<tr>
<td>A Paradoxical Presence</td>
<td></td>
</tr>
<tr>
<td>Bérengère Kolly</td>
<td></td>
</tr>
</tbody>
</table>
In this year of 2020 our Montessori community is celebrating the 150th birthday of Maria Montessori. Her philosophy of human development continues to grow worldwide as her contributions have organically disseminated over time. Montessorians are finding both the poetic and scientific view of what Mario Montessori Jr prophetically articulated with his 1976 title *Education for Human Development*. It was a perfect title. Mario revealed a powerful vision which we are now beginning to appreciate as an international human endeavour: to understand Montessori’s unique world view. Mario wrote in 1976:

She gained world fame as a pedagogue, yet this role, and its instantaneous effect on public opinion, actually took her as much by surprise as did the discoveries on which it was based. It was insight into the significance of these discoveries for a better understanding of the human being that motivated her subsequent behaviour. It compelled her, on the one hand, to concentrate on this particular investigation to the exclusion of everything else, and on the other, to communicate her findings to her fellow men and to fight whatever prevented their acceptance.

From the start this attitude generated a cultural movement of growing impact, one that is still continuing. It was not Montessori’s intention to start such a movement; it was merely a by-product of her activities. Her concern was to bring to light her newly acquired knowledge of human development. She dedicated herself wholeheartedly to this task, advocating the cause of the child (i.e., of man in becoming) throughout her long life.

Because her experiences indicated that education played a more essential role in this process of becoming than was generally assumed, Montessori focused her attention on this particular realm of human activity; hence her reputation as a pedagogue. However, her approach was so radically different from what is generally encountered in the pedagogical world that it is questionable whether the label really fits her. I believe this to be one source of the many controversies that have arisen in connection with her work. (pp 2-4)

This 2020 AMI Journal brings the AMI initiatives into an interactive weaving of pathways which reveal the connections between upper elementary programmes, middle school and high school reform, and (do we need “and”?) leading to 18–24 Montessori fourth-plane considerations. This includes wider correlations between the disciplines, methodology, and philosophy of education. The result will open Montessori to broader applications to an international audience. This is already happening through collaborative processes.

This cultivation includes a core principles training, an advanced adolescent programme design (through high school), technology design, developmental understanding of intergenerational needs, education reform for Montessori in underserved communities, education for peace, psychodynamics (in particular the social sciences), 18-24 new design research, and metacognition readings. AMI is thinking these aspects through internally. This journal attempts to externalize and integrate experimental thought into a Montessori direction. The patchwork of internal reform is becoming solidified and deepened by grass roots practice. Montessori trainers are researching and experimenting with course psychology, methodology, and theory to provide relevant Montessori courses of study for a new diversity of settings.

**References**

How It Originated (Secret of Childhood)

It was January 6th (1907), when the first school was opened for small, normal children between three and six years of age. I cannot say on my methods, for these did not yet exist. But in the school that was opened my method was shortly to come into being. On that day there was nothing to be seen but about fifty wretchedly poor children, rough and shy in manner, many of them crying, almost all the children of illiterate parents, who had been entrusted to my care. The initial plan was to gather the small children of the workmen living in a workers’ tenement, so that they should not be left to play on the stairs and dirty the walls or create disorder. With this end in view a room, a shelter or asylum, had been provided for them in the tenement. I had been asked to take charge of this institution, which ‘might have a future’.

I set to work feeling like a peasant woman who, having set aside a good store of seed-corn, has found a fertile field in which she may freely sow it. But I was wrong. I had hardly turned over the clods of my field, when I found gold instead of wheat; the clods concealed a precious treasure. I was not the peasant I had thought myself. Rather I was like Aladdin, who, without knowing it, had in his hand a key that would open hidden treasures.

The Century of the Child

The amazingly rapid progress in the care and education of children in recent years may be attributed partly to a generally higher standard of life, but still more to an awakening of conscience. Not only is there an increasing concern for child health — it began in the last decade of the nineteenth century — but also a new awareness of the personality of the child as something of the highest importance. Today it is impossible to go deeply into any branch of medicine or philosophy or sociology without taking account of the contribution brought by knowledge of child life. A parallel, but on a lesser scale, is the light thrown by embryology on physiology in general and on
evolution. But the study of the child, not in his physical but in his psychological aspect, may have an infinitely wider influence, extending to all human questions. In the mind of the child we may perhaps find the key to progress, and who knows, the beginning of a new civilization.

The Swedish poet and author Ellen Key prophesied that our century would be the century of the child. While anyone with patience to hunt through historical documents would find a recurrence of such ideas in the first King’s Speech of King Victor Emmanuel III in Italy, when, in 1900, at the turn of the century, he succeeded to the throne after the assassination of his predecessor. He spoke of the new era beginning with the new century, and he too spoke of it as the Century of the Child.

It would seem that such almost prophetic glimpses arose from the impression produced by the investigations of science in the last ten years of the nineteenth century; from the picture they gave of the child in sickness; ten times more exposed than the adult to death from factious disease, or of the child as victim in harsh schools No one could have foreseen then that the child held within himself a secret of life, able to lift the veil from the mysteries of the human soul; that he represented an unknown quantity, the discovery of which might enable the adult to solve his individual and social problems. This aspect may prove the foundation of a new science of child study, capable of influencing the whole social life of man.

The Child and Psychoanalysis

Psychoanalysis has thrown open a realm of research formerly unknown, bringing to light the secrets of the unconscious, but it has brought no practical solution to the urgent practical problems of life. Nonetheless, it may help us to understand the contribution to be found in the hidden life of the child [...]

Psychoanalysis has sounded the ocean of the unconscious. Without this discovery it would be hard to explain to the public at large how the child’s mind may help in a more searching study of human problems.
To Save Displaced Children and Young Refugees

Montessori’s Early Initiatives for Children at Risk

Erica Moretti

Erica Moretti was researching Maria Montessori’s work when she came across the story of Bruno and Nina, who, with a group of sixty orphans, were physically and psychologically damaged by the earthquake’s ravages in 1908. Not only did they lose their parents, but they were traumatized after being trapped for days in the rubble of fallen buildings. The earth had opened with cracks and crevasses beneath their feet.

In those frightening times they were alone. They were subsequently moved to Rome to the Montessori school at Via Giusti 12. Maria Montessori witnessed an almost universal transformation of the children in the prepared environment of indoor/outdoor classrooms, exquisite gardens, and a quiet, safe atmosphere. The documentation of the successful mitigation of this traumatic period remains useful for helping children anywhere in overcoming trauma. I was already researching on Montessori and became interested in the actual voices of the children. While Montessori extensively reports on the experience of single children, Erica wanted to hear directly from the children, and hopes this will enrich tremendously the analysis of Montessori’s work.


Little Bruno had nobody. His parents had died in an earthquake that almost levelled the city of Messina, Sicily, in 1908. Like many others orphaned in the deadly natural catastrophe, he spent his first four years ‘as a weed grows’, neglected and shuffled from one foster family to the next.1 Among the other cheerful children at the Via Giusti 12 Casa dei Bambini, the boy seemed dull, both to outside observers and his teachers. According to Maria Montessori, ‘the evil things done to him during his babyhood in the tenement’, along with the horrors he witnessed during the earthquake ‘such as the death-cry of his girl mother’, had frightened him so much that he sat in silence, powerless, constantly vigilant for any possible blow, repeating the same vile language he had heard before arriving at the Montessori school.2

Bruno arrived at the Casa dei Bambini in 1910. The school had just been inaugurated at the Franciscan Missionaries of Mary (FMM) convent in Rome. He was not the first to be educated through the Montessori method; many other orphaned earthquake victims before him had been brought into Montessori schools. In fact, the educator played a central role in the rehabilitation of children affected by the catastrophe. By 1910, she had contributed to the opening of several schools in the affected areas, some of which were run by the Franciscan nuns.3 The Associazione Nazionale per gli Interessi del Mezzogiorno d’Italia (ANIMI; National Association for the Interests of Southern Italy) had selected the Montessori method for the schools in Sicily and Calabria.4 The organization aimed to help the recovery efforts in the two regions, counting among its members intellectuals and politicians such as senator Leopoldo Franchetti who, at that time, was also an advocate for Montessori’s work both within Italy and abroad.5 One of the underemphasized aspects of Montessori’s pedagogy is her belief in its therapeutic potential for the victims of trauma. In light of Western society’s overall difficulty in rehabilitating children affected by war, conflict, and displacement, the educator’s efforts in this field assume a new relevance and offer solutions to the current refugee crisis.

When Montessori started working at Via Giusti, it was one of the few approved Montessori institutions. The educator held the Mother Superior of the FMM in high regard and tested new activities there, particularly on religious education.6 The convent also hosted a Montessori teacher training course that attracted several international students.7 In

18 AMI Journal 2020
addition to the underprivileged neighbourhood’s children, the school held sixty orphans, ages three to six, and a total of six hundred minors engaged in different vocational classes, all from the areas hit by the disaster. As Montessori recalls in *The Secret of Childhood*, the school had been established primarily to take care of orphaned [children] who had lived through one of the greatest disasters of history, the earthquake of Messina. Some sixty of those little tots were found alone among the ruins. No one knew their names or their social conditions. A terrible shock had made them all very much alike, depressed, silent, and indifferent. They were hard to feed and to put asleep. At night they could be heard crying and weeping.

Montessori was highly invested in rehabilitating these children through her educational methodology. She was convinced that, with the stimulation of the senses, the soothing repetition of sensorial activities, and a stable environment, they could recuperate their mental faculties. To this end, she designed an environment meant to stimulate the children, helping them work through their traumas and return to life both emotionally and physically. With this goal in mind, she created an aesthetically pleasing environment where children could be rehabilitated.

The site that had been chosen for these unfortunate children was a convent of Franciscan nuns with spacious gardens, wide paths, pools of goldfish, and beautiful beds of flowers. The garden [of the convent], with its covered corridors, its broad, graveled walks shaded by orange trees, and its big open space about the fountain, forms an ideal playground and open-air schoolroom.

The approach aimed at supporting the child’s healing by fostering self-realization and independence. Children would overcome their ‘victimized state’ so that the trauma would not be ‘permanently embedded in the personality’. In a prepared environment, furnished with Montessori materials and with child-size desks and chairs, mostly donated by the Italian queen, Margherita, the children would undergo the rehabilitation of their mental and physical faculties.

The experience of another earthquake orphan, young Nini, exemplifies this healing process. She was found under a collapsed building in Messina with her ‘little body twisted
and mangled beyond belief’.¹⁵ Only months after her arrival at the Casa, she had already recovered her capacities. Her nervousness had given way to tranquillity. Thanks to the Montessori method, she could work effectively with class materials and collaborate with peers. As one of the nuns who assisted the Montessori-trained personnel remarked, the method ‘does not exasperate the children as most school work does’.¹⁶ In her view, every child was completely immersed in his or her activities, and no one misbehaved, because the approach allowed for the individual stimulation of each child. Each child was invested in his own work and not forced to perform a certain activity. The classes also placed children of different ages together, forming bonds in which the older children would spontaneously share knowledge with the younger ones. In non-Montessori classrooms it might be thought that this would lead to chaos, stated the nun. However, in the Casa and among the traumatized children, confusion was conspicuously absent, with no acting out, as all the children’s attention revolved around the activities. In fact, the orphans learned how to behave like princes at their meals, and when they had to serve at the table, they were like masters of the art. Though they had lost their natural appetite for food, they were delighted by the new knowledge they were acquiring and by the preciseness with which they were conducting their various activities.¹⁷

Children would regain their mental and physical health by cultivating their senses without constraint or coercion, using material scaled to their own individual needs and tailored to their own individual interests.

Though the core of the rehabilitation process was the method itself, Montessori also highlighted the importance of the teacher’s role. Describing the teacher as ‘a true missionary, a moral queen among the people’ in Il Metodo,¹⁸ she clarified that the teacher should be for these children ‘an uplifting element [of the community], a moralizing one, an agent or truth’.¹⁹ Without imposing her will on the child, she must foster the discovery of a ‘new sense, the conscience-sense’.²⁰ If, as Montessori believed, in every child there are the ‘eyes of the spirit, and the slender groping fingers of the soul that look and reach for the good’, then the teacher is the one who helps the child awaken his conscience and propels his moral development.²¹

Meal in garden Via Giusti, 1908
This happened to both Bruno and Nini. After a long rehabilitation, supported by the protective yet encouraging eye of the teachers, Bruno flourished into a ‘champion of the weak’, a child who sustained and supported his shyest and most sensitive classmates.22 For her part, Nini, through the didactic apparatus, such as playing with the building blocks on the carpet, not only mastered many of the activities and regained a sense of tranquillity and peace with her environment and peers but also, ‘lying on her stomach and crawling to her knees and in a dozen other simple ways’, she recovered the use of her impaired limb.23 The Casa dei Bambini in Via Giusti, formed in the wake of destruction, thus served as an ideal environment for the rehabilitation of those affected by the disaster and, ultimately, for the production of moral, civic-minded, and independent human beings.

A Champion for Children in Danger

Bruno and Nini were not the only at-risk children educated through the Montessori method. Since the beginning of her career, the Italian pedagogue was an advocate for children suffering from poor health, poor education, and poor economic circumstances. Her work aimed at radically transforming society through education, by shaping the child into a model to his peers, a respectful family member to his family, and ultimately a better citizen to society.

As early as her first pedagogical experiments in 1906, Montessori envisioned expanding education beyond walls of the classroom. The Montessori-educated child would transfer the results of his education first to his immediate surroundings, and then, once he had become an adult, to the whole world. He would embody the new hygienic and behavioural norms — including peaceful interaction — spreading them to his parents and leading to the regeneration of the entire family and, through a rippling effect, to society. Since its very inception, Montessori’s pedagogical work took on a larger project of societal renewal.

Her notion of education as a propeller of social change was rooted in her interest in social medicine, or the conviction that ‘a tension to reform and a denunciation of social injustices drove medical disciplines such as physiology, anthropology and hygiene’.24 As a young medical student and social activist, she advocated for the disadvantaged, demonstrating a broad and inclusive definition of this concept.25 In all her campaigns, she saw the possibility of reforming society from ‘Italy’s margins’.26 From her work with the Lega Nazionale per la Educazione e Cura dei Deficienti (National League for the Care and Education of Mentally Challenged Children) to her activism for those living in the marsh areas around Rome and prevent the further spread of malaria, Montessori engaged in an all-encompassing analysis of the circumstances that could hinder a child’s growth. During the turn of the twentieth century, she argued that no child should be neglected, no institution should go unreformed. Whether it was the plight of foundlings, child labour, child mortality, or the sexual education of the child, Montessori argued that society must be reformed to protect children in various ways. For example, she enthusiastically greeted the 1904 reform calling for a radical transformation of the system for rehabilitating juvenile delinquents:

Window bars disappear, replaced by shutters in frosted glass; door bolts are thrown away in the basement; the door is now open on a daily basis for the children’s gymnastic walk, all with their beautiful uniform, accompanied by the teacher [...].27

Though 1913 is often considered the year when Montessori switched her attention away from social reform and toward an international movement to expand her educational methodology, recent historiography shows how the educator continued to place great value on her pedagogical inquiry as a quest for social reform itself.28 In particular, her concern with the children affected by World War One and her other initiatives demonstrate the continuation of her early social activism, one that lasted throughout her life.

Montessori’s Fight for Peace

Ten-year-old Cécile [sic] was a Belgian refugee who had fled to Paris seeking shelter from the Boches, the German soldiers who had invaded her country.29 As reported by the Canadian author Maude Radford Warren, Cécile was being educated in a Montessori school in the French capital with many other children who had escaped the horrors of the so-called Rape of Belgium. She had vivid memories of her family’s flight, but, to Warren, she showed no sign of shock, as if she had not yet processed the traumatic events. Unaffected, she recounted the horrors of the occupation:

Scarcely more than five [shells] fell in our quarter, but we slept outdoors in front of our house. Then one fell in the street and did a good deal of damage; so then we went into the cellar, and all the time the barbarous Germans were shelling our beautiful cathedral. Then the Germans came into the city, and they stood in front of our houses, and when we wanted to go out to buy food they would not let us. [...] One day I went for a walk and a German called to me. He spoke to me in his own language and I did not understand a word he said. I...
think he wanted me to make him some coffee. But I am afraid of going among strangers whom I do not know. So I ran away, but he ran after me to kill me, I think. He caught me at the end of the railway, but I cried as loud as I could, ‘Mamma, come and help me.’

Then the German gave me a hard box on the ear and let me go. After that some bombs fell in our street. Our poor neighbor was going out to buy bread and a bomb hurt her; she fell down beside a house that was half in ruins. We lifted her up and went with her to the hospital, and two days later she died.30

When interviewed by Warren, Cécile had just arrived in one of the schools founded in 1916 by the American philanthropist and educator Mary Rebecca Cromwell. Cromwell had gathered almost sixty children, mainly French and Belgian refugees, and utilized the Montessori pedagogical apparatus to educate them. She had recruited and trained Belgian and French women to help her run the classes, selecting those who had also suffered from the war, the widows of the battles of Verdun, Champagne, and Somme, in order that they could emotionally connect with their pupils.31 Cromwell, who came from an affluent New York family, financed the entire project.

As with her earlier success with the earthquake victims, Montessori’s pedagogy was able to calm the children’s overstimulated minds and distract them from the haunting memories of the war. The extreme deprivation endured by the refugees and their families had left profound marks upon their minds. The dire living conditions, the scarcity of food, and the need to hide had stunted these children’s mental and physical development, as described by six-year-old Marcel:

[W]e lived in Arras for more than a year in the cellar. All our window-glass was broken. We would go down and undress in the cellar and go to bed there [...]. [It] was cold in the cellar, and one day the house fell down. So we went to Rheims and lived in another cellar. I went to school in a cellar too. In the cellar in Rheims where I slept, my mother let me keep my rabbits. But one of them was killed.32

Deprived of basic stimuli to nurture his young mind, Marcel had grown apathetic and distant. The Montessori classroom, once again, offered stimulation and provided a safe haven in which the children could be rehabilitated.33

At Cromwell’s invitation, Montessori visited the schools to assess the results of her approach on the refugees. Referring to her experience in Italy, ‘where there have been so many sufferers from the great earthquakes’, Montessori pointed out that relief efforts were necessary not so much for the children’s physical wounds, caused by horrors and deprivations, but for the mental ones. The catastrophes the children experienced ‘had highly affected the pupils’ nervous systems, resulting in a loss of energy, receptiveness and intelligence so strong that would be impacted to succeeding generations’.34 According to the educator, doctors needed to rethink their role vis-à-vis the conflict and to take on the new challenges posed by total war, which affected an unprecedented number of civilians. She argued that:

[Medicine] has not taken up the attitude proper to its great and dignified role of ‘protector’ of life; it has merely come forward, like the Red Cross Service during war, to heal the wounded and alleviate the condition of
Montessori maintained that a new and all-embracing approach to curing the individual must be taken, one that took into account the psychological and physical health of the person. Accordingly, early childhood education needed to re-educate all children (and particularly ones affected by war) to help them overcome the traumas of the conflict.

Inspired by Cromwell’s work on the Belgian and French refugees, Montessori called for the organization of a supranational humanitarian organization she intended to call the White Cross, which would assist children harmed by war. Whereas the Red Cross symbolized the blood from a soldier’s wounds, and principally aimed at curing the physical wounds combatants experienced on the battlefield, the White Cross aimed at healing the mental wounds that both civilians and soldiers inevitably suffered during wartime. Although the White Cross never came into existence, Montessori’s work in favour of this organization opened up a discussion on civilians’ rights for protection, and she called for the constitution of an organization aimed at protecting children in times of war.

Montessori’s message is extraordinarily resonant today. As refugee crises erupt in many countries throughout the world, the educator’s arguments for rehabilitation through education have a renewed force. The rights of vulnerable children in these situations are often neglected, their physical and psychological growth deeply stunted. And while the press shows us images of wounded or killed children with dispiriting regularity, governments do very little to fight the harmful, long-lasting effects of war. Combating these effects requires us to address the mental and physical toll of conflicts. A 2017 report by the organization Save the Children shows how children exposed to ‘toxic stress’ for an extended period of time, such as during a war, are likely to resort to self-harm and suicide. For more than three million children under the age of six, war is the only reality they know. Toxic stress is a daily occurrence, the damage unfathomable. Though potentially irreversible, the damage can only be confronted with appropriate mental care and with a reformed educational system that centres children’s needs, wherein they can learn self-worth and dignity. Organizations such as AMI’s Educateurs sans Frontières promote initiatives among these vulnerable communities, aiming precisely at restoring children’s physical and psychological health while supporting sustainable practices by engaging local residents in the building of the schools. But this is only a drop in the ocean. More than seventy-five million children across the world currently require urgent support.

Providing safe and high-quality education would serve a protective function, but it would also keep children away from risks and prevent negative coping strategies (e.g. sexual violence, child marriage, and recruitment into armed forces to name a few). Education is key to a child’s recovery. Only through such initiatives can we reckon with the trauma that wars inflict on young minds and develop the means necessary for the rehabilitation of the most vulnerable among us. As the challenges remain almost innumerable, let’s realize the promises made in the various conventions, declarations, and treaties of the twentieth century, the so-called century of child, those very same promises that Montessori worked so hard to fulfil.

**Erica Moretti** PhD, is an assistant professor of Italian studies at the Fashion Institute of Technology, SUNY. She is co-editor of the book *Annie Chartres Vivanti: Transnational Politics, Identity, and Culture*. Her next book project, *The Best Weapon for Peace: Maria Montessori, Education, and Children’s Rights*, explores changes in pacifist thought in the first half of twentieth century through the work of Maria Montessori.
Notes

2 Bailey, “Christ in Bruno”, p. 5
3 Bazin, C., “Maria Montessori incontra il cattolicesimo delle Suore Francescane Missionarie di Maria” in La cura dell'anima in Maria Montessori (Rome: Fefè Editore, 2011), p. 54
4 ANIMI was founded in 1910 under the honorary presidency of Pasquale Villari and the effective presidency of Senator Leopoldo Franchetti. Between 1911 and 1914, ANIMI opened several nursery schools that followed the Montessori method. L’Associazione nazionale per gli interessi del mezzogiorno d’Italia, nei suoi primi cent’anni di vita (Rome: Collezione Meridionale Editrice, 1960).
9 Montessori, Maria, Secret of Childhood, p. 140
11 Montessori, Maria, Secret of Childhood, pp. 140–41
12 George, “Dr. Maria Montessori”, p. 26
14 For a history of the rescue efforts see: Dickie, J., Una catastrofe patriottica (Bari: Laterza, 2008)
15 George, “Dr. Maria Montessori”, p. 26
16 George, “Dr. Maria Montessori”, p.27; italics in the original text
17 Montessori, Maria, Secret of Childhood, pp. 140–41
18 Montessori, Maria, il Metodo Della Pedagogia Scientifica Applicato All’educazione infantile Nelle Case Dei Bambini (Roma: Opera Nazionale Montessori, 2000), p. 151
19 Archivio Generale F(mm) Roma (from now on AGFR), letter by M. Marie Elisabeth du Messie to M. Marie de la Rédemption, 9 August 1911
20 Bailey, “Christ in Bruno”, p. 5
21 Ibid.
22 Ibid.
23 George, “Dr. Maria Montessori”, p. 28
27 Montessori, Maria, “A proposito dei minorenni corrigendi” in La Vita 153 (3 June 1906), p. 3
28 Moretti, E., The Best Weapon for Peace: Maria Montessori, Education, and Children’s Rights (manuscript in progress)
30 Warren, White Flame of France, pp. 262–64
34 Montessori, Maria, “The White Cross” Association Montessori Internationale Archives [booklet of translated excerpts of Montessori’s lecture to the Woman’s Board of San Diego, California 1917]
To Save Displaced Children and Young Refugees


Launching a Montessori Journey, at the Headwaters
Teacher Preparation

David Kahn

A journey is a repeated metaphor for the evolution of a Montessori life with meandering slow currents, undertows, rapids, scenic panoramas, white-water excitement, vortices, and still waters. The Montessori adventure has its eccentricities — the visionary connections provide stability — it’s not a predictable pathway, the logic comes from within each unique human who is on the path to forming their own Montessori identity. My Bergamo trainers spoke with passion about Montessori. They constructed, catalogued, and kept alive the vision. Trainers fuelled a psychic engine inside all of us who were eager, if not driven, to advance our knowledge of Montessori.

In her book *Psychogeometry*, Montessori makes an analogy between the trainer and trainee, teacher and child, and teacher and parent. She saw the students’ receptivity and understood their enthusiasm and willingness to grow beyond school.

Those working in education, who have managed to arouse deeply imbedded interest that leads to an action performed with all one’s effort and effective enthusiasm, have succeeded in waking the man. They have touched that breath mentioned in the Bible, which made man out of mud. Now man, with his interest aroused, often demonstrates unexpected energy. In the same way the child, when making an effort out of interest, deploys abilities that were latent and unknown. These new ideas regarding the interested child have caused the old psychological concerns to change, opening up a more dynamic field of educational methods. (pp. 4–6)

When I started my Montessori training in 1971, I was recently out of college, an artist and writer and newly married. The students were all captivated by Bergamo, this fairytale landscape above the Venetian walls built on top of Roman ruins where two funiculars ferried people up and down a foothill called San Vigilio. The Italian world of ancient stone and pitched rooftops framing blue skies signified positive outcomes for the future. The effective training course housed in a safe haven created an oasis.

We and our fellow students loved walking across the piazzas and into the parks, watching the families with children eating gelato in their Sunday best. We were pilgrims from America, not tourists, but residents for ten
months in this picturesque and historic spot. All was new to us — seeing workers, not machines, sweeping and washing cobblestones in the square surrounded by the century-old stone cathedrals in Città Alta, the old city. The bells sounded on the quarter hour, reminders to go to church, or to buy fresh polenta, bread or panini, eggs or vegetables. Artists crafted jewellery in their storefront studios. We had stepped into a medieval guild on our way to school. The Bergamo centre sheltered a Montessori wholeness promoting an interior journey growing outwards to a universal clarity.

Mario Montessori, Maria’s son, was the cofounder of the Bergamo centre and visited with our venerable trainer, Camillo Grazzini. Mario Montessori Sr told us ‘if we were not there to learn the Montessori method, please get out’. He was referring to some course resisters who wanted to include other pedagogies: Tolstoy, Piaget, Bruner, Vygotsky, Elkind, William James, etc. Mario Montessori answered ‘no’ without wincing. Such was the right decision because when finishing the course, something was different — a new spirit took over. I now belonged to the universal Montessori family, and this was a sacred bond.

After our 1972 graduation, I saw myself as a prepared Montessori teacher who was to spend the next fifty years in America living a commitment I could never have prophesized. I began a Montessori elementary classroom, initiated and taught at their middle school, started a Montessori farm campus, and a Montessori high school, and published and supported a national AMI organization of media works, helping others find their place in the sun.

I will enjoy seeing the next generation fulfil the realization of all four planes of development; now we barely know three. Over the years I have loved exploring with international colleagues who shared their thinking, designs, and methodology. I have seen dedicated trainers, parents, teachers, and staff born and reborn into a succession of ages and stages. The Montessori spirit shines on through our trainers and trainee collaborations, as a living oral tradition. The work of the trainers communicates the completeness of an integrated human pathway graced by a rich social diversity. We celebrate a global convergence as part of a 150-year birthday, earmarking an ever-widening scope.
Such a passionate expansion lives on and on. This global joint perception of development shared across cultures travels beyond the present or the past, even the future, because Montessori pointed out a fundamental truth: The individual participates with a socially bonding partnership with the rest of the planet. This is not a pedagogical fact, but a social-emotional transformational awareness. Montessori will expand its connectedness to achieve global and ecological goals for all humans.

Can you feel the Great River that is flowing through each one of us right now? Can you feel its pulse? Do you see the strange nation, this strange country? The inhabitants are in each of us; the Great River flows through all of us. It flows throughout the body so that every single part is reached. The smallest parts from which our bodies are formed are the cells: A cell is very tiny, so tiny we can’t even see it with the naked eye. Yet the Great River reaches every single cell, and all the cells together work unconsciously to keep the body alive.

(Baiba Krumins Grazzini narrating the Great River story)
References

Montessori, Maria, [1936], Psychogeometry (Montessori-Pierson Publishing Company, 2011)

David Kahn is Executive Director Emeritus of the North American Montessori Teachers’ Association and Co-Director Emeritus of Montessori Development Partnerships. He holds a bachelor’s degree in fine arts and classics from the University of Notre Dame (Indiana) as well as the AMI Montessori elementary diploma from Bergamo, Italy. Kahn has served as a director for non-profit Montessori management organizations over the last forty years. He has seventeen years of Montessori teaching experience, twelve of them as teaching principal at Ruffing Montessori School (Cleveland Heights, Ohio). He was founding director of the Hershey Montessori School’s Adolescent Community in Huntsburg, Ohio, and of Montessori High School at University Circle (Cleveland, Ohio). Kahn developed The AMI Montessori Orientation to Adolescent Studies, consults with schools that are beginning Montessori farm or high schools, and has worked in public school districts adapting Montessori adolescent teacher development. He is currently a consultant for Hartford University Montessori Center (Connecticut) and a presenter at an experimental foundation course called Core Principles at MINT, a Dallas, Texas, training centre. Kahn also creates and collaborates on film and written publications showcasing Montessori innovation and implementation in both the public and private sectors and has created two major museum exhibits accenting the social and ecological directions of the Montessori movement.
Development is clarified in the opening paragraph of Camillo Grazzini’s article “The Four Planes of Development” in AMI Communications, Special Issue (Amsterdam: Association Montessori Internationale, 2010), pp. 7–79, In this section at the outset of our vision search we need to establish our moorings with two basic points of views across the planes. Grazzini himself explains why the “Four Planes of Development” is the fundamental vision theory that comes before Cosmic View. So this is the first cardinal point of awareness.

“Four Planes of Development (short excerpt)”  
By Camillo Grazzini

“Montessori’s developmental psychology constitutes a grand framework or structure in which detailed study or examination finds its appropriate place. All that we have heard during the last few days about the child from birth to three years of age, the child from three to six years, the child from six to twelve, concerns a much more detailed look at individual planes or sub-planes of development, but all of it fits within this great framework. The four planes then, are only a framework and yet, at the same time, extremely important precisely because it is Montessori’s overall view of development: the development of the individual from birth (or even before birth) to maturity. This vision of the whole of development provides a holistic view of the developing human being; and it explains and justifies the constant Montessori idea of the importance of education as a help to life. Surely it is this very grand view of development — this understanding of the cyclical and non-repeatable nature of the seasons of developing life — that constitutes one of the great distinguishing features of Montessori’s work.”
I mentioned above that, although the character of each period is so different that it seems to belong to different people, yet each period lays the foundation for the next period. In order to develop normally in the second period, one must have lived well in the first period. It is like the caterpillar and the butterfly which are so different to look at and so different in their habits; yet the fineness of the butterfly is attained by the true life of the caterpillar it was before, and not by imitating the example of another butterfly. In order to construct the future one must attend to the present.

Maria Montessori,
The Absorbent Mind
p 278, Montessori-Pierson Publishing Company

From The Storybook of Science by Jean-Henri Fabre (1823-1915) a French naturalist, and entomologist, whose work is quite regularly referenced in Montessori’s writings.

OH, how beautiful! Oh, my goodness, how beautiful they are! There are some whose wings are barred with red on a garnet background; some bright blue with black circles; others are sulphur-yellow with orange spots; again others are white fringed with gold-color. They have on the forehead two fine horns, two antennae, sometimes fringed like an aigrette, sometimes cut off like a tuft of feathers. Under the head they have a proboscis, a sucker as fine as a hair and twisted into a spiral. When they approach a flower, they untwist the proboscis and plunge it to the bottom of the corolla to drink a drop of honeyed liquor. OH, how beautiful they are! Oh, my goodness, how beautiful they are! But if one manages to touch them, their wings tarnish and leave between the fingers a fine dust like that of precious metals.

Now their uncle told the children the names of the butterflies that flew on the flowers in the garden. “This one,” said he, “whose wings are white with a black border and three black spots, is called the cabbage butterfly. This larger one, whose yellow wings barred with black terminate in a long tail, at the base of which are found a large rust colored eye and blue spots, is called the swallow-tail. This tiny one, sky-blue above, silver-gray underneath, sprinkled with black eyes in white circles, with a line of reddish spots bordering the wings, is called the Argus.”

And Uncle Paul continued thus, naming the butterflies that a bright sun had drawn to the flowers.

“Well, this initial state of the insect, this worm, first form of youth, is called the larva. The wonderful change which transforms the larva into a perfect insect is called metamorphosis. Caterpillars are larvæ. By metamorphosis they turn into those beautiful butterflies whose wings, decorated with the richest colors, fill us with admiration. The Argus, now so beautiful with its celestial blue wings, was first a poor hairy caterpillar; the splendid swallow-tail began by being a green caterpillar with black stripes across it and red spots on its sides. Out of these despicable vermin metamorphosis has made those delightful creatures which only the flowers can rival in elegance.

http://www.gutenberg.org/files/56795/56795-h/56795-h.htm
Maria Montessori’s Cosmic Vision, Cosmic Plan, and Cosmic Education

Camillo Grazzini

Introduction

[...] Over the last fifty years, this is the third time that we are publicly honouring Maria Montessori in this magnificent city of Paris. In 1953, the Tenth International Congress was held here (the first to be held after Maria Montessori’s death); then, in 1970, UNESCO celebrated the centenary of Maria Montessori’s birth; now, thirty years on, the Twenty-fourth International Montessori Congress is being held here, the first congress of the new millennium.

The theme of this congress is close to that of the first congress held in Paris: the theme then was “How to Help the Child to Adapt to Our Times”; this time it is “Education as an Aid to Life.” The close similarity of theme is significant because it demonstrates the continuity of our work, and the theme itself highlights Maria Montessori’s life work for the child and encapsulates the aims and work of the Association Montessori Internationale, the organization founded by Maria Montessori herself in 1929.

Cosmic Vision, Plan, and Education

By 1935 Maria Montessori’s cosmic vision, her thinking in relation to a cosmic plan, her ideas of cosmic education, had all started to take on a definite form, had started to crystallize. But what about these three expressions that all share the great qualifier cosmic? In reality they all represent different aspects of a single mode of thinking.

The first aspect, that of ‘vision’, has to do with a way of seeing, a way of understanding the world; and Montessori’s own grandeur has to do with her way of looking at the world and at the human being.

The second aspect is that of the ‘cosmic plan’. Looking at the world with a grandeur of vision, with a cosmic vision, we find order at the level of nature, at the level of creation. For such a cosmic order to exist, and for the upkeep and continuation of creation in general, we find many agents at work and among them we find human beings. Virtually all of these agents of creation, or cosmic agents, act and work unconsciously: humanity alone has the potential to act consciously.
The third aspect, that of ‘cosmic education’, can be looked on as the operational aspect: becoming aware of the different kinds of cosmic work carried out by the various agents and of the interdependencies and interrelationships involved, and thereby developing one’s own cosmic vision; becoming conscious active participants ourselves and thereby participating more fully in the cosmic plan or cosmic organization of work.

Incidentally, at this point we can understand that, unlike what many people believe, cosmic in no way implies contestation or rebellion or breaking free of given patterns of behaviour for the purpose of self-expression at all cost. It does not imply adopting transgression as a way of life. On the contrary, cosmic\(^1\) implies order, the world as universe and unity, the beauty of universal order as opposed to the disorder of chaos. This linking of order — unity — beauty lends depth of meaning to the expression chosen and used by Montessori herself.

Cosmic Vision

The Montessori vision of the world has a cosmic dimension because it is all-inclusive: Montessori looks at the world, sees the world, on a very grand scale, that is, at the level of the universe with all of its interrelationships. There is the inorganic world which is ecologically linked in innumerable ways with the biosphere which, in turn, is linked with human beings or the psychosphere.

Montessori’s vision is also cosmic because she looks at the whole of humanity throughout time: she sees human beings as being guided by finality from the time of their appearance; she sees humanity as both adult and child; she sees the individual both in his unity or oneness and in his developmental differences during the diverse stages or ‘seasons of life’.

It is this vision of an indivisible unity made up of energy, of sky, of rocks, of water, of life, of humans as adults and humans as children, that lends a sense of the cosmic to Montessori’s thinking.
This cosmic sense pervades all of Montessori’s work, both her thinking and her educational approach for all of the different planes or stages of development of the human being: from birth without violence, to the infant community, to the Casa dei Bambini, to the elementary school, to the Erdkinder community for adolescents.

Quite clearly then, this cosmic vision belongs by right to the whole of the Montessori movement: it is indeed the key which gives us all a shared direction and a common goal in our work. In stark contrast to this, there is cosmic education, which is for the second plane of education only, destined only for six- to twelve-year-old children.

Indeed, cosmic education responds to the specific developmental characteristics and needs of the human being during the second plane of development: for example, using the imagination to understand reality, realities beyond the reach of the physical senses; striving for mental and moral independence; exploring the vastness of culture; forming a particular kind of society; and so on.

**The Great Cosmic Plan**

In her book, *What You Should Know About Your Child* (a book which was first published in Sri Lanka, in 1948), Montessori herself speaks about the cosmic plan as follows:

> There is a plan to which the whole universe is subject. All things, animate and inanimate, are subordinated to that plan. There are also patterns for all species of living and non-living things. These patterns fall in line with the universal plan. Everything in nature, according to its own laws of development, approximates to the pattern of perfection applicable to itself. There is an urge in every individual of every species to fit into the appropriate pattern. There is also an inevitability with which all patterns fit into the great plan. From the seed to the full-grown tree, from the egg to the adult hen, from the embryo to the man of maturity, the striving to embody a pattern is perceptible. It wants a loftier vision to understand and appreciate how all creatures and all things evolve into infinite varieties of patterns with a magnificent impulse to subordinate themselves to the central plan of the universe.

It is certain that the urge to protect the offspring and to conserve the species is among the strongest urges of all nature. But there is a purpose higher than the protection of the offspring or the preservation of the species. This purpose is something beyond mere growing according to a pattern or living according to instincts. This higher purpose is to conform to a master plan towards which all things are moving.²

This ‘higher purpose’ can be understood more clearly if we think of the world as a great household, a cosmic household, where all the jobs involved in running the household have been divided up and shared out. Understood in this way, expressed in this way, the cosmic plan actually consists of an integrated structure or cosmic organization where all that exist have tasks to fulfil, their cosmic work to accomplish.

Exercising the cosmic workers at the very grandest scale, we see inorganic agents such as the Sun (the prime source of energy), the Land (but also the rocks and the earth or soil), the Water, and the Air, all of which act and ‘work’ according to the cosmic laws of their being, that is, according to their inherent nature. (Incidentally, in the thinking of Empedocles these would constitute the roots or sources of all and everything.) Then there are the great organic cosmic agents, plants and animals who, with their sensitivities and instincts, also act and ‘work’ according to their cosmic laws or inherent nature.

Lastly, there is the human being, always in his two manifestations: the adult and the child, the child and the adult.

**Cosmic Agents**

All around us there are cosmic agents, of whom we also form part, and these constitute the living and non-living world.

There is energy, the sun’s light and heat. There is the lithosphere: the very ground on which we stand and where we build our homes; the earth or soil with which we dirty our hands, in which the seeds of plants can take root, and to which, on dying, we return; the land which is also the great vessel or container for the seas and oceans. There is water, the hydrosphere: the great constituent or element of the surface of our planet and also of our own bodies; the very source of life. There is the atmosphere, air: the very breath of life. Then too, there is the sphere of life: plants, animals and human beings—the cosmic agents in organic form, those that make up the biosphere. Then, with mankind and with mankind alone, do we have the psychosphere, for ‘something new came into the world with man, a psychic energy of life, different from any that had yet been expressed’, a ‘new cosmic energy’.³
Montessori says all cosmic agents are guided by a universal intelligence which uses the horme,⁴ that impulse, urge or drive, albeit unconscious, toward evolution, self-functioning, and full self-realization. If this is so, then the Montessori idea of finality and syntropic phenomena (where we see a process leading from what is simple, from the homogeneous, to the complex and the differentiated and therefore to what is ever more highly ordered) also involves the non-living world. And all this reminds me, in a certain way, of yet another outstanding individual; it reminds me of Teilhard de Chardin’s powerful vision of the world.

**Cosmic Task and Cosmic Work**

Each agent, great and small, has its own mandate or mission to carry out. This constitutes its own particular function in the cosmic plan, its specific cosmic task that has to be carried out uninterruptedly and unceasingly. However, the possibility of doing this depends also on the work of other agents. In other words, there is a cosmic organization of work which necessarily involves specialization or division of labour, a collaboration amongst all the workers or agents, and therefore innumerable relationships of interdependency.

With Montessori’s cosmic fable, “God Who Has No Hands”, we see the coming of the great inorganic, non-living, cosmic agents as well as the laws of their being. In the work and activities that follow on from the fable, we see how these agents interact and function together in all their possible combinations and relationships, from the Sun with its energy and the planet Earth as a whole, to the cycle or game played out by Water with the help of the Sun, Air, and Land. The endless activity and unceasing toil of these agents explain so many of the phenomena with which we are familiar: day and night, summer and winter, rain and wind, snow and ice. But their work and toil also explain the seemingly changeless features of our globe where all, in reality, is endless change: where wind and water and ice constantly carve and sculpt the land; where the land is worn down and built up only to be worn down again, in endless cycles; and where the frontiers of land and water are ever changing. And in all of this unceasing toil, these agents behave, can only behave, according to their nature, according to their cosmic laws, the laws they were given. To express it in terms of Montessori’s first cosmic fable, it is as though these agents respond to the call of God, God who has no hands, and each one, Sun, Air, Land, and Water, whispers: ‘I hear my Lord, Thy will be done. I obey.’

With Montessori’s second cosmic fable, “The Story of Life,” we see the coming of Life which has its own laws. We see how Life appears to save and preserve the order and harmony of the world since, left to themselves, the non-living agents cannot maintain cosmic order and threaten to bring about chaos.

Montessori regards the sphere of life, the biosphere, as an intimate part of the Earth’s body; and Life’s function is to grow with the Earth, to work not just for itself but also for Earth’s upkeep and transformation. Thus Life too is one of the creative forces of the world, an energy with its own special laws.

The great agent of Life includes, of course, many, many beings, both plant and animal, and Montessori refers to these living agents as ‘engines of God’, for such they are. Take for example the diatoms. These microscopic (unicellular or colonial) algae extract silica from the water to build their ‘shells’. The layer of glasslike silica deposited on the cell wall forms sculptured designs that vary from one species to another; and there are thousands and thousands of these species! Minute as they are, these shells of silica are found in layers, hundreds of feet thick, on lands formerly covered by shallow seas, and vast deposits form diatom oozes covering large parts of the ocean bed.

Take for example the corals. These extract calcium carbonate from the water and, tiny as they are, they build up new land and they also protect mainlands from the sea. How much calcium carbonate was extracted by this army of tiny workers to build the Great Barrier Reef (of Australia) which stretches for about 2000 kilometres (1250 miles)?

And what about the green plants that constantly purify the air we breathe through their endless work of photosynthesis?

The cow, says Montessori, is one of the most important land animals, for its one duty in the cosmic plan is the maintenance of grasslands and meadows in good condition, and this it does: cutting the grass, pressing down the ground, and fertilizing it, all at the same time.

And what about the vultures? Faithful to their function of cleaning the Earth of things dangerous to other beings, they eat carrion and corpses in putrefaction.
And what about the earthworm? It sinks into the earth and works away as ‘God’s little plough’ (to use Darwin’s expression), aerating the soil and also leaving it more fertile. We could go on, and on, and on. But enough has been said to understand what Montessori means when she says: ‘all things in nature have a pattern to which they conform and all of them adhere to a plan into which they weave themselves to form a universe in equilibrium. They function for the preservation of the whole according to a plan and for the preservation of the species according to a pattern; thus are brought about order and harmony in nature.’

Cosmic Task of Human Beings

When it comes to human beings, the prime spiritual agent, and the cosmic task of human beings, Montessori distinguishes between the adult and the child since their tasks are very different and consequently, so is their work.

The child’s cosmic task is to construct the human being itself, construct a man who will build peace, a man who is adapted to the world in which he lives. The greatest onus of this task lies on the child of the earliest years; and the greatest work ever accomplished during any lifetime is that which takes the human being from the helpless state of the newborn babe to the child who not only manifests the characteristics of his species but clearly belongs to his own human group, and is also his own individual self.

Such an enormous work of creation and construction, one which is beyond the powers of any other age, is only possible with the power of what Montessori calls the absorbent mind; with the guidance of those irresistible attractions of limited duration, that Montessori calls the sensitive periods; and with the drive of incredible creative energy. Using his hands, that marvellous human gift, the child explores his world, develops his mental powers, and constructs his very self and, ultimately, the adult human being. We are each one, as Montessori says, ‘the child of the child’ that we once were; a variation, if you like, of Wordsworth’s line of verse: ‘The Child is father of the Man’.

The adult, on the other hand, whose cosmic task is one of contributing to the upkeep and development of the Earth, of creation, modifies and transforms the environment, building a world which is always new, ‘a supranature, a civilized environment’ which goes above and beyond primordial nature. In other words, the adults build a civilization which is in constant evolution and which involves a continual modification and enrichment of their ‘spiritual territory’.

Thus, in some — as yet unpublished — lectures that Montessori gave in 1950 she writes this:

Man’s arrival has created a psychosphere on Earth. What is his task in it? For we must understand that mankind, too, has a task with regard to the Earth on which it lives. The coming of mankind meant a new force, whose function it is to further the progress of evolution. We notice that man possesses certain capacities which may stimulate progress on Earth. His scientific work gradually discloses the secrets of Nature and, moreover, makes use of them, thus creating new possibilities. His technical skill has harnessed the forces of nature in order to build the most complicated machinery. Man’s toil has developed agricultural products which were unknown in primitive nature. Obviously, man too has an active task on Earth [...]

And she continues by saying:

So far, however, man has failed to see that there is a field to be explored in mankind itself. We have now arrived at a stage where we must cultivate human energy. Until now we have devoted our attention chiefly to the inventions of mankind and their workings. Now we have once more to connect these things with man, who invented them. Man must take a central place in life.

Montessori concludes with the importance of the child and the child’s education for the advancement of humanity and the evolution of civilization:

This we can effect through the child. But the child cannot do it by himself, he can only acquire a higher form of character with adult assistance. The child has no fixed form of behaviour, and therefore he needs a guide so that he will not go astray.

But now it is no longer enough to consider only the child of the earliest years, we must also take into consideration the older child, the six- to twelve-year-old child who is in the second plane of his development. And this is what Montessori says:

We can make the human race better by assisting the child in building his character and acquiring his moral freedom. One of the means to this end is a cosmic education, which gives the child an orientation and a guidance in life. For this education wants to prepare the growing child for the task awaiting him in adult life, so that he will feel at ease in his own environment, in which he will later have to live as an independent being.
Cosmic Education

All that I have said so far, about a cosmic vision; about the cosmic plan or cosmic organization; about the cosmic agents with their variety and diversity of tasks and work, all of which lead to a cosmic order; and about man’s special place and role in the cosmos for creation; all of this is involved in cosmic education. Very gradually, and without any need for direct teaching and preaching, the children are led to see, to understand, and to appreciate much of what I have already discussed, and much more besides.

Cosmic education has many aspects and facets and (also for reasons of time) I shall limit myself to indicating and highlighting some of these.

Cosmic education helps the children to acquire a cosmic vision of the world, a vision of the unity and finality of the world, a vision which gives a sense of meaning and purpose. This vision encompasses both space and time; in other words, the children learn to understand the world both in its evolutionary development and in its ecological functioning.

Cosmic education gives the children the opportunity and the freedom to explore, study and acquire knowledge of the universe not only in its globality, but also in its complexity; and they learn to appreciate how the various cosmic forces, following the laws of nature, work and interact such that our universe is one of structure and order. In other words, the children are helped to become aware of what is only too often taken for granted and not seen: the natural or cosmic laws that bring about the order and harmony in nature, a cosmic order and harmony.

Cosmic education enables the children to discover many kinds of interrelationships that exist in the world and that explain how our world functions. These are sometimes relationships of dependency but, above all, they embody interdependency; be this the interdependency of various cosmic forces or the interdependencies within the context of a single force. With these kinds of discoveries, the children come to understand and appreciate the importance of collaboration at a cosmic level.

Cosmic education helps the children to become aware of cosmic tasks and cosmic work, be these carried out consciously or unconsciously (as is usually the case). In this way, the children reach a deeper understanding of the full functioning and role of each of the cosmic agents, living or non-living.

Consequently, the children become more and more aware, not only of the importance of work, but also of the importance of work that benefits others, that contributes to the well-being of others; and they come to see how much they too have received and continue to receive. Mario Montessori recounts how, once they became conscious of cosmic work: ‘the children sought eagerly the cosmic task of whatever came under their observation and, penetrating into these tasks, they came to acquire a feeling of gratitude towards God for the nature he had provided, and towards mankind for having created, starting from natural conditions, a supranatural world in which each individual could perform his own task and provide himself with all he needed from what had been produced by the work of other men.’

Cosmic education results in creative attempts to lead a new and different kind of human life, with responsible participation in all natural and human phenomena. Let me illustrate this with one small but telling example. When Maria and Mario Montessori were in India, some of the children in the school heard about the great problem of adult illiteracy there. Quite spontaneously, they decided to play their part in alleviating this problem and, with permission, they borrowed some materials from the school and taught some such adults in a nearby village to read and write. What an example for all of us!

Cosmic education also means a very different kind of approach to culture. With this approach, we pass from the whole to the detail; each detail is, or could be, referred to the whole; the whole is made up of ordered parts; and, lastly, specialization of knowledge and interdisciplinarity, developing simultaneously, integrate and complete one another. ‘In the cosmic plan of culture’, wrote Montessori in 1949, ‘all the sciences (branches of learning) can be linked like rays springing from a single brilliant centre of interest which clarifies, facilitates, and furthers all knowledge.’ And one year later, she says:

Thus the way leads from the whole via the parts back to the whole. In this way the child learns to appreciate the unity and regularity of cosmic events. When this vision is opened up he will be fascinated to such an extent that he will value the cosmic laws and their correlation more than any simple fact. Thus the child will develop a kind of philosophy, which teaches him the unity of the universe. This is the very thing to organize his intelligence and to give him a better insight into his own place and task in the world, at the same time presenting a chance for the development of his creative energy.”
La Nazione Unica dell’Umanità

I could stop here for I have examined all the three aspects of Montessori’s thinking that I was asked to address. However, I should like to take a little more time to examine further that very special agent of creation, humanity, that has its own glorious, as well as inglorious, history. Throughout their history, human beings have always organized themselves into different human groups, and the contact between groups has varied from peaceful trade and exchange right through to open conflict and warfare. What does Montessori have to say when it comes to the future of humanity?

In her lectures of 1950, she says this:

> Every human group has a form of its own. Now we find that these groups have a tendency to unite; not because the individual members have grown to love each other — for how can one love such a huge number of people that one does not even know — but because obviously the next step in evolution is the unity of mankind. In the psychosphere there should now only be one civilization.¹¹

Even earlier, in 1937, Montessori was saying: ‘All mankind forms a single organism, [...] a single, indivisible unit — a single nation.’¹² For Montessori, in other words, a single nation of humanity already existed decades and decades ago.

There are others who have expressed similar, though not identical, ideas: for example, Marshall McLuhan with his ‘global village’; and Gorbachev with his ‘common home’ when speaking of Europe.¹³

In any case, sixty-five years ago, when the League of Nations was still in existence and the United Nations still lay in the future, Maria Montessori had widened the limited concept of a ‘nation’ (meaning, for example, ‘an ethnic unity conscious of its cultural distinctness and autonomy’) and extended it to embrace the whole of humanity. Ethnic unity, then, is determined by all of Earth’s human inhabitants belonging equally to the human species and, as for the different human groups, Montessori says:

> ‘A single interest unites them and causes them to function as a single living organism. No phenomenon can affect one human group without affecting others as a consequence. To put it a better way, the interest of any one group is the interest of all.’¹⁴

Even the new economic process of globalization, understood as the unifying of world markets and therefore human work, seems to be, at least to my way of thinking, anticipated in Maria Montessori’s writings. Montessori, however, always links the international economic reality to human or social solidarity, as we can read in a very well-known lecture she gave in 1949 in San Remo, a lecture which she even called “Human Solidarity in Time and Space.”¹⁵

Universal union, says Montessori, already exists, and therefore all that is needed is that we should become aware of this reality and ‘replace the idea of the necessity of bringing about union among men, by the recognition of the real and profound existence of these bonds of interdependence and social solidarity among the peoples of the whole world.’

And also: ‘This solidarity between human beings, which projects itself into the future and is sunk in the remotest ages of the past [...] is a wonderful thing.’

> ‘The living idea of the solidarity of all men [...] closely united by so many bonds, generates a warm feeling of sharing in something great which even surpasses one’s feeling for one’s country.’

We can note in passing that Montessori’s idea of La Nazione Unica, in the guise of world unity, was also shared by H. G. Wells and by Julian Huxley.

This idea of human solidarity throughout time and space, and therefore the concept of a single nation of humanity, also form part of Montessori’s cosmic education; and the children come to grasp these ideas, not through mere words and little sermons, but through the exploration and study of humanity, both past and present.

We have seen, however briefly, that Montessori’s education is education as a help to life and an education for peace; it is an integral part of an anthropological and sociological vision of the child and of humanity, with its ecological and spiritual role in the context of the Universe with all of its history.
Conclusion

During the two years following Montessori’s return to Europe after her second Indian sojourn and the San Remo Congress, that is, during the years 1950 and 1951, Maria Montessori became involved with UNESCO.

She was a member of the Italian delegation to the UNESCO General Assembly, held in Florence, in May 1950; during the same month, at UNESCO in Paris, she was welcomed ‘as one of the founders and inspirers of that revolutionary movement known by the name of the New Education’. On this same occasion, when she was asked by UNESCO’s Department of Education to give ‘her vision of how to reach a better international understanding’, Dr Montessori listed six points and one of these centred on cosmic education.

Lastly, in December 1951, on the occasion of the third anniversary of the Universal Declaration of Human Rights, UNESCO invited Montessori ‘to send a message to the world in order to emphasize the highly idealistic value of the event’. This is how Dr Montessori came to write “The Forgotten Citizen”, her last important contribution, for she died four months later.

Relations with UNESCO have been maintained to the present day, since the Association Montessori Internationale, under whose auspices this congress has been organized, is an NGO, or Non-Governmental Organization, in operational relations with UNESCO.

‘To contribute to the maintenance of peace by means of education’ is the main aim of the organization hosting our congress. Therefore I should like to conclude by recalling how, in 1950 in Florence, the poet Jaime Torres Bodet, who was the Director General of UNESCO at the time, welcomed Maria Montessori by saying: ‘In our midst we have someone who has become the symbol of our great expectations for education and world peace.’

After fifty years, education and world peace still remain humanity’s great hope.

I wish to thank Baiba Krumins Crazzini for her help in preparing this contribution.
Notes

1. Cosmic comes from the Greek kosmos meaning order, world, universe, and the etymological meaning has nothing to do with hair, despite what was said by other speakers during the Congress. Comet, on the other hand, comes from the Greek kometes meaning long-haired (and this in turn comes from kome which is the Greek word for hair). Etymologically speaking, therefore, a comet is a long-haired star. Obviously cosmic or cosmos on the one hand, and comet on the other, are totally different concepts and must not be confused.


3. Montessori, Maria, To Educate the Human Potential (Adyar, Madras: Kalakshetra Publications, 1948)

4. Horme comes from the Greek horme meaning impulse, and this is related to the Greek hormao which means to excite. The dictionary meaning of horme is ‘vital energy as an urge to purposive activity’ and this is how Montessori uses the term in The Absorbent Mind (Adyar, Madras: The Theosophical Publishing House, 1949). The term was first suggested (though apparently not adopted) by C. G. Jung, and developed and used by Sir Percy Nunn, whom Montessori cites in her book (Nunn, Percy, [1945] Education — Its Data and First Principles [London: Edward Arnold Publishers Ltd., 1970]).

5. Montessori, What You Should Know

6. Wordsworth, W., (English romantic poet, 1770–1850), see line 7 in “My Heart Leaps Up When I Behold” in Poems in Two Volumes, 1807

7. International Montessori Conference, Amsterdam, Netherlands, April 1950, unpublished proceedings


9. Montessori, Maria, “Educazione cosmica”, manuscript published in the form of an anastatic reproduction in Il quaderno Montessori (Castellanza, Italy, 1991)

10. International Montessori Conference, April 1950

11. International Montessori Conference, April 1950

12. This lecture was given on 29 December 1937 at the Internationale School voor Wijsbegeerte [International School of Philosophy], Amersfoort, Netherlands, and published in Education and Peace, trans. by H. R. Lane (Chicago: Henry Regnery Company, 1972)


14. Montessori, Maria, lecture 29 December 1937

15. In La formazione dell’uomo nella ricostruzione mondiale, proceedings of the Eighth International Montessori Congress, San Remo, Italy, August 1949 (Rome: Ente Opera Montessori, 1950)
Introducing Abs Joosten, the Spark of the Montessori Revolution

Molly O’Shaughnessy

The story he told us was about a social revolution, a revolution without violence. It was the most inspiring story I have ever heard, told by an engaging and masterful storyteller. What made Mr Joosten a master was his incredible depth, brilliant mind, and ardent passion for the child. Every particle of the Montessori method and philosophy of life came vibrantly and viscerally alive to us as we sat mesmerized by his words:

This is not merely a question of learning something. It is a question of achieving a revolution within ourselves and of our whole outlook, of our whole attitude, and of everything we are (knowingly or unknowingly). The discovery and exploration of all we are without having been aware of it, is one of the most exhilarating and fascinating experiences because we precisely discover unknown factors within ourselves. (p. 12)

It was indeed exhilarating and fascinating. The beauty of this work is that it remains so throughout life. And Mr Joosten magically planted the seeds.

His very first words to us in that training course were, ‘We need a theme to stay together and grow together.’ He put forth the theme ‘on becoming who we are.’ The idea was that if we can build a deeper understanding of who we are and how we became who we are, we might realize who we were meant to become and thereby be empowered to render the best support to our newest members of humanity. This perspective gave us a foundation for the work we intended to do together. We had collectively chosen to follow a course in education in order to dedicate ourselves to the service of children. We were to assume a new responsibility to defend the rights of the child — foremost among them the right to be and to develop as nature intended.

Throughout our time together, we were continually reminded that the path of the social revolution is an inward one, because without going in, we could never go out. It was life altering in the most profound and comprehensive way. The discovery was joyful and freeing. Like the American poet Robert Frost, we took the road less travelled, and that has made all the difference.

With the path of the social revolution foremost in our hearts and minds, we moved to the more technical aspects of the course, the developmental materials. Joosten’s brilliance continued to shine. I doubt any course in the world has spent an entire week on the cylinder blocks!
His depth of understanding of the significance and power of each material was extraordinary, as was his ability to have us fall deeply in love with each material. To this day when I present the cylinder blocks, I see his hands, hear his voice, feel his excitement, and all I can do is smile, knowing my hands reflect the power of his hands. He instilled in us that we must develop intelligent hands, hands capable of inspiring the young child to engage with and enjoy the sheer beauty of the materials while exploring the concepts embedded in each one.

Joosten’s deep connection to the Montessori family, begun through his mother, Rosy Joosten-Chotzen, afforded him the opportunity for first-hand, deep, and sustained dialogue with both Maria and Mario Montessori. I remember him describing late-night conversations with Dr Montessori, who was known to work well into the wee hours. As his students, we were afforded the same opportunity to talk to him extensively after class and beyond. Small groups of us crowded around him, bombarding him with questions, ideas, and comments on his thought-provoking lectures. He would pause, think, and articulate the most incredible responses. And we left grateful for the opportunity to have this Montessori sage as our own personal trainer.

In addition to all of this, Joosten was an accomplished linguist who spoke several languages and deeply understood linguistic structure. He wrote extensively on the application of language in a Montessori environment and was well known for his writing on the orthographic difficulties of English. His facility with language was outstanding, and he thought deeply about its application in a Montessori environment.

As one can see from the articles that follow, Joosten was a prolific writer on multiple topics. His ability to combine theory with practice makes the method accessible on a practical level while demanding that guides remain grounded in theory and principles in every decision they make.

The importance of republishing this writing representing Joosten’s extensive contribution to the alternative Montessori movement cannot be overstated. The breadth and depth of his insight is one of the most extraordinary contributions we could ever dream of, and hope for, for future generations of Montessori guides and children. We must preserve the wisdom, knowledge, and passion of the first-generation Montessorians, those who were closest to the genius of Maria Montessori.

As I listened in awe to my most esteemed trainer, I never dreamed I would one day be a trainer myself, but I recognize, to this day, that without his voice proclaiming the social revolution, I would not have taken the road less travelled. And it has made all the difference.

References

Joosten, A. M., [1971], “The Spiritual Preparation of the Adult” in Around the Child

Molly O’Shaughnessy, MEd, has provided strategic leadership for the Montessori Center of Minnesota, serving as president and director of training, since 1996. She earned her AMI Primary Diploma from the Montessori Training Center of Minnesota and holds a master of education from Loyola University, Maryland. She is an accomplished AMI trainer, consultant, and lecturer and serves on the faculty for Metropolitan State University and St. Catherine’s University in St. Paul. She serves on the boards of NAMTA and the MM75 fund, which provides financial assistance for future AMI Montessori teacher trainers; is a member of the Montessori Leaders Collaborative, and has served on the board of AMI. O’Shaughnessy helped spearhead Montessori Partners Serving All Children, an initiative launched by the Montessori Center of Minnesota in an ongoing effort to demonstrate the effectiveness of Montessori education starting in early childhood and its viability for all income levels, races, and cultures.
Non-Violence and the Child

The long and arduous struggle for independence by the Indian people under the unique leadership of Mahatma Gandhi will go down in history not only as one of the greatest events in this century; it will also be recognized as the opening of a new era in human history on account of the technique employed to achieve this political aim. To have wrested recognition of one’s rights from a dominating power, to have shaken off the shackles of bondage without the use of violence is, indeed, a historical event marking a decisive step forward in the evolution of mankind. Furthermore, to occupy a prominent position in the consortium of nations, to be able to give a lead to the peaceful solution of great international problems, is proof of the acknowledgement given to the moral superiority of this new technique and its practical efficiency.

Non-violence however is, and is meant to be, without doubt, much more than merely a new way to realize political and social aspirations. It is meant to be an attitude of life, the basis of all the manifestations of human life. It should penetrate the entire field of human relations and activities. Coexistence of violence in one field and non-violence in others is impossible. We may be still far from a total victory of non-violence over violence, but we certainly cannot renounce striving towards this aim. In this magnificent endeavour, India can and must be a torch bearer. It is unanimously expected to fulfil this great role.

How can we ever hope to reach this sublime goal? Certainly not by obtaining mere intellectual and emotional consent to this ideal, on however universal a scale. It is not enough to understand that non-violence is superior to violence and to cherish non-violence and abhor violence. We must learn to live non-violently, to be non-violent. Non-violence must become an integral part of our personality.

This compels us to ask a few questions. When is our personality formed, especially that foundation which remains unchanged and exerts its influence, often unconsciously, during the rest of our life and development? Who lays this foundation? What means are used to construct it?
Foundation of Personality

Modern psychology gives an uncontested answer to all these questions. It is during the earliest years of our life, from birth to about six years of age, that this foundation is laid. It is the young child, whom Dr Maria Montessori calls a ‘psychic embryo’, who constructs it and gathers the material by means of which he does so, from the environment. He does not ‘learn’ from the words, teachings, and admonishments deliberately and consciously offered by those who consider themselves his educators (parents and teachers). How could he, at so tender an age, when he is still so largely inaccessible to verbal teaching and has not yet completed the psychic organs which will enable him to be taught? He ‘absorbs’ his environment and from his environment that which is ‘alive’. These absorbed impressions are the raw material with which he will build his personality and psychic organs: intelligence, will, and memory. They will colour his emotions and determine the unconscious substratum of the conscious superstructure of his behaviour. The living elements in his environment become ‘means of development’ and we, adults, are first among them, not in what we want to teach, but in what we are.

The next and rather startling question is, therefore: Are we, adults, non-violent in our behaviour in the child’s immediate environment and, specially, in our behaviour towards the child? Do all the great and small apostles of non-violence, those who practise it in realizing their great political and social aspirations; those who preach it, teach it, and propagate it; those who educate their followers and the people in general to non-violence, and those who are their followers; do they all practise non-violence in their relations with the child? Do they do so, not only when they approach the child consciously, with a deliberate educational intention, but above all in their unconscious behaviour towards the child and in his environment?

The Child Surrounded by Violence

A frank and honest answer to these questions can be only negative. It is a sad fact that the child is educated and surrounded by violence! Violence is still accepted, even deemed indispensable, as a means of education in innumerable forms, from the many instances of evident physical violence to the more hidden forms of psychological violence. We may preach non-violence to a large meeting and, on returning home, even do physical violence to our
own child who annoys us. We send him to a school that we have chosen, for reasons of our own (not always very reasonable nor educational), where violence, albeit not always consciously, pervades the whole atmosphere and forms the basis of the methods used.

Even the moment we decide to send him there is often determined with little regard for the child’s needs. In fact, we compel the child to do this and that, to avoid the other — often on points of which we entirely ignore the vital importance for the child himself — without ever asking ourselves whether this ‘unavoidable compulsion’ may not be proof of the violence which our wishes, dislikes, and prejudices do to him, because we do not consider his vital needs sufficiently. We fail to prepare the environment and to provide the means the child needs for his development and generally ignore him as a personality with rights personal, and social, equal to our own. How often is the violence we do to the child’s most vital needs not a direct provocation to violent reaction on his part? How often are we not the direct cause of a development of violence in him?

Social Question
This is a subject in itself, in need of separate and extensive treatment which we cannot give here. Yet, this question Maria Montessori calls ‘the social question of the child’ — which must be considered urgently and requires an ‘examination of conscience’ and ‘widening of our consciousness’, of immense importance. Although we cannot enter into details here, let us at least realize the consequences of the violence that accompanies the child during its development. If violence is one of the elements he absorbs from the environment while constructing his personality, the principle of nonviolence, in whatever form may be given later, can never be but a superficial acquisition, a factor foreign to his nature, incapable of asserting itself when the stress and strain of the circumstances of life bear down upon it.

Non-violence without roots in the very foundation of our personality is like a coat of paint that blisters and peels when exposed to excessive heat and cannot be regenerated from within. It then stands in contrast to our innermost urges. There will be perpetual warfare between the conscious aspirations for non-violence and the unconscious tendencies to violence within. This battle weakens, creates contradictions and tensions, and leads at best to a precarious compromise, usually to the defeat of the ‘ideal’ of non-violence by the reality of violence. In this inner conflict we may even recognize the seed of conflict between the individual and his environment; between groups of individuals more or less organized around their own violent urges; and ultimately of the wars that deface the pages of human history.

Vital Requirement
If non-violence is to open a new era in human history, if it is to become a permanent conquest of human nature and civilisation, if it is to be more than a weapon to overcome political and social injustice; if, in other words, it is to pervade the whole life of man and not only certain limited manifestations in a society of adults who are here today and will be gone tomorrow, then non-violence must become the very foundation of our relations with the child from birth onwards. It must become the first and most precious and steadfast offering from the adult to the child, from the society of the present to those who will form the better society of the future.

This is a great and noble undertaking! To carry it out, good intentions, a magnanimous heart, and firm will are indispensable, but insufficient. If science furnishes us today with the means and technique to carry out even the most ordinary activities of our daily life, it must be harnessed also in this field. The great work done by Maria Montessori, which — on a solid scientific foundation and an educational experience all over the world, among children of all races, creeds, and social conditions — has penetrated, through and with the child, into psychology and sociology, should be recognized as a substantial contribution towards this aim. In it we find a scientific monument to non-violence as the basis of ‘education as a help to life’ from birth to adulthood. Non-violence, that is to say, positive and constructive respect, and selfless, unprejudiced service to the realization of the human potential according to the laws of psychic growth, determines its orientation and all the details of its technique and practical application.

Need for a Training Field
One more point deserves to be made, however briefly. We all know how difficult it is to be consistent in the application of non-violence to the problems of adult society. How often do we not tend to waver and to relapse into violence! How much do we not have to fight against the urge to take the illusory but so tempting shortcut through violence! How frequent also is it to consider as non-violence mere avoidance of violence out of fear for the violent reactions of our environment! Do we not feel that the mastery of this new technique, as that of any other technique, requires ‘training’ and, consequently, a ‘gymnasium’, a training field?

The adult world requires application, it does not offer a natural training field. Love for our neighbour is not always strong enough an energy to help us respect him and observe non-violence towards him. Yet, love is the one energy that provides a vis a tergo for non-violence. Where, then, do we find love as a spontaneous energy? Where do we find it in its greatest and most natural strength? Exactly
between the adult and the child! Is not the child the fruit of love? Does the child not call forth love from even the most hardened soul (is somebody who has no love for children not considered ‘unnatural’?) as if he were a ‘spiritual magnet’ of this most spiritual energy? Let us then take advantage of this opportunity and realize that not only does the child need us so that he may use non-violence as a means of development and base his personality on it, but that we need the child to help us to strengthen, develop, and stabilize non-violence in ourselves.

Instead of the violence of the adult world penetrating into that where the adult and the child meet, and thus vitiating the child’s nascent personality, the non-violence of our relations with the child — purified by a frank examination of our conscience, increased by a widening of our consciousness, and raised and rendered more efficient by a scientific technique — can then overflow into the world of the adult as an irresistible and infinitely beneficial life-raising force. Then, in this field also, the child can truly be a helper rather than the helped and give even loftier significance to the expression that ‘the child is the father of the man’.3

Notes

The following notes have been adapted from those provided by editor Rukmini Ramachandran for the book *Foundations of Montessori Pedagogy*.

1 Mohandas Karamchand Gandhi (1869–1948) helped to free India from British rule by a unique method of non-violent resistance and is honoured by Indians as the father of the nation. Ahimsa (nonviolence) to him was the highest virtue. By non-violence, Gandhi meant not merely the absence of violence, but also loving concern for all life. He taught that to be non-violent required great courage.

2 Latin term meaning ‘a force operating from behind; a propulsive force’.

3 This quote from William Wordsworth’s poem “My Heart Leaps Up”, or “Rainbow”, refers to the idea that a person’s personality is formed in childhood.
War on Poverty

Not only our country, but the whole world is engaged in an all-out war on poverty as part of the even greater and truly global war for justice and peace.

Can there still be any doubt that education is one of the most important weapons which can bring us closer to victory in this just and non-violent war?

Poverty is so much more than merely a lack of material goods of food, shelter, and clothing, preventing man from living a human life and compelling him to pass, not even to live, his life in a struggle for precarious survival in conditions worse even than those of infra-human beings. In the case of man — and in his case only — does the word poverty have true meaning. It is also above all a lack of deeply lived human values, unshakeable inner strength, and a real and lofty vision of his place, task, and function in the world (today we really must say ‘universe’) that makes him poor. Of this poverty, which inevitably brings all its other forms in its wake, he suffers most. In this poverty he suffers as a human being. The almost frantic search for better material conditions, the blind expectation that it is this alone that can assure his life. By a law of nature, only Man-the-Child can do that!

Education as a help to life must render the assistance needed so that the child can utilize the great wealth of developmental powers and only mask, to himself also, the deeper and more fundamental poverty that causes true misery for himself and makes him an agent of misery to others, to the world itself (the pollution of his vital environment).

Man-the-Adult is capable of material production and could, by means of an all-out discriminating effort, use his almost unlimited powers and means to satisfy the basic material needs of himself and his fellow beings all over the world. Man-the-Adult, however, can no longer produce in himself the strength of character, the breadth of vision, and the discriminating intelligence, much less the truly social attitude, needed to do so. He can make ‘things’, he can no longer lay the foundation within himself that makes him into what he is meant to be and should be.

[...]'potentialities given to every child everywhere. They are man's most real and true wealth. Nothing can deprive him of it. It is his 'dowry' on entering life. Not equal in all, but not absent in any.

How great and fatal is the blindness that makes the adult world and also, even particularly, the educational world overlook this original fund of immaterial riches! How great and fatal the injustice that — in the name of education, mostly reduced to mere instruction — deprives the human being from before birth until adulthood (but most grievously during the first six years of life) of the conditions and means to live by these riches and thus enrich the whole life of man and society! How contradictory this creation of poverty at the very roots of life from which it can only develop and spread its luxuriating deadly growth!

In helping the child lead the rich life which is his by birth, we can become rich ourselves in our deepest human being. Thus, it truly is the child who can help us take the first steps, already now and here, towards a victory over poverty in all the forms that degrade human life, and yet retain and develop the spiritual virtue of poverty without which man cannot be rich.

Notes

1 The beginning of this sentence is also missing from Foundations of Montessori Pedagogy. —Ed., 2020
The Child’s Right to Develop

There can hardly be a more fundamental right than that to be, and to be oneself, what one is and is meant to be. When we say, ‘meant to be’, this should then also be understood as meant not by others, not even by oneself alone, but in accordance to one’s raison d’être. This right is the very centre of a social question insufficiently taken into consideration. Yet it is not only the last social question to be raised and solved, as explained by Dr Maria Montessori, who was perhaps the first to raise it in explicit terms, but also the most comprehensive and radical of all social questions. All others concerned Man-the-Adult: and even then, only groups of adult men. This social question concerns Man-the-Child, all children without exception and, thereby, all men, because all men not only once were children but are built by the children they were and largely determined by the conditions of their childhood. The social question of the child, therefore, underlies all other social questions, whose solution depends on it as it concerns that period of a man’s life when the foundation of his being is laid.

If a social question concerns primarily the conditions under which man leads his human life, the recognition of his human dignity, the respect paid to this human dignity and its inalienable rights, at what time does this acquire greater and more decisive importance than precisely when he forms himself? When he gives himself a form which will not basically change during later life, as is now almost universally acknowledged?

If all social questions are considered in terms of the social function fulfilled by those to whom they refer, at what time does man fulfil a loftier and more essential social function, a function more directly related to his being, than when man forms his very being? Only to the extent to which he is can he apply his being. It is man, more than any other being, who has been given the task and the power to make himself, but this task has been entrusted to Man-the-Child. The very essence of the being of Man-the-Child consists in the progressive actualization of his human being. For Man-the-Child to be is to develop, in him the two are practically, more even than theoretically, synonymous and identical.

“...Our laws, our traditions and our social principles or prejudices have deprived childhood of its civil rights because of a fatal lack of understanding with regard to its function and task. The child depends practically totally on the family and the school. He is educated and instructed according to the interests and opinions of the adults who carry out these activities. The needs of his development, the rights of his life are not sufficiently taken into account. He is, therefore, deprived of his rights as a citizen.”

Maria Montessori, The Formation of Man
Man-the-Child is man in fundamental becoming; fundamental is here a necessary qualification, not restrictive of the meaning of the noun it qualifies but reinforcing and condensing it. It is, in fact, characteristic of man, and his unique privilege and responsibility, that he can, consequently is meant to, continue developing even after attaining maturity and adulthood. This continued development, however, is conditioned by the foundation laid and the development realized during childhood. It is man’s formative self-construction and explication as a child that furnishes him with the actual powers of understanding, vision, and will to carry out his applicative life task of continued self-development. It is no less, even more, important and characteristic than the application of his being to the development of his outer environment, of the world, the latent potentialities of which wait for man to set them free by his co-creative and re-creative work. In working in, on, and for the world without, he continues working at, on, and in himself and, thereby, continues developing himself.

In this perspective, taking up and trying to solve the social question of the child is the first and all-decisive step towards the raising, even discovery, of a social question of man, not of some men, of all men, of man as such. But why do we call it a ‘social’ question? Man being social by nature, unable, therefore, to live his human life except in society, all human questions are social questions and require to be tackled and solved by society, by the social family of man. Society has to recognize and respect the inalienable rights of all its members. It has to maintain, restore, and create the conditions for their human life and that in direct relation with their social functions, with the priority and importance of the contribution of those functions to the common weal of mankind.

Does it then not, not yet, sufficiently do so? Sufficiently never. Is not man’s nature by nature dynamic, evolutive by nature, in continuous movement, ideally developing movement? No, not yet, precisely with regard to Man-the-Child, in his fundamental function of developing and making himself. The adult, adult society still arrogate to themselves the right and responsibility to ‘make’ the child. They ignore that the child alone can do this. They, therefore, deny him the right to be, to be himself and, thereby, to fulfill his being. Maria Montessori writes in The Formation of Man, ‘The child, has remained outside society, an unknown quantity [more even quality] in the equation of life.’ Elsewhere, in the 1930s, in a work unfortunately not yet translated into English which has the title Through the Child to a New World, she calls him a ‘forgotten citizen’. There she writes:

Our laws, our traditions and our social principles or prejudices have deprived childhood of its civil rights because of a fatal lack of understanding with regard to its function and task. The child depends practically totally on the family and the school. He is educated and instructed according to the interests and opinions of the adults who carry out these activities. The needs of his development, the rights of his life are not sufficiently taken into account. He is, therefore, deprived of his rights as a citizen.

[...] Many are trying to improve the living conditions of children, but these attempts are made on the basis of mainly private initiative, of the moral principles of associated individuals, not on the basis of a recognition of the social rights of the child. Society does not yet recognise the children as a special group of its citizens who possess a sacred right to well-being. Our laws mention the rights of parents without requiring from them to sufficient extent that they prove worthy of these rights and be adequately prepared and qualified to exercise them in favour of those for whom they hold them.

Elsewhere in the same book she writes:

When the social question of the child is mentioned at all, only extreme cases are thought of, but the assistance contemplated can be compared to first aid offered in the case of accidents, to a Red Cross service. They do not yet constitute a recognition of the social question of the child, of childhood as a whole.

Society still lacks awareness of the autonomous value and function of Man-the-Child, of his power and strength, of his radical social importance. We always think of him only in terms of what we are and he is not or not yet. Assistance, even education, is always thought of in terms of filling a deficit, of giving shape and substance to a presumed lack of both and either.

Whereas the child, by reason of his physical and mental immaturity, needs special safeguards and care, including appropriate protection before as well as after birth [...] 3

No mention is made here either of the vital contribution made by childhood to the very existence of adulthood, consequently of the adult man whose rights as an adult were proclaimed earlier. We certainly recognize that the child needs (and who does not need?) help. Yet hardly ever, perhaps never, is any mention made of the help the child can and does give, must give, to us, adults, and to our society, as a child, by his childhood.
Can the two parts of human society — because, recognized as such or not, childhood is part of human society, forms even the majority in a healthy human society — ever truly form one whole truly human family and society as long as one part remains at the receiving end and the other at the giving end? As long as it remains divided in debtors and creditors? At least as long as this is the conception one part has of itself and of the other one? Can ‘aid’ — which means help — ever truly help as long as it is thought to be one-sided and given with this attitude? Does true help not require that we recognize that it has to be mutual, that we can help only if we are prepared to receive help from those whom we wish to help? Should we not try and understand that we can help only to the extent to which we let ourselves be helped by those to whom we offer assistance? And can our help to the child be an answer to his true needs, if we fail to recognize that the child is a human being with human values and human rights as a child and not as a mere preadult? Can we ever know the human needs of childhood unless we recognize it as an autonomous period of human life and break through our habit of looking on it as a kind of ‘waiting room’ for adulthood only?

More than all this even, we have to recognize the essential difference between helping and claiming, offering in response to needs which embody rights and imposing on the basis of prior conceptions (hence prejudices). We must accept that help is such only if it is given to assist the achievement of the purposes of those to whom it is given, that it becomes a hindrance when it does not respect such purposes and demands that it be utilized for the purposes of the giver. Respect, recognition, even acceptance of indebtedness on the part of those who offer help with regard to those to whom it is offered, then become the keys to all true assistance. Indeed, all social questions so far raised and to some extent solved in the course of the last hundred years opened the door of concrete social progress with the help of these keys.

Maria Montessori’s educational approach opened doors and paved a path to a concrete recognition and implementation of the right of the child to be, to develop his being. It is the ‘instrument’ of a social campaign which is the real content of her work. It started a real and peaceful revolution by setting the child free not only from very real oppression and neglect, but for the fuller fulfilment of his unique life task as builder of the human personality. Let us then also recognize that it was built on respect for the child in this capacity, on recognition of his place in society as the foundation layer of social life, on full acceptance of the great debt we adults, all we are, all we are capable of doing and should do, owe to the child. She did not ‘invent’ a new and more successful method to teach children, what we felt they should learn, to make them behave as we felt they should behave, to make them be what we felt they should be. She did and could develop her method because she recognized in the child vital powers of development we no longer possess, capacities that are no longer ours, attitudes not only potentially but actually superior to ours, needs that had been overlooked or misinterpreted, a dignity trampled upon. She based her work on these, also scientifically proved, ‘discoveries’ and then compelled by them decided to follow the child and became, as she was once called, the Knight of the Child. She did not decide what were his needs, she learned from the child what his needs are, and then tried to respond to them. She did not trace the road he had to follow, she observed the path along which his selfbuilding efforts moved and accepted the humble task of paving it for him. She did not try and facilitate his adaptation to society as it is, but rather claimed that society give him the place, the scope, the means which it owes to him so that he could help it, already now, as a child, to follow new paths, find new forms of life, of a better life, a more peaceful and harmonious, a worthier life.

To dedicate ourselves to the solution of this social question and to carry out our work for the child within its framework would be a pledge truly honouring our gathering. Let us not forget that this greatest, because most fundamental and numerically vastest of all social questions, is also the noblest and most challenging as those it concerns directly cannot fight for their rights themselves. Ours can be the merit and privilege to do so on their behalf within and even against ourselves. Thereby we can greatly enrich our own lives and society and eliminate much that in us and in our social life is neither true nor right.

Thus, we can start taking concrete steps towards peace, union, and harmony in our world by moving toward peace, union, harmony, and mutual assistance between Man-the-Adult and Man-the-Child, towards a new and radical collaboration between them, towards a true recognition of their mutual human and social rights. Maria Montessori’s discoveries illuminate the vital interdependence between Man-the-Adult and Man-the Child. She called for and paved the way for the establishment of a new relationship between these two human peoples, who are one. It breaks through the incomplete, one-sided, exclusive, and, therefore, destructive conception that the child is helpless and only dependent upon the adult, and that the adult alone is capable of offering help to, but remains himself independent of, the child. Maria Montessori’s work and message reunite these two great parts of mankind, and thereby lay a foundation for their integration into a single whole. Neither dependence
nor independence are real here below or anywhere. Interdependence is the only reality of created life and all it has been given to ensure and fulfil its life.

We can do no better than quote in conclusion of an address given by Maria Montessori in Florence:

Not merely children, but young people as a whole are undoubtedly full of energy and resources, to which we have paid insufficient attention. We who have always concentrated on the problem of teaching and transmitting our knowledge to young people, never seem to have thought that, conversely, we have so much to learn from them, so much of the hidden resources of human nature itself. We should be ever on the look-out for what young people through their lives and activities, have to teach us in this way.

I think, therefore, that if UNESCO one day decided to regard children as a factor in the reconstruction of the world and the establishment of peace, and if it tried to enlist their aid, organize them, discuss matters with them and make use of everything they have to teach us, this would be of great assistance in breathing fresh life into this society, which must be built up not by a section of men, but by all men, from the beginning of their lives onward. It is the young people, the children, upon whom we may base our hopes of building a better world, since they can give us more than we in fact have today, and more than we at one time had, but have since lost.5

Notes

The following notes have been adapted from those provided by editor Rukmini Ramachandran for the book Foundations of Montessori Pedagogy.

1 This is the transcript of an address in Duluth, Minnesota, in 1974, published in the 1981, 1-2 issue of AMI Communications. This was published with an introduction by Mario Montessori to pay tribute to the memory of Abs Joosten who had died the year previous.

2 Montessori, Maria, The Formation of Man, chapter 3

3 From the Preamble to the Declaration of the Rights of the Child drafted by the UN Commission on Human Rights and adopted by the General Assembly of the United Nations on 20 November 1959

4 Montessori, Maria, The Secret of Childhood, chapter 2

5 From the transcript of Maria Montessori’s address to the fifth session of the UNESCO General Assembly held at Florence in 1950, which appeared in the Jubilee Issue of the UNESCO Courier (July/August 1966)
Albert Max Joosten (1914–80) was a Montessori trainer and practitioner whose life and work has had far reaching impact on the Indian subcontinent. He brought the Montessori message of education for peace and social harmony to Montessori teachers across generations. He was known and admired for his lively personality and powerful lecturing style. His writings call us to return to the foundations of Montessori pedagogy, the importance of creating conditions in which children can develop to their fullest potential and thus bring about in turn the spiritual uplift of humankind. Reprinted from A. M. Joosten, Foundations of Montessori Pedagogy, ed. by Rukmini Ramachandran, chapters 5, 6, and 7 (Indian Montessori Foundation, 2018). Used by permission.
What Does Montessori Have to Do with Anthropology?
Diversity, Observation, and Revolution

Maribel Casas-Cortes

This article is the sequel to a previous article by Maribel Casas-Cortes about Montessori’s search for applying deep anthropological consciousness, which establishes Montessori pedagogy as holding a deep revolutionary, counter-cultural insight.

It was this anthropological orientation that determined Montessori’s revolutionary conception of education as an aid to life.
—Mario Montessori Jr, Education for Human Development, p. 5

In the introduction to my previous essay on Montessori, “Montessori Education: Cultivating a Counterculture? Notes by an Activist Anthropologist”, I explained how I was initially attracted to Montessori as a university educator and a parent of three transnational children. My fascination with the potential contributions of Montessori education grew stronger upon realizing how deeply it resonated with both my affinity for social justice issues and my academic field of cultural anthropology. That piece argued for ‘Montessori as a pedagogy with a pro-diversity agenda built-in’ (“Montessori Education”, p. 147). Arguing that the method nurtures deep respect for difference, I developed how it strongly resonated with my background in Zapatista-inspired activism and my scholarly training on appreciating diversity.

This reading was made possible by engaging the bibliographic rendering made by Paola Trabalzini in Maria Montessori Through the Seasons of the “Method”. This historical account shows a woman actively involved in the social movements of her time, such as early feminism, socialism, and pacifism, as well as pioneering novel struggles, such as those for children’s and disability rights. When reading Trabalzini’s detailed historical account, the activist anthropologist in me identified a radical pro-diversity agenda in Montessori’s mission and method. Her activities questioned and challenged many of the uneven power relations that were accepted as normal at the time in which she lived. In particular, she dealt with discriminatory practices and prejudices in scenarios of diversity that were then understood as a social hierarchy, that is, when being ‘different’ was used as an excuse for dismissal and exclusion: mental and physical particularities, economic disparities, age difference, gender diversity, and national identity. My essay “The Forgotten Activist Hero: The Documented Social Mission of the Young Maria Montessori” engages this largely disregarded trajectory of Maria Montessori’s work as a way to further understand both
her context and her contributions. I identified five distinct yet interrelated issues of diversity still of contemporary concern: disability rights, economic inequality, children’s rights, early feminism, and anti-nationalism (pp. 31–38). All these issues are key for social-cultural anthropologists, who deal with questions of how diversity is intertwined with power and counter-power processes. Anthropologists critically analyse how differences among humans are at times coded into hierarchies and inequalities within concrete communities. They also identify how diversity is translated into alternative practices based on respect and mutuality within those communities and among other groups of people.

My initial gut feeling, and eventually more elaborated argument, is that Montessori deeply resonates with the field of cultural anthropology. In this piece, I explore such connections, which I started to sense when first encountering the world of Montessori. I propose that anthropology and Montessori hold three meaningful similarities in relation to the what, how, and for what.

The What
The ‘Object’ of Study

One of the initial staples of the discipline of anthropology in the mid-nineteenth century was its focus on the ‘Other’. That is, the study of those outside the mainstream, those who historically have been labelled ‘primitive’. Anthropology was born to study those populations believed to be so different that a new field of expertise was needed in order to better discern who and how these people were, and eventually learn to relate to them. Those Others belonged to pockets within humanity outside of an assumed norm. At the beginning of the discipline, the norm was defined by the white middle class male of European origin. Full of stereotypes and orientalist impulses, early anthropologists searched for communities who were different, and if possible, radically opposite to the ‘civilized’ white man. In their search they joined imperial explorations to remote places and were eventually hired by British Commonwealth authorities, among others, for their useful information based on close contact and intimate knowledge about ways of living and communication among those unknown Others. These radically different kinds of
people were initially represented by the ‘uncivilized tribes’ peppered across all the continents except for Europe, in remote places and as far away as possible in relation to where the ‘armchair anthropologist’ was most of the time sited, usually the United Kingdom, France, the United States, or another seat of empire.

Reckoning with the discipline’s origins has become a must for most cultural anthropologists in order to recognize its problematic assumptions and questionable alliance with military and imperial powers. In contrast, choosing to study cultural anthropology today is an almost political stance representing the recognition of struggles for diversity and arguing against multiple abuses of power. In fact, from the late 1960s onwards, anthropology explicitly refocused the aim of the discipline from ‘the study of the Other’ to ‘making the strange familiar, and the familiar strange’. This renovated motto aimed to put an end to the essentializing and hierarchical tendencies of the period when the discipline was born and embraced the question of difference in a more relational and horizontal way. Still, the discipline of anthropology deals at its core with this tension between the normal and abnormal, the familiar and the strange, paying special attention to the possible unbalances leading to realities of exclusion, discrimination, and dispossession. To study how common human needs are met through deeply different responses and how cultural differences are crystalized in different power regimes, anthropologists receive special training to understand and relate to diversity.

This anthropological urge is what I identified in the moment of Maria Montessori’s biographical development, when, upon realizing the ongoing discrimination children suffered, she decided to focus her professional and research career on the ‘discovery of the child’ (Education and Peace). The anthropological motto is to study those misunderstood, under- and misrepresented, and usually targets of discrimination, to somehow understand who and how they are on their own terms. I find a very similar raison d’être in Maria Montessori’s engagement with children, encapsulated in her famous statement, ‘The child, that “forgotten citizen”, must be appreciated in accordance with his true value’ (Education and Peace, p. 34). This represents a ‘discovery’ for those looking from the mainstream point of view. For Montessori, children constituted the anthropological Other, that object of study important to pay attention to in order to understand it — given its apparently strange particularities — and, based on that knowledge, to struggle for, addressing their particular needs. In fact, this is still an amazing realization, since adults’ way of thinking continues to be taken for granted as the norm; children’s thoughts and actions are assumed to not yet be mature or simply less elaborate and are thus seen in a relationship of inferiority to those of adults. This kind of ageism underlies many political decisions and determines many social norms today.

Making children the object of research and a central policy concern is one of the key contributions of Maria Montessori beyond her concrete pedagogical developments. And this contribution is a very anthropological one. I was happy to find this same argument made by her own grandson in a brief text entitled “Some Remarks on the Anthropology of Montessori Education”: ‘She pleaded that the child should be respected and that he should be taken seriously. In short, she championed his rights as a fellow human being. In this she also saw the bases of a peace movement’ (p. 11). Now, put the words ‘indigenous person’ where it says child, and you will have a basic anthropological statement: taking diversity seriously, with respect, accepting difference while recognizing universal human needs, with the goal of avoiding unnecessary hierarchies and conflicts and reaching mutual understanding and peaceful coexistence.

When we gather this anthropological understanding, it becomes clear that Maria Montessori’s significance ought to be recognized beyond the world of pedagogy and become part of the canon of anthropological thinking. I missed her persona and works in the courses and seminars on anthropological thought that I took during my doctoral programme at University of North Carolina–Chapel Hill. These foundational seminars reveal how different thinkers — with direct or indirect affiliation to the discipline of anthropology — point to specific groups of people that have been the object of misunderstanding and usually suffered a lack of recognition, social rejection, and discrimination throughout history: de Beauvoir on women; Todorov on the indigenous peoples of the Americas; Fanon on those under colonial occupation in North and Central Africa; Marx and Gramsci on factory workers in Europe; Foucault on institutionalized people, such as those in prisons and psychiatric hospitals. When teaching my own courses, I plan to include Maria Montessori and her ‘discovery’ of children.

When thinking of Maria Montessori as an anthropologist, I want to rescue this anthropological contribution of calling attention to yet another so-called ‘strange population’: children. She contributed to taking them seriously, to better understanding their specific needs, and to informing policy and developing personal relations with them. Historically, children were considered ‘primitive beings’, Paula Polk Lillard affirms in her introduction to Mario Montessori Jr’s Education for Human Development: Understanding Montessori Education (p. xii). According to Maria Montessori’s grandson, her deep reverence for creation ‘freed her of the common prejudices adults hold toward children’ (pp. 4–5).
When learning that she was an anthropologist herself, director of an anthropology university programme in Rome, I looked for specific anthropological works and found a thick book with the term anthropology in its title: Pedagogical Anthropology (1913). Still, upon going through it, I realized it was not representative of contemporary anthropological thinking about the ‘discovery’ of a particular population as ‘forgotten citizens’. In contrast, it was a product of one of the most problematic early developments of anthropology as a discipline. As I warned, anthropology had a turbulent past which every contemporary anthropologist has turned away from. Being an isolated topic among her textual production, I understand this text only when putting on a sociological lens to read it as a product of her historical time when ‘science’ was the ultimate value. As such, Maria Montessori’s professional expectations as an anthropologist might have been to produce something along these lines where diversity among humans was treated with the excesses of an almost zoological like obsession. This often led to measuring physical traits in order to make supposedly ‘objective’ comparisons, which in turn constituted value judgments used to legitimate relations of inferiority and superiority among diverse groups of people. These hierarchical assumptions were the norm within intellectual trends at the time. They were linked to what we now call ‘scientific racism’, which was at the time used to argue that biological differences pointed to moral and character differences among groups of people. So, most of the book should be read as a testimony of a way of thinking among a large scientific community, as a resource for a sociology of science to study how this trend of scientific racism came alive and also vanished, in part due to work within the same discipline, thanks to anthropologists including Franz Boas and his disciples who spoke up against it and showing its scientific fraud.

Since then, the discipline has been one of the most active social sciences to unpack and dismantle the notion of race, both through research and education, committing as a discipline to undoing the consequences of racism: ‘Anthropology contributed to the establishment of a so-called scientific approach to race and to the fundamental critique of that science. We argue today that biological racial categories are not real, while simultaneously emphasizing the centrality of those same categories to patterns of social inequality and structural violence’ (Zani, p. 1). The general conclusion in anthropology today is that race is not a helpful way of understanding human biological variation, but racism, as a cultural system, has powerful effects on our lives marked by exclusion, inequality, and violence.

I believe Montessori’s book was an unhappy product of her fascination with the possibilities opened by the scientific method to fight against stereotypes. What is rather impressive to consider, is that given the measuring tools used by anthropology at the time and the assumed consensus in the scientific community around racial hierarchies, Maria Montessori was able to keep hold of a deep respect towards difference and to believe in the unity of humankind. Indeed, even in that obscure book, there is something to be rescued. What I found most useful from it is the introduction, where she describes and identifies with the anthropological method of study, that is, observation of living human beings, and how this will help the field of pedagogy (Pedagogical Anthropology, pp. 14–24). In order to undo the consequences of wrongful generalizations and stereotypes about children, it was necessary to go beyond speculative statements about the inner essence of humans as ‘good by nature’, ‘wolves for one another’, or ‘rational beings’ made by different philosophical stances, upon which the social sciences are grounded. (For instance, much current economic thought is based on the problematic notion of humans as rational, benefit-maximizing, and selfish beings.) According to Maria Montessori, the field of pedagogy thus far had been based on ‘a non-existent philosophical abstraction: the child’ (p. 14). While holding a universal conviction about protection of all children, she recognized the deep diversity within them, focusing initially on ‘mentally deficient children’. Instead of developing a method of education based on ‘unifying abstractions’, her research, inspired by her former teacher Giuseppe Sergi, focused on observed differences and advanced ‘the first page of pedagogy reformed upon an anthropological basis’ (p. 17).

According to Maria Montessori it was time to develop a method of education beyond speculative assumptions and to ground it in experimental observation (p. 24). A ‘scientific’ approach was necessary to living humans, the same way the fields of zoology and biology studied other living creatures. Anthropology was attractive at the time because it focused not only on the physical traits of humans, but also on their social habits. Anthropologists were (and are) the scientific investigators of living human individuals, gathering data through regular observations of individuals acting within communities. As such, the field of anthropology responded to Montessori’s need for a descriptive pedagogy, product of empirical engagement with children through the scientific method of observation.
The How
Observation and Ethnographic Research

For Montessori, the emphasis on description brought by anthropology represented a cure against prejudices and biased speculations about children, sources of both false stereotypes and homogenizing solutions for education: ‘This discovery [...] was the direct result of careful, patient, and systemic observations of the spontaneous behaviour of children’ (Mario Montessori Jr, Education for Human Development, p. 5). Montessori education is based on an empirical approach to reality. Other social sciences relate to this empirical approach. Still, methodologically speaking, the Montessori approach has something that makes it closer to the discipline of anthropology, and that is the ongoing conceptualization of the observations, the inter-weaving of theoretical analysis with empirical observation. In the words of Mario Montessori Jr this is a ‘philosophical outlook’ toward the observations: ‘Montessori’s philosophical outlook, however, was responsible for her ability to see beyond the superficial manifestations of the children’s behaviour she observed. She distilled from them, basic phenomena relevant to human development and integrated them into a comprehensive vision [...] that took into account the full complexity’ (p. 5).

Observations produce a large pool of descriptions, recorded over a given period, that follow a community in detail. Those records speak for themselves in terms of concrete behaviours and social dynamics. This journaling material, product of a long-term note-taking process, enables one to hypothesize from the concrete. In anthropology, we call this ethnographic research; it differs from certain sociological approaches based on statistical readings of polls. The ethnographic method, the disciplinary landmark, provides ‘thick descriptions’ of social reality by paying close attention to concrete interactions (Geertz). Still, anthropology does not stop at providing extremely detailed accounts of given communities. On the contrary, this kind of ethnographic engagement allows for conceptualizing from the ground up, developing theoretical analysis about a given social reality. As such, the distilling of concepts, which are both coherent and complex, from systematic observations of spontaneous behaviours, constitutes the art of ethnographic research. Anthropology aims at comprehensive understanding of cultural differences based on ethnographic research.

In fact, this is how Mario Montessori Jr understands Maria Montessori’s research: ‘Montessori’s aim, from the start, had been to contribute to a comprehensive science of [humanity]’ (Education for Human Development, p. 5). This scientific impulse would not be reductionist but comprehensive through the practice of long-term observations, gathering data during participation with those to be studied to later further analyse, developing concepts, and elaborating interpretations.

Observation was at the core of Maria Montessori’s research method to understand children and it is also the basis of the Montessori teaching method. As an anthropologist, I found this fascinating. The espousal of observation as the main tool pushes us to rethink the role of the expert and the meaning of their expertise. One of the main roles of the Montessori teacher is to observe in the background, taking notes about work chosen, children’s interactions, and so forth. Both the Montessori guide and the ethnographer conduct long-term observations as active participants within a given community, taking detailed notes about everyday life. They do not act as the centres of attention or unquestioned sources of knowledge. At least in my discipline, ethnographic journaling implies a very detailed description of the space, the time, the different actors and activities happening in a particular situation. The figure of the ethnographer is expected to be quiet in a corner and writing in a simple notebook for long periods of time. Out of those regular observations and detailed ethnographic notes that focus on individual behaviours as well as collective dynamics emerges ethnographic research usually presented in the formal product of an ‘ethnography’: a monograph about a particular group of people.

Yes, there is an empirical impulse at the basis of ethnographic research, the method which forms the foundation of social and cultural anthropology. Still, the scientific edge in anthropology develops on a different path than other social sciences. For instance, from the start, the relation between the observer and the observed has been an object of discussion. Compared to methods in natural or other social sciences, the anthropologist maintains the ‘critical distance’ necessary for scientific observation but at the same time ‘goes native’, to use disciplinary expressions. When conducting ethnographic fieldwork, the research milestone of any anthropological training, anthropologists make observations while living for extended periods of time among those to be studied. During this time, anthropologists learn and imitate their language, and ways of everyday life. The relationship between the researcher and the object of research is not a cold or strictly professional one; it transforms over the time of this long period of fieldwork. In contemporary anthropology, it is allowable for researchers to express enthusiasm and even reverence for the supposed ‘object of study’, exhibiting ‘critical proximity’ instead of the expected ‘critical distance’. In fact, the discipline of anthropology is known for its deep debates on the relational character of observation, acknowledging how the observer is and should be openly ‘reflexive’ about their own positionality, and how this can affect his/her own
observations. That is, how anthropologists are not merely objective observers of human differences, but ‘vulnerable observers’ (Behar) and even ‘engaged observers’ (Sanford and Angel-Ajani) when openly supporters of their causes and directly engaging in their struggles to meet their needs and defend their rights.

I was happy to find the acknowledgement of this kind of complexity and explicit proximity when conducting observation in Montessori: ‘The relationship between the observer and the participant was one of mutual respect and confidence’ (Mario Montessori Jr, Education for Human Development, p. 7). It is through this acknowledgment of the relational character of observation among humans that the possibility for research for social justice arises as a legitimate scientific endeavour.

The What For
Research for Social Justice

I was surprised how directly her grandson connects Maria Montessori’s endeavours with the field of anthropology in one of its more active, or policy reform–oriented versions, the sub-discipline of applied anthropology: ‘Maria Montessori was the first to appreciate that education should be applied anthropology, and she took the consequences of this conclusion in earnest’ (Mario Montessori Jr, “Some Remarks”, p. 14).

Applied anthropology as a subfield refers to the use of the discipline to address societal problems and to facilitate change. Lately efforts have taken place to blur the distinction between applied and academic anthropology, politicizing the whole discipline (Beck and Maida). Thus, the choice to study anthropology today usually points to an engaged scholar, open about his or her sensitivity towards social justice issues and repudiating the colonial twist of the discipline in the past and in the present at times (Harrison). The discipline’s motto of ‘making the familiar strange and the strange familiar’ is taking a political stance of respecting diversity, not as the basis for producing social hierarchies and discrimination, nor as a museum of relativism where ‘everything is a valid and curious idiosyncrasy’. Contemporary anthropology calls attention to how diversity works: while people might look, live, relate, and work differently, they share basic human needs. Each need must be addressed, but the responses to those needs will vary according to the community’s specific environment and history. Beyond the possible homogenizing tendencies brought by calls for equality among differences, anthropologists have been working at balancing diversity and equity, identifying how specific needs are to be solved in specific ways, advocating for both place-based particularities together with global needs of humanity and the Earth. Arturo Escobar and other anthropologists have called for ‘pluriversality’ as a way to communicate the equal importance of the universality of needs and the particularity of the responses to them (Escobar).

I was pleasantly surprised when identifying a similar anthropological sensitivity in the Montessori classroom and curriculum through different lessons, works, and protocols. The most explicit is the lesson and chart on “Fundamental Human Needs” divided into spiritual and material ones. Nowadays, materials are updated and reformatted for a more multicultural perspective, yet still highlighting a series of commonalities among different human groups through history and space. This lesson is designed to help children understand that people everywhere have similar basic needs even though those needs are fulfilled in different ways by various cultures. This worldview is at the core of Montessori philosophy and Cosmic education, encouraging understanding and respect for people all over the world. Maria Montessori wrote that peoples’ fundamental needs fall into two categories: material (survival needs) and spiritual (pertaining to the soul and intellect). Material needs include shelter, food, clothing, transportation, safety, and communication. Spiritual needs include love, spirituality/religion, culture/arts/music, and self-adornment. This lesson, which is prefaced by a brainstorm among the students about what humans really need, brings children and adults into the realization that all humans, across the ages and continents, share rather similar needs. This can help foster a sense of connection and even solidarity, regardless of language, religion, social class, and so forth. Cosmic education, with its great stories and lessons, including the Fundamental Needs of Humans, helps create understanding and respect, the foundation for tolerance and peaceful relations. Also, it provides a special sensitivity for situations of injustice, helping children develop a critical gaze to analyse and act upon them, and to denounce when those needs are not met for any fellow human. These situations can happen at the level of the family or classroom and then scale up to the school, neighbourhood, city, region, country, continent, planet, universe...

As an anthropologist I value that my children are exposed to this pluriversity curriculum, which goes beyond a simplistic exhibition of differences rendered as multiculturalism that does not engage the key commonality of sharing fundamental needs. Montessori education aims at keeping this balance between diversity and equity both in its contents and protocols. My six-year-old son is discussing with his classmates how people used to dress, fish, and shelter in certain areas of Polynesia through postcards and pictures, exploring ancient and currently practised
traditions. Then, they share how their grandparents dressed, got food, and the kind of houses they lived in, to realize how different practices were used by the Polynesians and their grandparents to solve similar problems. I am proud of having little anthropologists in training! The students of the Children’s House classroom also prepare international foods, listen to world music, experiment with art from different cultures, and play instruments from around the world. It doesn’t get more anthropological than that. I think it beats my anthropology department gatherings in terms of cultural activities and artefacts. My daughter in elementary is going through the Chart of the Fundamental Human Needs in order to guide her research project about the country of Vietnam, looking at this place not simply as a possible tourist destination. The cultural research projects in the Montessori schools I have visited highlight the curiosity for knowing more about how other people respond to similar needs to one’s own. This responds to the scientific mind of wanting to know more, but also to the moral impulse of wishing people — wherever they are — the ability to fulfil their fundamental needs.

Another simple analogy I notice is that anthropologists prepare themselves when going to do fieldwork research, learning the language and customs of a given group of people before visiting and staying for a minimum of three months and up to one or two years. In many Montessori schools students practise grace and courtesy lessons on greetings, not only in the official language of the place, but also learning new ways of saying hello each time a person with a different language comes to visit or an international student joins the classroom. These simple details speak to the sensitivity of diversity and how to respond with equity. Everybody needs a greeting, but some might appreciate to hear it in their mother tongue when they have recently moved from another place.

A more detailed ethnographic study of Montessori classrooms will help elucidate in more detail and with more evidence how Montessori education aims to change a negative perception of difference, by effecting a way of teaching that takes diversity as the keystone of its pedagogy. When differences are addressed in a Montessori way, which is a deeply anthropological one, it tends to avoid excessive comparisons, competitions, exclusions, and unnecessary hierarchies. This mission for positive social change is engrained in both the Montessori curriculum and the contemporary field of socio-cultural anthropology, working towards understanding how human needs are fundamental to all, yet not fully addressed for many. This can put research and education to work for the construction of pluriverses, where difference is not negated but responded to with equity, affirming a universality of needs within the plural expressions of human experience. This anthropological and Montessorian approach to difference takes us beyond essentialism and idealizations. This approach is further grounded in the possibility of humans to change, evolve, and adapt, to becoming something other than that which has been prescribed by their bodily traits, ethnic origin, social class, and so forth. When embracing cultural diversity among humans in this way, one is able to nurture both individual and collective imaginations and think forward about current problems with alternative and creative solutions. That is, nothing more, and nothing less, than revolutionary thinking.
References


Behar, R., Vulnerable Observer: Anthropology that Breaks Your Heart (Boston: Beacon Press, 1997)


———, “Some Remarks on the Anthropology in Montessori Education” in AMI Communications 1965-1 (Amsterdam: Association Montessori Internationale, 1965), pp. 11–14

Myers, R., “The Familiar Strange and the Strange Familiar in Anthropology and Beyond” in General Anthropology 18.2 (Hoboken: John Wiley & Sons), pp. 1–9


Trabalzini, P., Maria Montessori Through the Seasons of the “Method” in The NAMTA Journal 36.2 (The North American Montessori Teachers’ Association, 2011)


Maribel Casas-Cortés, PhD, is a research fellow in the sociology department at the University of Zaragoza, Spain. She received her doctorate in anthropology from the University of North Carolina-Chapel Hill. In the process of raising three children, she and her husband have become advocates for complete implementation of the Montessori method in the public sector and parent education. Casas-Cortés has trained in the Montessori-based faith formation programme the Catechesis of the Good Shepherd. She is currently working on a book project titled Raising Revolutions: Montessori Education for Cultural Transformations.
Maria Montessori and the New Education Fellowship
A Paradoxical Presence

Bérengère Kolly

The hypotheses shedding light on the presence-absence of Maria Montessori with regard to the New Education Fellowship are, in the first place, to be linked to the conditions of emergence and diffusion of her pedagogy, to the discussion about the status of her disciples, the conditions of formation, but also to profoundly make pedagogical and practical considerations about the place and status of the adult in Montessori’s education. It is especially important to provide historical documentation as to the expansion and movement details about Montessori education.

An Absent Presence

From 30 July to 12 August 1921, the first International Conference of New Education was held in Calais, France. This Calais Conference, whose centenary is soon to be celebrated, gathered delegates from fourteen countries around the idea of the ‘creativity’ of the child and educational reform. From this unprecedented international gathering the New Education Fellowship was born: ‘An international association that links together those who find the administrative measures necessary, but insufficient, and who want a radical change in the starting point and purpose of education.’

This association wanted to be very special: ‘neither rules, nor statutes, nor committee meetings, nor anything like that.’ It affirmed above all a sharing of ideas, ‘the fundamental principles of the new education’ by means of a magazine issued in three languages: The New Era, published in English, French, and German.

The conference brought together some of the great names in pedagogy: Adolphe Ferrière, head of the Bureau des Écoles Nouvelles; Ovide Decroly, founder of the ‘school for life, through life’; M. J. Loiseau, leader of the new scouting movement in France; and James Young, a disciple of the psychoanalyst Carl Gustav Jung. Some female pedagogues were also present and at work, such as Beatrice Ensor and Elisabeth Rotten. But there is no trace of Maria Montessori, neither as a founder nor as a participant. However, the Montessori experience was very much present, with a conference on the Montessori method by Claude A. Claremont and a presentation of the material.

This paradoxical presence proved to be a constant. In the French pages of Pour l’ère nouvelle, the experiences of Maria Montessori thus constituted a centrepiece: Montessori’s practices and texts were published, discussed, and criticized. Yet Maria Montessori is also almost absent: the pedagogue contributed only once to the French version of the review during the twenty years of its existence. She was only present at two congresses of the New Education Fellowship, in 1929 in Elsinore, Denmark, and in 1932 in Nice, France; on both occasions the Dottoressa held her own congress at the same time. Thus, Maria Montessori, who is unquestionably, at least symbolically, a linchpin of the New Education, is far more
removed from this specific network than is often believed. How can this be understood, and can it be explained?

Specific Networks, a Precursor Position

This paradoxical presence can be explained by several historical factors; we will not deal here with the issue of ideas. The first of these is clearly chronological, since the work of Maria Montessori began well before the founding of the New Education Fellowship. In 1921, the pedagogue had been a recognized lecturer for twenty-three years, and had her own networks, which were consolidated when the Association Montessori Internationale was created in 1929. By the early 1930s, Maria Montessori’s works had already been translated into some fifteen languages; there were more or less structured Montessori societies in more than twenty countries and Montessori schools in more than fifty cities around the world.

However, this network was still in the process of being structured, and many practitioners — mostly women — were then engaged in this pedagogy without being officially related to Maria Montessori. In that respect, the role of women, in formal (associations, foundations) but also informal networks, was crucial. Teachers, kindergarten teachers, or simply mothers were the first contributors to the actual dissemination of Montessori pedagogy. Difficult for the historian to grasp, often leaving few institutional traces, this dissemination was nevertheless decisive: these women came to visit a Children’s House, in Rome or Milan, attended classes, set up their schools, sometimes proposed conferences or articles about this pedagogy, although most of the time they were not part of any specific network. While they were not necessarily formally among Maria Montessori’s disciples, they nevertheless spread her ideas and practices, transferred by capillarity in networks that were not strictly Montessorian: Theosophy, Protestant networks, Catholic nuns, the network of new schools, or simply teachers or mothers who built their own schools, such as Adolphe Ferrière’s sister, Maya Ferrière, who opened La Volière school in Geneva in the 1920s, or Madame Pujol-Ségalas, Dorothy Canfield Fischer, Mary Cromwell, or Émilie Brandt, who through their own private initiatives contributed to the spread of Montessori ideas.
Thus, made up of more or less faithful, sometimes self-proclaimed disciples, this disparate network mainly disseminated what each had retained or endorsed from pedagogy according to their own interests. They could then generate confusion as to what were, or were not, Montessori’s ideas: however, these people who claimed to be Montessori were not always Montessori disciples.

A Disagreement Between Pierre Bovet and Maria Montessori

Let’s go back in time. In the early 1910s, Montessorian practices were already well known across the Atlantic. Montessori’s first book had been translated into English in a full edition as early as 1912, reissued several times in the following years, while the American journals of educational reflection had dealt with her pedagogy in a more theoretical way. European diffusion, however, especially in French-speaking countries, was less rapid, at least in institutional terms, even if the Children’s Houses were identified as part of the ‘new schools’ that were flourishing at the time.

In 1912, the Institut Jean-Jacques Rousseau proposed to Maria Montessori to create the first French translation of _Il metodo della pedagogia scientifica_, coordinated by Pierre Bovet, director of the Institute, with her consent and assistance. The setting up of a course on pedagogy was considered. Maria Montessori viewed this new partnership with hope: the Institut Rousseau was indeed recognized as the epicentre of new ideas in education. Pierre Bovet, however, made a fatal mistake: instead of inviting the pedagogue herself to this course or inserting the Montessori method into his inaugural lecture on great pedagogies, he created a separate and purely practical course led by two women, Jeanne Barrère and Teresina Bontempi. Jeanne Barrère had followed part of Maria Montessori’s course in 1910; she was then actively involved in the development of this pedagogy in the French Theosophical networks. Teresina Bontempi, for her part, had developed an adapted form of Montessori pedagogy in Ticino, Switzerland, after having been asked to act as a trainer during a course given in 1911 in Milan at the Società Umanitaria and the School of Via Solari. Bovet considered that both Jeanne Barrère and Teresina Bontempi, claiming to be Montessori disciples, were indeed Montessori disciples. Letters in the archives of the Jean-Jacques Rousseau Institute and the AMI, however, suggest that Maria Montessori considered these two persons not serious enough to give a course in her stead. Above all, by constructing a separate, and only practical course, Pierre Bovet implicitly refused to consider that Montessori’s thought was part of the ‘great pedagogies’. Maria Montessori protested and definitively disengaged herself from this cooperation by refusing to have her name associated with the course.

This rupture in the early 1910s had important practical repercussions on the diffusion of Montessori’s method: this dispute marked not only the end of the cooperation between Maria Montessori and Pierre Bovet, but also between the pedagogue and the Geneva network, which was beginning to structure the New Education Fellowship. Pierre Bovet did not understand Maria Montessori’s reasons and felt that she had reacted in a rigid manner. The pedagogue inherited a reputation for being inflexible and ‘orthodox’, as Ovide Decroly wrote in the 1920s, in the way she applied her pedagogy. This question of ‘orthodoxy’ was not a detail: it divided the related practitioners in Montessori themselves — as was the case in the Netherlands — and was a subject of discussion within the network of pedagogues who later founded the New Education.
‘Orthodoxy’ and Montessori Ethics

This ‘orthodoxy’, involving the way the pedagogy spread, was therefore an additional factor of distance between Maria Montessori and the New Education Fellowship. Of course, this question arises for all pedagogues, but in an increased and very early way as far as Montessori is concerned, because of the very important and rapid diffusion of the pedagogy. The issue can be divided into at least two main themes: training and speaking in the name of a pedagogy; the strict or loose application of this pedagogy.

On the subject of training, it should be pointed out that the dispute with Pierre Bovet came at a crucial moment, just before the first international course (in January 1913). It seems that this dispute, together with the experience of the Milan course with Teresina Bontempi — which was, as Maria Montessori wrote, a ‘disaster’ — led the pedagogue to conceptualize a specific training for teachers, courses preparing to ‘defend, understand, present’ the principles of pedagogy, as she wrote to Pierre Bovet in 1913. This meant, in fact, that a specific network had to be set up, very much in tune with the latest developments in this pedagogy and its general spirit, which was done with the structuring of the AMI in the 1930s.

The question of whether or not the pedagogy should be strictly applied stems from this initial reflection. Like the defence of a pedagogy, its practice requires a rigour that allows the pedagogue to protect him- or herself from erroneous, misapplied or even incomplete applications, especially when the pedagogy bears his or her name. Maria Montessori wrote several times that her pedagogy could only be understood by being applied without mixing; Pierre Bovet, for his part, created a Maison des petits, an adapted version of the Children’s House, mixing Montessorian, Decrolyan, and Froebelian pedagogy. He thus subscribed to the vision of an educator not affiliated to a specific pedagogy.

Two ethical choices are actually at work. For the strict Montessorians, pedagogy was not only a series of techniques designed to help the adult to educate; it was a way for the adult to transform himself, to change his view of the child and his practices in depth. Thus, pedagogical

Group of founders of the New Education Fellowship (1921), including: educationist Beatrice Ensor (1885–1974), pictured (front row 4th L-R). Two other initiators were Elisabeth Rotten (1882-1964) for the German language sections who later became vice chair of New Education Fellowship, and Adolphe Ferrière (1879 – 1960) for the French-speaking sections.
techniques change in nature: they are thought to be a lever for the transformation of the educator. This thus justified orthodoxy, and explains the fact that Maria Montessori, reputed to be so ‘orthodox’, could nevertheless write at the end of her life that her pedagogy was anything but a ‘method’ — since no ‘method’ could have been sufficient to radically transform the adult and the educator. For what became the New Education Fellowship, on the other hand, the ethics of the adult resided in a model of adapting techniques to each audience, each child, in each situation, a position which, in essence, presupposed the mixing of pedagogies. Orthodoxy is thus, in this conception, an ethical misunderstanding, a form of pedagogical authoritarianism, which explains why this network always encouraged the speeches of Montessorians announcing the ‘mixing’ of techniques coming from different pedagogies.

**Historical Distance**

Thus, Maria Montessori, the pivot of the New Education, was both present and absent from this network, first of all because of historical circumstances. There were also fundamental differences on how freedom, the nature of the child, and the place of child spirituality were viewed, differences that developed after the 1920s. After all, although all these pedagogues shared a common primary desire, that of giving a real place to childhood and of profoundly reforming education, their ideas on how to achieve this were multiple. This was also the case within the network of the New Education Fellowship itself.

That being said, a number of pedagogical activists were both Montessorians and stakeholders in the New Education Fellowship, such as Elisabeth Rotten, who became vice-president of the AMI in 1937, and a number of Montessorians forging links with other pedagogues according to national contexts.

The hypotheses shedding light on this presence-absence of Maria Montessori with regard to the New Education Fellowship are therefore, in the first place, to be linked to the conditions of emergence and diffusion of pedagogy, to the discussion about the status of disciples, the conditions of formation, but also to profoundly pedagogical and practical considerations about the place and status of the adult in Montessori’s education.
Notes

1 Université Normandie, CIRNEF, Pour l’ère nouvelle, revue internationale d’éducation nouvelle 1 (January 1922), p. 6
2 Amsterdam, Maria Montessori Archives of Association Montessori Internationale, letter from Pierre Bovet to Maria Montessori, 27 October 1913

References


Di Giorgi, F., “Maria Montessori modernista” in Annali di storia dell’educazione e delle istituzioni scolastiche 16 (Brescia: Editrice La Scuola, 2009), pp. 199–216


Perregaux, C., L. Rieben, C. Magnin, "Une école où les enfants veulent ce qu’ils font" in La Maison des petits hier et aujourd’hui (Lausanne: Éditions Loisirs et Pédagogie, 1996)


Bérengère Kolly is a professor of educational sciences (philosophy and history of education) at Université Paris Est Créteil. Her research interests are Montessori pedagogy (philosophy, history, controversies), teaching ethics and philosophy of childhood, and contributions and controversies related to female pedagogues and equality.
SECTION 2

Through the Gateway of the Third Plane and Fourth Plane of Development

Interdependency (aka the Unconscious Exchange of Services)
Baiba Krumins Grazzini

Early Articulations Toward Advanced Learning for the Third Plane and Becoming an Adult
85
Maria Montessori’s Special Lecture
A Lecture Given at the Montessori Congress in Oxford, England, 1936
Maria Montessori

A New Education for the Secondary School
A Public Lecture Given at Utrecht, January 18, 1937
Maria Montessori

Small Steps and Quantum Leaps Along the Way to Erdkinder
99
Charting the Way to Adulthood
Developmental Chart Series
David Kahn

Human Tendencies
Authentic Guideposts to Human Characteristics Across the Planes
Xavier Angelo P. Barrameda

Metacognition
Inviting the Democratization of the Adolescent
Paige M. Bray and Steve Schatz

The Lifelong Impact of Cosmic Education When Taught from Age Six to Twelve
Guadalupe Borbolla

An Interpretive Summary of an AMI 12–18 Diploma Course Design
Laurie Ewert-Krocker

For Families
Remembering Our Humanity as We Support Adolescents
Laurie Ewert-Krocker

The Emergence of Montessori Core Principles
Uma Ramani

Montessori Adolescent Construction for the Future
David Kahn

Psychodisciplines
Baiba Krumins Grazzini
Introduction for Section 2

A comprehensive interdependencies chart is like a spreading tree at the outset of the third and fourth planes. Combined with Baiba Krumins Grazzini’s refined narrative, it makes a universal statement about caring for the Earth including humans. The interconnectedness of the ‘totality of life’ is a finale for second-plane cosmic education and a prelude to the older adolescent’s scope of vision. The interdependencies connect the biological facts of human solidarity. They also elevate the highest ideals of cosmic education to a cooperative division of labour on the farm community and the local village.

Section 2 also features the evolution and expansion of the adolescent pedagogical framework with Montessori’s lectures given in Oxford and Utrecht. Her early adolescent education articles suggest many activities and services that could happen outside of the school.

What follows are a series of charts which symbolize the stages of the four planes expansion. The first chart shows an established first and second plane and an emerging sub-plane for 12–15. The second chart shows all four planes as a series of rebirths. Another chart shows four planes with developmental categories. These charts represent almost forty years of conversation among adolescent teachers.

The metacognition chart is an elaboration for the third plane. Metacognition offers more observable data for understanding adolescent psychology and brain theory. This expanded thinking helps the adolescents see their life ahead. Section Two rolls out AMI’s baseline
for two-summer adolescent diploma courses. Another innovation in the Montessori field is the development of an AMI Core Principles course, created by a team of AMI trainers over a 2 year period and piloted by MINT under the direction of Uma Ramani. This short course, delivered in blended or online formats, presents foundational Montessori principles across the whole range of human development.

The closing article on psychodisciplines is integral to designing formal programmes across the planes. Montessori suggested a consolidated view of how we can think of the whole of an academic programme which has not yet been designed except at the first- and second-plane level.

In this mainstream legacy Section 2 we explore the need to provide more research which includes metacognition, consideration for the fourth plane (18–24), and the realization of the psycho-disciplines. The basis for formal learning is part of an international view of the human tendencies across the planes. Additional research will include Montessori outcomes for adolescent evaluation criteria and the dovetailing of pre-collegiate and collegiate expectations at the ending of adolescence. As our Montessori students become contributing adults in the international world they will broaden their real-life insights by practice.

D.K.
Interdependency
(aka the Unconscious Exchange of Services)

Baiba Krumins Grazzini

The original version of this talk was given in India in 2015 (at the Navadisha Montessori Foundation in Chennai, on 26 January). Later versions were given in the US: at the NAMTA conference held in Portland, March/April 2016 (a talk which inspired the Montessori Adolescent Summits of 2017); at the NAMTA conference held in Cleveland, April 2018; and as part of the Montessori Adolescent Orientation held in Evanston, Illinois during the summer of 2018. The present article is based on the Interdependency talk given in Cleveland, 2018.
This (image 1) is our Earth in space. Our blue planet as seen from space is representing the new environment, a vast environment, the one that would be the natural environment for the six- to twelve-year-old children to explore. And in addition to the three dimensions of space, there is also the fourth dimension, that of time, to explore. If these children could, they would hop into a space vehicle to explore this vast new environment because they belong to an adventurous stage of developing life. And if they could, they would also hop into a time machine in order to travel backwards through time. This, in other words, is how we can think of the elementary children’s “field” of exploration.

So there we have that blue planet in space, in the universe, which we know is (from a psychological point of view) the child’s natural environment at this stage of developing life, and we can also think of that same planet going back in time. But here is another way of viewing our Earth in space.

I know this (image 2, Mario Montessori’s Chart of Interdependencies) looks very, very different but nonetheless this chart also represents that same Earth, and how that Earth functions. We know that this is still our Earth in space if only because of the Sun that we find at the top of the chart; the Sun, after all, is off the Earth. So here is the Earth, once again, in its own environment and, in particular, it is being shown in its very important relationship with the Sun. This chart is, of course, the Chart of Interdependencies, a chart that Mario Montessori himself, in his booklet Human Tendencies and Montessori Education, identifies as the Unconscious Exchange of Services. The chart helps the children of the second plane of development to understand the harmonious functioning of our planet as a whole, helps them to reach a grand global understanding. The chart helps the children to visualize a global ecology of the Earth as it exists today but I also want to refer to the Earth’s past, a past already known to the children (at least to some extent) by the time they reach this chart.

Speaking of the past:

It is also interesting to note how Mario M. Montessori himself, in a lecture, stated that (our) history begins with the creation of the earth to then consider the coming of life as well as the story of human beings.

(Taken from "The Montessori Approach to History – The Story of Three Time Lines")
Thus, right there, we have history and geography, history and biology, history and prehistory, and when it comes to the story of human beings, this inevitably also involves history and language, history and mathematics. Anyway, Mario Montessori is making it very clear that one outstanding characteristic which renders the advanced Montessori approach special, is that history starts from the very beginning, with the creation of the Earth. Furthermore, since the Earth was not created in an isolated fashion or in a vacuum, the creation of the Earth involves the creation of the Universe and the Solar System (and to even begin to understand how the Earth functions on a daily basis, we can hardly leave the Sun out of the equation). What Mario Montessori is saying also implies that all cosmic tales, cosmic fables, great stories (call them what you will) are part of history. Indeed, the very word story comes from the same Latin root as the word history, and naturally both are embedded in the fourth dimension, that of time.

In this way, we see one of the things that makes the Montessori approach to elementary education quite unique. Moreover, this approach permits us to start with the greatest whole; we start with the greatest whole precisely because we start from the very beginning. Thus, in this chart which represents our Earth and how the Earth functions, we can find all the great themes of our history; as can the children who are already very familiar with the first five cosmic fables by the time they are formally introduced to this chart.

Looking at the top part of the chart, we can see the Sun, the Land with its mountains and rocks, the Water. Naturally, the children have experienced these throughout their lives but they have also come to know them more deeply through the cosmic stories and through their own work. They have thought about the Sun: they have understood its enormous size; they understand how it is like a fire in the sky, our great source of light and heat. The children have understood how our planet depends on the Sun for its very existence, for the daily rhythm of day and night, for the cyclical rhythm of the seasons and for much else besides. They are very familiar with the Sun and the role it plays on the Earth. The children are familiar with the Land, with its mountains and plains, with its rocks and soil, and the fact that it constitutes the surface of our planet which is the lithosphere. The children are familiar with the Water which covers most of the surface of the planet in the form of oceans and seas and accounts for our planet looking so blue. They know Water in its different states, its different forms and the importance of fresh water. The surface of the land itself is crisscrossed by so many rivers that in a chart of the child’s own continent, for example that of Europe, the landmass resembles a sponge. There is even water below the surface of the land, water that constitutes a dark underground sea to use Rachel Carson’s expression. (See her book *Silent Spring*).

Now there is something very important about this chart: we can see the Sun, we can see the Land, we can see the Water but we cannot see the Air; we have to imagine the presence of Air. We cannot literally see the presence of Air in the chart but then, can you see the air in this room? I mean there obviously must be air in this room but you cannot see it because air is invisible. Well in the same way, Air is on that chart: you cannot see it because air is invisible; therefore we have to imagine its presence.

Thus, at the top of our chart, we can see or imagine our planet in the form of lithosphere, hydrosphere, atmosphere and these, together with the Sun, give us our inanimate agents of creation or, if you prefer, agents of change. And the story of the coming of these non-living agents forms part of the Story of God Who Has No Hands.

Therefore long before the children come to look at, or to think about, this chart (the Chart of Interdependencies or, as Mario Montessori calls it, the Unconscious Exchange of Services) they have heard about the coming of these particular agents of creation: Sun, Land, Water, Air. They have understood something of their nature; they have understood the inherent laws that govern these agents; and with the work that follows, they also come to understand the interactions between them. And it is the interaction between them that explains so much that happens on our Earth: the phenomenon of day and night, how heat is distributed over our planet, the phenomenon of the seasons, the formation of the winds and the rain, and so on and so on. It is enough to think of all of our geography charts and all the related experiments and demonstrations. And with the help of the second series of geography charts, the children actually come to understand the work of Air through the winds, the work of Water in its different states and forms, and thus how the interplay of the agents impacts climate, the natural distribution of vegetation, and how they bring about the erosion of the land. After all, agents of creation are necessarily agents of change, they bring about change. So now let us have a look at this next chart (image 3).
One important example of the interplay of the non-living agents is represented here, with the Water Cycle. What is really interesting about the cycle of water is that we hear about it in three different contexts: in the context of the Story of Life (or, if you prefer, in the Story of the Coming of Life); in the context of the work with geography; and lastly in the context of ecology.

Right at the beginning of the Story of Life we have the “Whose fault is it?” part. The order that has been created on Earth is breaking down and Sun blames Water (think rain, rivers and the seas all of which erode the land, etc.). Water then blames Air, Air blames the rocks and mountains (the Land in other words) and the rocks blame the Sun.

Then in the context of the Work of Water, we look at this chart and we can examine the cycle of water in the classic or conventional way:

Over the ocean or the sea, especially where it is hot, great quantities of water are evaporated and pass into the air as invisible water vapour. The air rises and cools, and the water vapour condenses to form clouds. The clouds are blown over the land and the water falls to the earth as rain (or snow). Much of the rainwater collects to form streams and rivers which carry the water back to the sea. Thus there is a cyclical movement of water starting from the sea and finishing in the sea. We call this the Water Cycle.

Then in the context of Ecology, we look at the Chart of Interdependencies and tell the children another story, a story which talks, yet again, about the interaction of these same non-living agents.

In this way the same basic ideas, the same basic concepts in the different story versions, continue to help the children understand how our planet functions, irrespective of whether the context is that of biology, geography or history. And apart from anything else, this illustrates how totally artificial is our classification of knowledge: we cut up knowledge, compartmentalize it and call it geography, biology, history or whatever. We have to do that: we have to order and classify knowledge in some sort of way, so that...
we can find our way around and locate the information we need. But the children are not interested in whether a piece of knowledge is classified as geography or biology or history. What they are interested in is finding answers to their questions about the world and how it functions, discovering knowledge in relation to, for example, the how and the why of rain, the how and why of snow, the how and why of wind, and so on. It matters little that that kind of knowledge is called geography or climatology or meteorology or whatever.

In any case, what is amazing is the amount of repetition that the children hear over the years, with the same ideas coming up in different contexts, each context lending a different perspective and thereby enhancing and enriching the child’s understanding.

To come back to the second cosmic fable, the “Whose fault is it?” part in the Story of Life then leads into the part on the emergence of life. That is the way the story is told: that life came to preserve order because the four inanimate agents, left to themselves, were destroying the order that had been created. Thus the story indicates how, from the beginning, life functioned as a force of creation, an agent of change, working to change the composition of the water of the seas and oceans. As the story continues we hear how, over time, more complex forms of life come into being, animals and plants, and how eventually life invades the land. Ultimately the children will understand that Life transforms the planet: water, air and land are all transformed by this new agent of creation.

Now let us come back to the Chart of Interdependencies. Naturally, the children already know the Story of Life before they come to reflect upon this chart and, through their work and exploration, they have also acquired much knowledge of plants and animals, knowledge which lends the Chart of Interdependencies far greater meaning than a casual glance would indicate. Thus, when you look at the plants and animals on the chart, you have to think about what the children already know and consequently just how meaningful this chart can be in terms of the realities it represents.

Therefore let us think about plants and animals, and how each of these great life forms can be considered a living agent of creation. As the children acquire knowledge of life forms, they are once again acquiring answers to their questions, whether or not these questions are actually expressed. In a very basic way, the Story of Life illustrates the difference between life and non-life, and it takes us from an inanimate or non-living world to the world of life right through to the emergence of human beings. In that sense the story takes us on a journey through the four and a half billion years of Earth’s existence: it recalls the Earth as it was in the beginning, it recounts the birth of life, it illustrates the adventures of life and, at the very end, it introduces the human being. The story also makes it very clear that there are different forms of life: those that eat others and those that make their own food from sunlight and water and a gas in the air. Despite the commands given to all life forms, Eat, Grow, and Make others like yourself, this fundamental difference in how the need for food is satisfied is reflected in very different physical forms and very different ways of life, that is, animal life and plant life.

Let us then consider the children’s work and exploration with plants (which also includes experiments of all kinds).

Planet Earth as we know it depends on Life, but all forms of life, including plants, completely depend on the Earth. The plant we see on the chart (image 4) is a tree, a land plant, a kind of plant that is part of the children’s everyday experiences. Its needs are indicated in a very
general, though quite significant, manner. These needs, which have to be satisfied if the plant is to eat, grow and makes others like itself, are highlighted in colour: Sun (for light and warmth), Air (a mixture of gases of which one in particular is vital for making food), Water (fresh water), Land (soil). (The second Bergamo chart shows the needs in detail.)

When we present something new to the children, we try to bring out what is special, what is different. With the Story of the Coming of Human Beings, for example, we really emphasize what is different and special about us. However, it is also really important to remember that, just as we can do things that plants and other animals cannot, there are things that plants and animals can do that we cannot. And what plants can do is positively amazing. They can use these inanimate agents (Sun, Air, Water and Land/soil) to literally make, produce, food. Thus the plants are the main bridge from the non-living world to the living world (see the botany chart of the Leaf as a food factory). Consequently other forms of life, that is, animals including us, depend directly or indirectly upon plants. Talk about interdependency! The plants depend on all those non-living agents, and all forms of life (all those with which we are more familiar) then depend on the plants' ability to make food. Our very lives, ultimately, depend on plants.

Our very lives depend on plants in more ways than one, however. As the plants are making their food, a process which we call photosynthesis, they not only take in carbon dioxide but also send out oxygen. Incidentally, when plants breathe, they breathe like us in the sense that they take in oxygen and send out carbon dioxide. Nonetheless, they are net producers of oxygen. Indeed, if we have an atmosphere that is made up the way it is (presently with 21 per cent of oxygen), that is because of the work of photosynthesizing forms of life.

Now how many of us have really thought about the air or the evolution of the atmosphere? Perhaps you think of air as always being the way it is? In fact in her writings, Dr Montessori herself seems to imply that the composition of air has always remained the same. However, although the air has been the way it is for a very long time, that has not always been the case. And if we have the atmospheric oxygen that we need in order to breathe, we can thank the microscopic beings that first practised photosynthesis as well as the plants that evolved later. The early photosynthesizing life forms in other words completely transformed the atmosphere. Some children might even find out that, if we go right back to the time of the unicellular beings living in the water (see the Story of Life), among them we find unicellular photosynthesizers known as the cyanobacteria. Long, long ago the early atmosphere had no oxygen and when the cyanobacteria started releasing oxygen, they triggered a series of events that led to an atmosphere rich in oxygen. That means life had to adapt to completely different conditions and the new conditions favour aerobic life forms at the expense of anaerobic life forms.

Coming back to the present day and to our land plants, what part of the plant is essential both for food-making and for the release of oxygen? The leaf of course. But that is by no means the end of the story when it comes to how plants contribute to the environment and to the lives of other beings. If we consider the part of the plant opposite to the leaves, we pass from the part in the air and sunlight to the part found underground in darkness: the roots. Perhaps we should first consider the work of the roots for the plant itself: anchoring the plant firmly in the ground, so much so that plants can grow tall like this tree (and even rise to more than a hundred metres high above the ground); seeking water whether by spreading out horizontally like the grass plants or by also growing vertically down like the trees (as deep as tens of metres below the ground or even a hundred and twenty metres down in the case of a South African fig); taking needed mineral salts in solution from the soil, which means with the help of the water. Speaking of the tree, Colin Tudge has this to say (in his book The Secret Life of Trees):

The whole vast and intricate structure is evolved to bring air and water together in the presence of sunlight; and the water and attendant minerals come mainly from the earth.

So the old Greeks were absolutely right. Trees at least are compounded from earth, water and air, and the sun that powers the whole enterprise is the greatest fire of all, at least in our corner of the universe.

Whilst undertaking all this work for the plant, the roots also hold on to the soil as well as on to the water, thereby preventing erosion by wind and water and the loss of precious soil. Therefore the plants depend on the land and soil but the land and soil also depend on the plants. This work that benefits the environment and therefore the lives of countless others, is called cosmic work by Dr Montessori, an interesting expression which merits some thought.
In Dr Montessori’s thinking all that exists, works and all are therefore agents of creation: sun, land, water, air, life in all of its myriad forms. Thus (in *What You Should Know About Your Child*) she says:

Watch the unending activity of the flowing stream or the growing tree. See the breakers of the ocean, the unceasing movements of the earth, the planets, the sun and the stars. All creation is life, movement, work. *(Chapter 20)*

Life itself, however, was given special commands, *Eat, Grow; Make others like yourself*, and all living beings work in order to actively obey those commands. That work benefits the individual and the species to which it belongs, and this is the obvious part or aspect. At the same time, however, that work can benefit the environment and contribute to the lives of others in less obvious ways, and this is the aspect identified as cosmic work by Dr Montessori who also says this:

All creatures who live on earth have a cosmic role to play. The maintenance of life on earth depends on many species, each one of which has a special, specific function. [...] Everyone knows, for instance, that the disappearance of one species in a certain place upsets the balance, because the lives of all species are interrelated. Life therefore can be regarded as an energy that maintains life itself. *(Education and Peace, Chapter 9)*

And this (in *What You Should Know About Your Child*):

So in every cosmic detail, from the maintenance of the purity of air to the maintenance of the purity of water, each living thing performs its task with fidelity to a definite plan. So does all creation. The suns and the stars in their movements; the earth and the planets in their rotations and revolutions; the clouds condensing into showers; plants and animals in their cycles of birth, growth and decay; the oceans and rivers, minerals and metals and all kinds of matter in their formations and functions; from the earthworm that sinks into the earth to the butterfly that flies round and round and perches on the flowers; all things in nature have a pattern to which they conform and all of them adhere to a plan into which they weave themselves to form a universe in equilibrium. They function for the preservation of the totality according to a plan and for the preservation of the species according to a pattern; thus are brought about the order and harmony in nature. *(Chapter 18)*

If Dr Montessori’s use of the word *plan* bothers us, we can always use the expression *cosmic organisation* instead. It is as though all living beings form part of a great cosmic organisation for the upkeep and maintenance of the Earth, our planetary home and household.

Now let me come back to the Water Cycle once again and this time we can think about which part or role is being emphasised at the beginning of the *Story of Life*. In the *Whose fault is it?* part of the story, the emphasis is on water as an agent of erosion or, as Mario Montessori expresses it, on the work of water in its sculpting mood. Obviously, at the beginning of the story, there was no life at all, never mind land plants, to restrain the erosive power of water.

However, the part or role that is emphasized with the *Chart of Interdependencies* is the water that falls from the heavens, rainwater which, says Mario Montessori, is water as the beneficial mother of all that lives. After all, when water is carried all over the land in the form of rain, the land can become covered with vegetation. Thus the geography chart that follows those illustrating the cycle of water is indeed the chart that shows the natural distribution of vegetation over the whole of our planet: forests, grasslands and, where little or no rain falls, deserts. Temperature and *rainfall*, in other words, help to determine where different kinds of plants, and also animals, are to be found.

Coming back to our *Chart of Interdependencies*, we can understand how plants depend on all the non-living agents but the arrows, which are arrows of dependency, indicate that plants also depend on animals. Given that plants are the food and oxygen producers of the world, it is easy to see how animals depend on plants, directly or indirectly, for their very lives but why would plants depend on animals?

Well, since plants can make their own food, they can just stay in one spot but animals have to find their food and therefore they have to move around. When plants need a means of transport, they can use wind, water or animals. Thus we can find incredibly important forms of collaboration between animals and flowering plants for the purpose of pollination, something which is absolutely essential for carrying out the command *Make others like yourself*. The plants provide food for the pollinator and the insect, bird, or other animal, ensures (cross) pollination. The importance of this collaboration is highlighted on the timeline of life where, of all the innumerable invertebrates, only the insects (who are the outstanding pollinators), have their own red line, along which we even find a butterfly together with a flower.
Many plants also depend on animals for the dispersal of their seeds and this, too, may be essential for the survival of the species. In other words, if the plant-animal partnership is an exclusive one, the very existence of the plant as a species depends on the continued existence of that particular animal.

Perhaps all of this is easily understood by the children but there is another form of dependency which is not so evident and which is only hinted at in the story accompanying the Chart of Interdependencies. From work with experiments and botany charts, the children do know that plants obtain all sorts of nutrients from the soil. But if all that happens is that the plants keep taking in mineral salts from the soil, the soil becomes depleted and infertile. This opens up another whole field of exploration which concerns not only the erosion of the rocks but also Nature’s recycling of all animal waste and everything that dies, from the leaves that fall in the autumn to the death of organisms as large as trees and elephants. Nature has armies and armies of workers who dedicate themselves to clearing the planet of corpses of all kinds and who ensure that everything is recycled and available for re-use. Bacteria, fungi, invertebrate and vertebrate animals of all kinds are part of this process, and this process ensures that what the non-living world lent to life is then returned to the non-living world for lending to new life. One example of this endless life to death to life cycle is known as the nitrogen cycle which illustrates how plants depend on other forms of life for the nitrates they need.

Let us now come to that special kind of being, that is, the human being. From a scientific point of view it is astonishing to see that half of the whole Chart of Interdependencies is dedicated to human beings. But then this chart is not aimed at scientists but at six- to twelve-year-old children whose developmental needs led to the educational approach known as Cosmic Education. In one of her letters, Dr Montessori writes how this approach lends unity to all branches of knowledge and how we can think of this unifying idea as Man in the Universe. Indeed these children of the second plane of development have a hunger not only to know and understand the world but also to know and understand human beings, human society. Therefore we have to help the children to explore not only the interactions and interdependencies which explain how the natural world functions but also the human interactions and interdependencies which explain how the human world or human society functions. In any case, children are human beings in the process of development and therefore it is psychologically appropriate for the human being to take a central role.

In To Educate the Human Potential, Dr Montessori says:

> Something new came into the world with man, a psychic energy of life different from any that had yet been expressed.

Humanity, in Dr Montessori’s thinking, constitutes a new agent of creation or, if you prefer, a new agent of change. To appreciate the truth of this, it is enough to think of the duration of human existence in relation to that of the Earth and then to think of everything human beings have achieved in that short time. We know that whether we consider genus Homo or our species Homo sapiens, human existence can be counted in mere seconds when compared to twelve hours representing the existence of our planet.

And what have humans achieved? We can first think of Nature, Nature as wilderness (not the countryside) and imagine ourselves living in the wild with nothing other than whatever Nature provides directly. Then compare that with the world we actually live in: a human world, a world built by the work of human beings, a world that Dr Montessori calls supranature or supernature because it is built upon or above Nature. Supernature not only includes the human world in its physical aspects (houses, clothes, food, cars and trains, museums, churches, etc., etc.) but also the intangible world of knowledge of all kinds (as well as of beliefs and values, etc.).

Human beings have brought into being whole worlds that did not exist before, and how did they do this, achieve this? Well of course, in the Story of the Coming of Human Beings and even earlier, we hear about some special gifts: mind, love and hands. But what did human beings do with all those gifts? They worked, they learned, they discovered and invented. Thus, Dr Montessori describes humanity as Man the Worker, Man the Transformer (of the environment), Man the Revealer (of the secrets of nature), Man the Migrator. For example, human beings can take wood and transform it into a chair, into a table, into a box; they can take wool and transform it into a sweater, into a coat, into trousers, into a hat, etc., etc. That is true alchemy as far as I am concerned; forget about the idea of transforming base metal into gold!

Human beings started life as part of nature, and by nature seemed rather weak and defenceless creatures. What permitted them to become such a powerful agent of change that today we can not only create but can even destroy the world? Were the gifts enough or was there something else as well, something that we take completely
for granted? The answer lies in the group, living in a group. Human beings always lived in groups; living in a group permitted them first to survive and then to thrive. The gifts empower human beings when there are many minds and many hands. Thus, in the Chart of Interdependencies, we see small groups that represent different human groups and, by the way, the children of elementary school, are interested in what is different. They are interested in different ways of life whether in different places or at different times.

Thinking of human beings in their different human groups, we can notice a general historical trend. In the beginning, human groups were rather small. If we think of a hunting and gathering band, this would consist of perhaps thirty or more individuals which is little more than an extended family. By the time of farming, which is when the transformation of the environment becomes very noticeable, the groups become larger. Thus a Neolithic village could comprise a hundred and fifty individuals. When human beings take up urban living, those cities of ancient times may be populated with thousands of people. Around 2000 BC, the ancient city of Ur may well have been the largest city in the world and its population was approximately sixty-five thousand.

Human groups could obviously become larger through population growth but they could also grow through the merging of smaller groups. If each small group develops knowledge relating to its particular territory (as it must if it is to survive), then the merging of groups can also lead to an overall increase of knowledge. Even contact alone between different hunting and gathering groups can lead to fruitful exchange and increasing knowledge if they are leading different ways of life. When groups come into very close contact, there are various possible outcomes: peaceful merging together; conflict; conquest. Whatever the outcome, a new supernature will emerge.

In the Chart of Interdependencies, each group’s supernature is represented by a circle or sphere which indicates a way of life specific to that group, and a particular way of life always implies a particular kind of knowledge. Incidentally, it is a mistake to think that our modern western way of life automatically means that we are more knowledgeable and more intelligent as individuals, because nothing could be further from the truth. For example, there is an indigenous human group who live in Brazil and are called the Kayapo. They have knowledge of some 650 different plants purely for medicinal purposes. I think it would be difficult to find an ordinary westerner who can simply recognise 650 different plants, irrespective of any medicinal purposes they may or may not have. What is true, however, is that each person develops the knowledge necessary for a certain way of life and much of that knowledge is learned from others.

Those different supernature spheres are important; they represent knowledge held by the whole group. They represent not just individual knowledge but the knowledge of the whole group, and in that sense we can think of each one as group intelligence. A whole group of individuals knows so much more than any single individual possibly could. Therefore if and when groups merge, or simply come into contact, knowledge starts to circulate and spread. And this too, constitutes another great historical trend which has inevitably led to changes in ways of life, both in material terms and in terms of knowledge.

Yet another overwhelmingly important trend to be observed historically is that of an increasing interdependence between human beings. Of course human beings depend on the non-living agents as do all the other forms of life; but they also depend to an increasing extent on each other both as individuals and as human groups. This increasing interdependence is the inevitable result of an increasing specialization of work.

To some extent specialization of work would always have existed, even during those long ages of the hunting and gathering way of life (known as the Old Stone Age or Palaeolithic). But when farming first became established and people settled down to an agricultural and village way of life (known as the New Stone Age or Neolithic), the farmers started to produce a food surplus. A food surplus means that some people do not have to farm but can dedicate themselves to other kinds of work. Thus farming led to much greater specialization of work and villages quickly grew into towns and cities which we associate with civilization and an urban way of life. People living together in greater numbers encourages further discovery and invention which leads to yet other kinds of specialized work so that new trades, crafts, occupations, can continually come into existence, trades with their own specialized knowledge.

In our present times, we have become so specialized in our work that we depend on other human beings for our very lives and wellbeing. To satisfy our needs for food, clothing, shelter, transport, etc., etc., we now completely depend on the work and dedication of others. In other words, the more human work becomes specialized the greater the interdependence. Thus, in the 1930s, Dr Montessori was already saying that we humans are so interdependent that we actually constitute one single great society of humanity,
a single nation, *la nazione unica*. This is true not only in an economic sense but also in relation to knowledge. Therefore, in our chart we also see an overarching sphere which represents a great supernature for the whole of humanity, a supernature to which all can contribute and from which all can receive. Our contributions may take many different forms: we can contribute to the lives of others through the food we provide or through the clothing we provide or through the teaching we provide, etc., etc. The possibilities for contributing seem endless but then what we receive also seems endless!

We can also think of this overarching supernature for all of humanity as a kind of super intelligence since it goes beyond the kind of knowledge that is developed by any single human group. This overarching supernature now includes (or could include) all human knowledge which then becomes available to the whole of humanity. But how is that possible?

Dr Montessori starts to provide the answer with this chart (image 5).

Human beings have always lived in groups, and they have always organized themselves so as to work together in a collaborative or cooperative way. At first this organization of work might have been based on a division of labour without much specialization and then later with a greater and greater specialization of work. Either way, the organization and collaboration required communication, and our most important form of communication is language. Thus, with this chart, Dr Maria Montessori shows us a number of adults who form a society (they are all connected to the same cloud) which means an organized group of individuals. How can they organize themselves to form a group, whether in relation to working together or to the basic laws of living together? They are certainly not joining hands, their hands have to be free to work. The dotted line shows that they are connected by means of their mouths, they are connected through language, our prime form of communication.

Looking at the chart, we can understand that the language indicated is spoken language, and we do indeed depend on spoken language to communicate with one another and to work together in a cooperative way. Spoken language constitutes a very efficient means of communication, up to a certain point. Again it is a question of numbers, because if a human group becomes very large it becomes impossible to depend on spoken language alone. Therefore we reach a point where we need written language as well. To build a functioning society or civilization which involves a substantial number of people, we need to be able to
communicate in a silent way, in a way which overcomes the barriers of time and space. Thus we can understand the importance of the fourth cosmic fable, that of written language which for many of us becomes the story of the alphabet also known as the Story of the Ox and the House. (Alpha, the name of the first letter of the Greek alphabet, has no meaning as such in Greek but means ox in the Semitic language of origin. The situation is analogous for the second Greek letter, beta.)

Let me repeat the question I asked some time ago: what permitted human beings to become such a powerful agent of change? The answer I gave earlier was this: the group, the human group. But now we can understand that for a human group to become organized, to work together as one, requires language, and we can, indeed, think of language as an innate characteristic of human beings. Human beings also have another innate characteristic which Dr Montessori identifies as the mathematical mind and this underlies our fifth cosmic fable. Without these characteristics, could human beings have become, in Dr Montessori’s words, ‘God’s chief agent on earth for creation?’ (To Educate the Human Potential)

Now I want to show you what happens in a community of people who are all specialized in their work (image 6).

This community is made up of a baker, butcher, toolmaker or smith, miller, farmer, mason, tailor or dressmaker, shoemaker, etc. There are sixteen specialized workers altogether and to some extent they recall a medieval village. By simply thinking about Who needs whom? and drawing the appropriate lines of dependency, the children discover or reveal what can only be described as a network of interdependence. A very simple activity with a very dramatic result which illustrates very vividly how a human group, how a human society, functions. And if this is the result for a community of just sixteen workers, what would we see for our societies with their far larger numbers of specialized workers?

We do have a sixth cosmic fable, The Story of the Great River, which is first and foremost a story of the human body and how the human body functions. But there are some important ideas within the story that can take us beyond the functioning of a human body: the importance of work and the specialization of work, exchange and
interdependence, collaboration and solidarity. If we focus on these aspects, we can see them at work in human societies throughout time and space, and even in the workings of the world itself.

According to Dr Montessori, if the children understand and appreciate these realities (because they truly are realities and not fantasies or ideals that have yet to be reached) then they can grow and develop with a sense of human solidarity unlike the adults who still suffer psychologically from outworn ideas and prejudices. Our hope, as always, lies with the children and that is why we find them present in our Chart of Interdependencies. Humanity actually constitutes a dual agent of creation: the adults who work and transform the environment, creating a supernature; and the children who work for their own development, transform themselves and, given the chance, will create a better humanity.

Bibliography


Montessori, Maria, “Early Man”, Chapter 10 in To Educate the Human Potential (Adyar: Kalakshetra, 1961)


———, letter to Mr Nino Bobba, 3 December 1947


———, “Supernature and the Single Nation”, Chapter 13 in Education and Peace


Montessori, Mario, Geography Charts, Bergamo 1962/63 (notes for Chart 27)

———, The Human Tendencies and Montessori Education (Amsterdam: Association Montessori Internationale, 1996)


Baiba Krumins Grazzini is director of training at the International Centre for Montessori Studies Foundation in Bergamo, Italy. She has been involved with Bergamo’s AMI elementary training course since 1975, became an AMI elementary trainer in 1986, and joined Camillo Grazzini as codirector in 1992. Krumins Grazzini holds both a bachelor’s and a master’s degree in economics from the University of London (London School of Economics and Political Science) as well as the AMI 3–6 diploma (London) and the AMI 6–12 diploma (Bergamo). As the late Camillo Grazzini’s closest collaborator, Baiba Krumins Grazzini co-researched, and sometimes co-authored, papers and projects on many aspects of Montessori elementary work; she has continued to publish in her own name. She became a member of the AMI Pedagogical Committee in 2004 and served until 2013, by which time it was the AMI Scientific Pedagogy Group. Today she is an expert on Montessori elementary education as she continues the Bergamo research and elementary courses of study and implementation.

Copyright © 2020 Baiba Krumins Grazzini
Adolescents on the Farm, Abba’s Orchard, The Philippines
Early Articulations Toward Advanced Learning for the Third Plane and Becoming an Adult

The following two articles by Maria Montessori explore simply and clearly the underlying assumptions for the Erdkinder concept as they were written at approximately the same time as the ‘Erdkinder’ appendices in From Childhood to Adolescence became public. Montessori touches on the importance of independence and social life beyond the family, the necessary environmental awareness for young people in the context of civilization, the meaning behind social values of civilization, and the importance of social morals, social development, and economic independence.

D.K.
Part I

Rather than a lecture, I wish to have a discussion and exchange of ideas. First, I wish to explain this idea: that there is a profound and decisive distinction between the period between birth and puberty, and from puberty onwards. In the first period, which is our special period in pedagogy, we have the human individual creating and constructing itself. It is the individual which is the centre of all. All effort is directed towards the acquiring of functions; what we may call success, is the acquisition of the possibility of independent functioning.

To put it clearly, there is no clash between independence and the social individual. Only when there is independent development can he associate with others. So it is while we give the child all these means to become independent he develops vivacity and the possibility of social intercourse.

The baby, as we know, when it is born, takes on functions; but there is a special social acquisition on his part because with each new function he can enter a social relation with those around him. When he is born he associates with his mother. When he can walk he seeks out other people.

There is a social union of love. The love of the mother and other people for the child and the love that the child himself gives. As Crichton-Miller has said, for the child’s development it is necessary to have security, valuation and freedom. What he called valuation of the child is descriptive of all we give of affection, encouragement and admiration. We have an individual which must be observed and helped, although the help must be limited to all that is purely necessary. This social union has the individual as the centre attracting value to himself and giving. He is the centre.

At this stage, if we give religious instruction, it would be the idea of a God who helps, sees and never abandons; so in nature we should have the idea that nature takes care of all the individual animals. It is a God who regards the individuality of children, animals and plants. Everything is a separate individual for God.

The same idea is present in the aid we give to the child to analyse all the things and sensations in the environment. We have a great mission to aid the individual in a clear, defined way. We try to facilitate what for him is a great effort; by clarity, materializing everything for him, even
abstractions. So that he can handle materialized abstractions and go deep into them.

From birth to the age of twelve he lives a complete life. He acquires a wide culture by this means, and independence. He is able to acquire culture that corresponds to two years in advance of the usual school attainment. He has been educated in the manners of life, so that he can live in a social unit with ease.

At puberty he comes to the end of this period. Nature marks the end. It is an extra ordinary change, a point of life which might be called a rebirth. At this point the individual child is becoming a new born social being who did not exist before. As the newly born creature always is, he is weak and in need of help. This piece of creation is in need of the same detailed and minute care as is given to the baby. As with the baby he is delicate and liable to be attacked by disease. The fact that the body is growing is the cause of the weakness.

There is also a powerful inner development going on. This is a mystery just as the new born child is a mystery from a spiritual point of view. At all those stages of life when something is forming we call it the mystery of creation. If there is the mystery of creation forming man for social life, we must call it Divine. The youth cannot voluntarily form himself. It is a delicate and all important point in life for which we are responsible.

What it is, we do not yet really know. We must hasten to understand and find out what they mean. If we are to arrive at any knowledge, the child, the youth alone can reveal it to us. We must give him conditions in which it will be possible for him to reveal it to us.

Where they usually change the teacher each hour without any sequence, it is hardly possible in the space of an hour to adopt the new way of thought. Whenever the adaptation is arrived at, the teacher changes. So this precious and difficult period passes as a succession of changes or gasps. I once studied the rules of religious life with great interest. In a religious order one finds forms of penance undertaken to purge the soul and make it better. All penances of a corporal kind were abolished in one order. There was to be no fasting, or limits to sleeping; one could even pray seated. But there was one form of penance, which was that when you began an occupation you were obliged to stop it. Never

Maria Montessori at the Montessori Congress in Oxford, England, 1936
were you allowed to finish it. As soon as you were interested, you had to stop. Very few people could hold against this refined form of torture, yet this is the life that youth normally leads at this period.

Why it is done, there is no reason. The reform of school for this period is very important. Many schools have been reformed. These are modifications of the old, more or less successful. They give greater liberty to the youth, and the choice of studies. Abstractions are materialized, making the work easier and more fruitful; the buildings and gardens are more beautiful.

I consider that as we are speaking of ideas based on development we must be more revolutionary. It is not the partial increase of liberty we have to consider, but what is the best form of liberty to help the child realize his independence. The crucial point is that we have to make real the social independence of man. We have not merely to consider the fatigue, etc., we have to know what the feelings and instincts are essential to this period of life. The child's sentiments are changing now. He is no longer satisfied to be the pet of the household. He has a sense of dignity. He feels that he is observed. He does not wish to be held at less worth than others. He wants to take the first steps in social life and he is anxious as to the figure he will cut. Many psychologists agree that the inferiority complex and timidity is developed at this stage. This brings serious consequences later. I was told the story of a boy whose whole character changed at this age, owing to the consciousness that he was poor and not dressed like others. The mother did all she could, but he always remained depressed. If his clothes were neat, he said they were out of fashion. Nothing could be done. He had a sense of injustice, and anxiety. Whereas he would like to enter in triumph into this social existence. Social differences at this stage are a form of anguish not felt either before or later. At this age in the school we may bring about a repugnance to social life. These forms of barriers between us and other people are formed at this age. The individual grows up weakened, humiliated and isolated. Whereas nature intended youth to go forward with the head held high and a competent step.

Without doubt, what we have here is a real idea of the social mission of society itself. It is entirely false to suppose that we apply the same principles as up to this age, the period of breaking up and isolating parts in the environment. Hitherto the adolescent has been occupied with movement in the environment; now by his own effort he is mastering the environment around him. The early period should be symbolized by moveable things. This period we could symbolize by the earth, because from it each social unit has its origin, and the earth is still firm. Man's first work is to exploit the earth. His work is with the earth itself. Apart from the practical fact that it is the best thing for the child to be removed from his home and its emotional environment into the country, he finds peace and tranquility in an environment new to him.

The two years he has gained in study can be given back to use in a different way in this new period of life in the fields far from the annoying forces of life. He can break away from the warning anxieties of his elders, not to be late for school, dinner, etc.; he steps out into another life where all men are equal and he can get spiritual and mental repose. Who knows what will emerge from the soul of youth at this stage of life. Take an episode from the life of Christ. He, too, fled from home in the search for wisdom. I no longer belong to the family as the child. I have something else to do. This mission of man must come to each child. He must be relieved from all that might hold him back. He must attain the full stature of man. In this epoch we get the idea of a God who guides not one individual, but humanity in its destinies.

Practically he ought to be working, not just for fun. In many reformed schools we find that form of work. Work is done as exercise upon the land. They may study biology, or they build a house in the woods, but it is no good to live in. Just as Froebel taught his children to lay tables for dolls, whereas we give real work when they lay the tables; so with this other work it must be really as serious. I am merely speaking of the initiation that is to help this period of change, but I do insist that the work must be real, so that the adolescent lives out a social life. Social life must be taken in its essence.

Social life is not sitting in a room together or living in a city. It does not regard social relations. The essence is that something is produced which is useful to the whole of society and is changed for something else. Production and exchange, are the essence of social existence. It is a production and exchange which does not only bring in the people living near to one, but those far distant. Division of labour enters into it too. Well, the youth should experience this in life. This is the secret of social life. The other is only casual. He must live it and feel it deeply. This, for me is the most important, I mean, the adolescent must produce and sell what he wants; sell it so that he may buy something else. Produce for people unknown to him. This represents a connection.

There is a vivacity of life in all this. Little by little he is able to realize social life and find his own economic independence. This is the root and a great advance in the correction of many ills in society, because we have a strong mental barrier against money and work, because we have profaned
them. Whereas exchange is the link between all men forming society. Work stands for the natural form of life. There is no mystery of money which up till now has resided in poppa's pocket or locked up so that we can never get at it. It is even essential for someone to die in order that we may get it. Study is even prompted so that he may be able to earn money. All growth may be sacrificed for this. But this should not be thought of in connection with study. It will come by life. When we see that life is a matter of work and exchange, it has a vivacity exceeding anything that we find on the tennis court, in the cinema or ballroom.

In Germany I saw people keen and eager. The whole day was a festival. Parents visited the school, buying what was there, or else the boys went out to sell it. There was a variety in life, and yet the individual was getting opportunity for repose. Many forms of study can be done parallel with this, all leading the child to a clear comprehension of the time in which he is living. We must help him to discover what part he is to play in society, for anyone who realises his own mission must respond to the environment. The nobility of the youth's soul will find expression in this way without the assistance of vocational guidance.

Part II

I should like to clear up some points already touched upon and I repeat these points to recall the fact that the life of the child is one of direct relationships with other people. We resume these social relations under the name of love. It is the art of being among other human beings which is based on certain feelings and ways and manners that facilitate living together. When I say this is the setting in which the child finds himself at the earliest age, I do not mean it disappears when he grows older. The 'child' as he goes on living does not disappear, he grows up. We ought to perceive that there is a period in life of condensation or concentration of love, and to store up this love (just as people going into a gassed region take a supply of oxygen in an apparatus). When adolescents enter on the second stage of life, we have to deal with another set of relations.

These relations represent the new social life. As I was saying yesterday, children on the land are given the possibility of living over again the primitive social existence which is built up on the principles of production and exchange that comprise the whole of social life and are the very embryo of society.

The essence of this social life is work. Work and exchange bring together people far apart bring them in touch who would never otherwise be in touch at all.

I am not here stating, as many do, that the child needs to pass through the same stages of growth as primitive society. The exercises I propose have not this object at all. I mean something else: Looking on the child with the same eyes as we looked on the newly born, we see that he has a sensitive period to go through which has the same relation to social life as previous sensitive periods have to individual life. As in the previous sensitive periods, the growing man fixes and stabilizes functions which he would otherwise not be able to develop; so it is essential at this period of life to have the possibility of fixing his relation with social life, because in this sensitive period he is prepared to take up his part in the social life of humanity. It is the same psychological mechanism at work as is at work in achieving perfection of speech during the sensitive period for acquiring speech.

Real earnest work and the exchange of its products constitute the mechanism or working of social life, because the aggregate of human society is based on the division of labour. Labour is requisite to carry on the production essential to the existence of mankind. All the rest follows as the consequence of that, i.e., organization.

Man does not live as do the animals in direct dependence on nature, nor like the birds and beasts seeking food in the environment. It is essential to understand that man lives by and through the work of other men. Human society for its very existence requires reciprocal help. This law becomes more and more rigid as society goes on progressing, and becomes progressively more complicated, so it is only through the society of his fellows that man can exist at all.

Man does not any longer live in purely natural surroundings although he does live in a natural way, but the nature in which he lives today is a nature that man himselfs have built up, a supranature, a state of nature constructed upon nature.

In speaking of the child, we are now dealing with the manners and rules of social existence, and we come to the need of laws regulating work and exchange. People think this a complicated affair, but it is essential that the child shall be able to live it through in its essential meaning: work, produce, buy, sell and really handle money for himself, and realize how necessary it is to have rules for all this, and that they should be observed.

If any mistake or oversight is made by the child such as being late for a meal, he can remedy it by asking pardon, but here the rule has to be observed absolutely in order that the youth may understand what social discipline means. To this state of things man has to adapt himself in the course of exploiting the soil. The youth has to arrive at
this experience of actual living, and thus changes in his way of life come about.

In the first period (up to puberty) if he breaks the rule and arrives late for school or something it is only an individual [sic], some adult may be upset and there the matter ends. But in organized society no infringement of law can be tolerated because it produces an upset in the whole organization. It is a different form of life that is lived in the group so closely knit together. A higher form of self-control is needed here, which is at the base of social education, and it has to be worked out and actually experienced in the sensitive period during which man is creating his social personality.

The division of labour and the necessities of exchange brings together a group of various persons. Human groups form in the human group such as nations. Not only exchange, connected with the exploitation of the earth links such groups, but they are also bound together by the common factor of speech. Our interest in children leads us to stress this fact.

Language which is so necessary as the means of communication between man and man is the treasure given us by the small child who, during his sensitive period for it, holds and arrests speech and keeps it intact. This language which cements these human groups and of which they are so proud, we owe to the child, so that if only for this fact the child is our collaborator in social life. Like the oxygen jacket in the simile already presented, the small child helps humanity in this way, too. From him we derive the connection with our fellow creatures.

To return to the adolescent, we have certain prejudices about money because we think it is degrading for the child to handle it or earn money. We have noticed similar prejudices about the liberty of the child. People have thought liberty hostile to education. But when you understand it, liberty in school makes the child free to grow up, and it is the exercise by which we grow up.

I repeat the same thing about money in order that the immorality and error bound up with it may be destroyed, and we must extirpate them completely.

The consciousness of what money is must be present to the mind of the child. In theory it is taught in all schools. The process is described as first barter and then the introduction of money to facilitate the exchange of goods. Now it is interesting and curious to read the histories of Greece and Rome, but it is a more difficult problem when the subject has to be lived out and experienced. Then the meaning of money used as a substitute for exchange becomes clear. What is money if not that which corresponds to the product of the worker? Because we have only learned this theoretically, we have to live it out. This is more easily said than done, but actual experience in this sphere fixes the fact, and what was an abstract principle becomes a living truth. It comes to life in the sensitive period in which the child is getting at the idea of justice.

This gives a basis for morality and responsibility which is entirely lacking in today's teaching about money. We treat money itself as an immoral thing, but this is not right. The very foundation of social morality is bound up with money. The child who really lives out this experience which teaches him the nature of money is going to arrive at a clear idea of what money means, of what its function is. Money has to circulate continually as the blood circulates in our tissues if cells and organs are to be fed. So that among the other laws the child is learning now, there is something grand to be grasped here, to realize that this is the most important fact in the organization of society and in social morality. Otherwise we are leaving the rising generation in a state of darkness which becomes increasingly dangerous and we present the youth with contradictions which have no meaning, as when we say it is well that money circulates, but on the other hand it is well to save money. On the one hand we say money is one of the first necessities, and on the other that it is a dirty thing. Because men grow up into life in this state of mental confusion they are ignorant and in darkness about the mechanism of finance which holds in its possession all the world's money, and therefore all the world's work. Because it is master of work, finance is master of life. We want men to be conscious and free, but they are the slaves of their own ignorance of all the forms of organization of social life, and education only comes into it to isolate them from that real life in which they ought to take part. In education, social life in this sense, is left entirely out of consideration. We worry about what we ought to teach in universities and neglect what is essential to life. Most of the people who do the most advanced studies spend the greater part of their time shut up in a room hearing lectures in which everything has about the same importance.

Turning to religion, this is not a study you can teach like other subjects. It requires a method peculiar to itself; just as the constitution of society requires something peculiar to itself. If a child has got the idea of the nature of society and the part he has to play, you have something quite different from taking up one single point and studying that. When we consider God as the director of human affairs it is quite a different matter from teaching, say, Greek religion. We must distinguish these fundamental matters from matters of more detail. It is all different from the wooden objects and the paper the children used to use and more like the
Japanese paper flowers that expand in water. What we do is to thrust on the child one of the paper bullets of which we understand nothing. Episode and essence are confused in such a way that we come to realize nothing, we just give this jumbled compress without knowing how it will open out or what it will show. Whereas we should open out and explain to the child what is waiting for him in life. This is the clarity which is most useful to man, and in order to get this degree of clearness it is necessary to give extensive culture. All the different subjects of life’s curriculum have to be understood as forming part of one whole, so that not only in economics must we so explain the meaning of the subject, but we must have centres from which all other subjects radiate. I believe youth is interested in synthesis and in getting a general grasp of things, and afterwards goes into detail.

The fact that youth is capable of earning money is a complex one, but a very important moral fact on which all social morality depends. Social morality has this basis, this is the material part of morality, a real material by which we can understand how an error in distribution is a moral fact which brings a social disease.

Such a centre of social disease will branch out and affect the individuals. We become awful that around the oscillation of money there is an oscillation of public health, and we reach the conclusion that there are some things we do need, and others we do not, and that we may even be physically ill because we possess a number of useless things; so that the normal distribution of money is necessary to health as the normal circulation of the blood to the health of the individual creature. If the blood is unhealthy all the tissues are affected so that it is in the interest of all that we should be closely acquainted with this circulation and exercise control over it.

How would youth earn money? How is it possible when there are so many unemployed, and together with this a prejudice against young people working?

There is only one way of solving this problem. The adolescent must not work in the adult world, nor earn as an adult earns. Society must create for educative ends possibilities of this work for earning adolescents. Youth, as a social being, may be compared to a little child in school whom we educate to do all he can for himself; and in order that he may, we must provide the means. We allow him to dress and brush his hair and scrub the table, and we are aware the child has said to us: ‘Help us to do it by ourselves.’ In the case of adolescence there is the identical need of help to do it themselves. Society has the duty of organizing the world for childhood and youth. We cannot remedy the terrible ills of our social system today by fine speeches or painting the schools bright colour. The adult has to realize the importance of the adolescent getting vital experience of life just as the young child does his work in school. The sense of independence gained by the young child who does things for himself reacts to the advantage of the adult. The mother of five children who can dress and wash themselves and get themselves off to school has a different life from the mother of those who cannot. We have also seen the character which develops in these children and something of what it seems to be a normal individual.

Carrying this criterion into the next period of life we do not suppose that the adolescent is to live exclusively by the help of others in the economic sphere. On the old plan he would have to ask his father for a penny for the tram or for a cigarette paper. It is not the not having these things that is bad for the child. It is the feeling of being dependent on adults for every act of life, like keeping a bird tied by its legs so that it cannot fly.

All this leads to psychological deviation from normality on all the planes of life. The little child dependent on its mother will not develop psychologically, and psychoanalysis has shown how this defect, and the adaptation which follows, leads to psychic diseases. How is youth to arrive at full stature if continually harassed by enquiries of the parents as to why he has not done this or that? But if you realize that he is capable of working for himself and penetrating the labyrinth of life, this leads to the development of the normal personality. the contrary leads to the formation of the inferiority complex, that impotence of will and obscurity of the intelligence that are such a great danger to the social existence of today. This part of the adolescent’s training, his economic independence, may be compared to the relief of the mother of five in relation to the adult point of view. Because the adolescent can to this extent help himself economically he is less of a burden to his parent. The world in which this may become possible has to be created for the life of the young so that they may begin to live and not begin to deviate from the normal path of living.

© 1936 Montessori-Pierson Publishing Company
I am very grateful for the welcome given me by the president of the Dutch Society, which brings together here in Holland all the friends of my method and ideas. I am proud of this group of people who through the years – although I was far away and gave hardly any help – kept alive these ideas and advanced them toward a common goal for you and me.

All of us feel the need to help mankind at this difficult moment, and the most practical and substantial way to do so is to help the new generation. We have to help those who come to us with their weakness and their inability to orient themselves in our world. It is not just teachers who have to love and have a vision of the importance of education: The whole world has become alert.

This evening I would like to talk especially about secondary schools. The secondary school is not merely a part of education and teaching. I believe it represents the very center of all education, the centre where one must look for the key to give to humanity. It is at this age that the adolescent or youth enters social life. We should also be able to get a clearer picture from this age of what should be done before, in the elementary school.

The secondary school takes people at the age of puberty, when a second birth takes place: the birth into social life. At this age, the social man is born: It’s a delicate age. Doctors and psychologists have already shown a great interest in this age, but what are we doing for the adolescent? What they think, what they go through, their desires and their impressions are almost a mystery to us. We are not very concerned with their interior life; we are only busy with the goals of the school, which have remained the same since ancient times and which have been fixed by rules and the authorities. But what does a person do in school?

The moment has come to do something parallel to what was done for the elementary school in the last century. People started to think about the child in school from a physical point of view, and their investigations showed some very bad conditions they hadn’t even dreamed of. Doctors saw so much sadness that they spoke of school sickness. A new science was born: school hygiene. The reforms in the schools that followed these discoveries showed that the existing conditions were contrary to the needs of nature, that we were tormenting people in the formative period of their lives, while society was unaware of the errors committed in its midst. Our century no longer
demands only that we take care of physical hygiene; it demands the development of mental hygiene.

What is the soul of man, his intelligence, his nervous and psychic power, his feelings? A new science is needed and an investigation of the secondary school, very broad, methodical and scientific research on what happens at the age of youth, when they are in a closed space where they force them to study several hours each day under various professors who are not interested in young people but only care about their subject matter. They do not respond to the need for unity in the soul of man at this delicate age. On such positive observations by competent people we can construct a clearer basis for secondary education, which will also shake the social sciences.

But even without research we are able to know what goes on in the soul of youth. Modern psychology shows clearly that an inferiority complex is one of the roots of danger for man. This complex is practically shaped by society. It is, one could say, the feeling of not having the power or the ability to do what one should, the feeling of being inferior to one's task and nature. This inferiority complex is not just timidity: It is the conviction of being less than one should be and of not having the confidence to work in society.

What are the characteristics of youth? A sort of forced egotism, because the adolescent in secondary school must have as his goal to succeed in his studies for his own sake, to find a place in life where he can earn enough money to live. His parents push him along this path. Work becomes an occupation to earn a living. But the secondary school and the university do not prepare a person directly for a job. In these schools, so to speak, they are given a ticket to enter a certain level of society, a more or less exalted station in life, like a theater ticket or a train ticket. Yes, it's a ticket. In effect, you have to start all over again in life.

You have to fight your competitors, because the seats are not numbered as they are in a theatre or in a train. The man who is able to take a seat earns a living; he finds what he needs in society. This seat assures him of the material things in life and a social position. But what does the soul of the adolescent feel while he is pursuing this goal? His cramped soul must feel that his whole life on earth is sacrificed in the interests of adults. How could he see it as something broader, more moral?
The world today needs a completely different sort of man. It needs to give full value to all the qualities of the human personality. There are enormous forces in mankind that the adolescent must feel within himself. He must, undoubtedly, feel the sacrifice not only of heroism and great deeds, but also the sacrifice of not growing, of staying inert and enslaved. What we call discipline and order are means to cause suffering and to bring about the decline of the human personality, without our even being aware of it. It is good that we educete them to earn a living, but why do we condemn man to be inferior to himself and his possibilities? Why does he have to lose certain values to earn a living? Why die to live, when it would be more logical to live in order to live. If animals did the same, nature would be destroyed!

People have to live looking out for their needs, but that is not their reason for existing; that’s not the way we want to make youth act. Think of the birds that would think only of gathering seeds without their wings. They would lose the instinct of their species, which is sometimes to take long voyages to other countries in flocks. They would love their instinct to come together or to make their nests if they limited themselves to finding enough seed to feed themselves. They would not longer fill a need anymore in nature, they wouldn’t serve a purpose anymore in the harmony of the universe, such as to destroy insects or clean the air, and they would do nothing but look for seeds. It would become very easy to hunt them, because they would lose their value and ultimately their ability to defend themselves against danger.

Animals do not eat just to be eating, but because they have a sense that makes them feel and recognize what is necessary for their life. There are, for example, birds that eat cadavers and can smell them from a long distance, and they feel danger from far away. They could not defend themselves if they would only notice their enemy at the moment it was attacking. They notice it from far away. It is this instinct that allows animals to live.

Something bigger should exist in man: feelings, intelligence, and guiding instincts which come from deep down in the human soul and which should lead him in a different direction, to search for what he needs in life and to defend himself in danger. Today man is blinded by selfishness, which is strongly stimulated by his education. Mankind is in great danger and the whole world should tremble. It is not just a question of education then, but a question of the defense of mankind and civilization. We need all the human forces available and should not lose even a little bit of them, but should help develop them.

The reformation of the secondary school is not only a change of programmes. It does not consist in a change in the way knowledge is transmitted. We must put man
himself at the basis of education, not some obscure goal. Man has remained unknown for centuries, while the world has changed enormously. The human personality as the basis for education should make man grow with all his powers, which have not been considered at all. The famous book *Man the Unknown* contains almost nothing about the powers of the soul. The needs of the soul and the enormous possibilities of man are not recognized.

We have to put moral education at the foundation of a change in education. This change will be easy and logical because it is not man who has to be sacrificed for the artificial conditions of society and the environment. Man must create his own environment. He has to be the ruler of the environment and not its victim. Man has to be a moral force, a precious moral force: man the king of the universe, emperor of the world, full of courage, strength, intelligence, conqueror of everything that exists. Man has to be educated in this way. If we want to put the human personality at the basis of education, we distinguish two kinds of schools for different ages, with different needs.

Man, to develop, needs to exercise his intelligence at all levels. Instruction should not be abolished or diminished in education but plans must have man at the centre, because we cannot develop without activity. Instruction should not be the goal, but the means to make him exercise his mental powers. Instruction is considered the only goal in secondary school, but what sort of instruction? What must one teach? Everything! Imagine a rapidly changing world, how subjects will increase, to what point and in what number. All subjects grow continuously and will form such a large quantity that one day the intelligence of man will be so tired that it will not develop anymore and will lose its knowledge. Instruction through force and the cold transmission of facts will lead to the impossibility of studying, to mental barriers, to a horror of study, to a distaste for learning. It will not be enough anymore to study when you are young; people will study until they are thirty, forty, sometimes even fifty years old, always condemned to know, but for what purpose?

We have to take a new path. We must give everything that is necessary to develop the personality to the highest possible degree, taking as a basis the human powers themselves, unknown in their greatness and beauty, which are shown by youth.

The adolescent has, without doubt, a great sensibility and mental needs of an enormous importance for the life of man. They have to give these fundamental elements to mankind, whose goal is to form part of society. At this age, the social preparation of the human personality has to take place.

There are several plans for education that have as their basis the human personality: a plan from childhood to puberty and one from puberty to maturity. The first is for the early years of life and the elementary school (from zero to twelve years), which has as its basis the formation of the human individual, which needs protection. Education has to respect the human personality and has to do everything so that it can act according to its creative nature. The environment has to be prepared and childhood protected, as in nature. It is the family that protects, loves, encourages; these are the positive, tangible persons, always present, who take an interest in the child. The same thing applies to the environment: a protective environment especially made for the needs of the child. In this environment, the protected child feels his value. Also in religion, he feels the protection of God-Protector, who guards his sleep and his life during the day. In his prayer, he prays for his mother and father. At this age, his soul has contact with everything, the environment, his parents, things and animals. It is the first important period of life. But the intelligence also needs to develop itself; it needs a lot of instruction. If the personality is the centre of education, the child is much more instructed than the child who is forced. He feels his individuality and his independence.
During the other age, puberty and secondary school, the plan changes. Social Man is born, and he does not need to be protected anymore. He feels adventure, the value of competition; he wants to conquer the world. Nature prepares the second birth: Social Man develops. He feels that society is something different than being protected by the people around him. He feels a mysterious social feeling, and he is interested in the ideas of other people. He starts to take interest in things he cannot see: Mankind, the group he belongs to. As Social Man, he has to participate in Supranature.

These feelings do not relate to the exterior, or to the means to live, but they consider (and this should be the goal of the secondary school) the preparation to find one’s place in the society in which we live. These are the feelings of the soul of man, who exists in reality; of the individual who does not only think of himself but takes part in a group of individuals with the same principles. And, as he is growing up, he feels that he belongs to a group in an indirect and spiritual way. He understands the symbolic meaning of Nation, the Motherland, the Family, things you cannot touch with your hands but only with your soul.

Religious education is no longer that of God giving individual help, who makes you sleep well at night and live during the day, who feeds you while others do not have anything to eat, who helps you to look for an individual place in life. That is no longer sufficient. The goal of life, touched by the soul, is to be strong enough for life, for the mission, to overcome obstacles, to acquire more ability than already given by nature, to enter Supranature. Man has to live a life of effort and should not be personally enslaved. Social feelings cannot be felt when one is constantly tortured, trembling with fear before a professor’s questioning, like martyrs, like criminals waiting to appear for the judge of life or death; or the child who depends on his father, who gives him his money for the bus, and his bread to eat.

At this strong age he should be able to do things with his hands, with his intelligence. It is not on this plan that man becomes superior and able to live in the social life of today. Social education has to start with a plan of independence and not with too many material contacts. God is not supposed to be a material contact. Individual contacts must be surpassed, not abolished. Forces from all sides are needed. He always needs contacts with protective and encouraging people, but those are not longer enough. Man has to live for society.

Therefore the basis for the secondary school must be that the child of that age is able to leave his family, not completely, but so that he can hear the call from the collective spirit, of which the individual is an essential part. We have to find a school in the countryside, in a neutral environment, new, far away from cities.

This is not a new idea; people have talked about schools in the countryside before. The great English institutions are far away from cities, the English and American universities are founded far away from towns, and have started new cities like Oxford and Cambridge. The idea was to remove the student from the cities to give them the spiritual experience of freedom, and to strengthen their weak physical condition. There must be clean air, but that alone is not enough. We have to give them an education so that Social Man develops. This education does not consist of lectures that give some sort of social feeling, because the history teachers and economy teachers cannot give this to them. The lectures make the child tired and the child shows us this, because man cannot only live when he is thinking; he does not develop only through his intelligence and memory. Social experiences are needed, a social life with instruction at its basis. Studying is very different from living.

The child of the first plan, that we all know well, becomes very tired only working with his mind. He needs to work

A New Education for the Secondary School
with his mind and his hands. This demands a complex effort of the personality. The mistake of education is that it creates a mutilated man without abilities. And also today, man, already mutilated, divides himself again and again. We know men without hands but with special minds; machine-men that have to live close to machines. The child shows us that it can do more when it functions normally. It then gains the confidence to take a different road, to overcome obstacles. This does not make the child tired at all.

How can we offer these social experiences? The new, unique idea that I have given is that the young person can work positively and, while he works, earn a living. I am not against making money, but this should not be the goal. With these social experiences he puts himself on a harmonious way and has contact with the functioning of society. Man must live to work, because working is a normal function of man and in his work a spiritual unity is formed. Within these experiences he will note that an organization needs order and discipline.

Children, until they become eighteen years old, are parasites of society; they are humiliated often without a reason; they are condemned to working without dignity while often they can produce a lot.

Society spends an awful lot on the education of people who produce nothing and whom it destroys. Money is thrown away for warfare, to pull people down and make them incapable of living. People have to produce much, without thinking of competition. Production never means poverty. They do not work like the others; they work in a productive way. We do not know real craftsmen anymore, people that existed some time ago. That are too many little things that we, busy people, cannot do anymore. We feel the necessity to know a lot: biology, economy, history. They become a passion, and we search the whole world until we know everything about the subject.

Instruction gives a key to love, a passion to learn, that young people need, because a loving personality is able to study. The difference with mutilated and incapable men disappears, although individual differences will always remain. They all work with their hands and their minds, and we will have a more harmonious and stronger society for young people who do not understand much and come into this world without any preparation. The whole of Mankind will lift itself to a higher level because of this education.

Notes

1 Alexis Carrel, (Paris:Librairie Plon, 1935)

© 1937 Montessori-Pierson Publishing Company

Maria Montessori delivered this lecture (in French) to the members of the society Vereeniging tot Hervorming van het Middelbaar Onderwijs (Association for the Reform of Secondary Education) and members of the Dutch Montessori Society. The Mayor of Utrecht and other dignitaries from the local government were in attendance.
Small Steps and Quantum Leaps  
Along the Way to Erdkinder

“Therefore work on the land is an introduction both to nature and to civilization and gives a limitless field for scientific and historic studies. If the produce can be used commercially this brings in the fundamental mechanism of society, that of production and exchange, on which economic life is based. This means that there is an opportunity to learn both academically and through actual experience what are the elements of social life. We have called these children the “Erdkinder” because they are learning about civilisation through its origin in agriculture. They are the “land-children.”

Maria Montessori
From Childhood to Adolescence
Charting the Way to Adulthood
Developmental Chart Series

David Kahn

Chart A

The charts shown here represent graphics which were used in NAMTA Journals, lectures and reports between 2003 and 2020. They were created by Montessori teachers from many countries. James Moudry was one of the first practitioners who realized that we had an incomplete vision of the third plane. He created the chart below. Around 2005 he discerned that practitioners needed an expansion segment for the fullest rendering of the third plane. Practitioners invented the following charts for expanding the third and fourth plane.

This incomplete chart indicates only two and one-half Planes of Development. It calls for the full development of the Third Plane in 1973.

Chart B

The Introduction of Metacognition

Around 2006 NAMTA and practitioners created the following chart which introduces the metacognition third-plane triangle. This chart completes the third plane and makes a major change to the psychology of the adolescent work as it isolates the development of cognition. This came about through discussions with practitioners at NAMTA roundtable-style events. (see Gena Engelfried’s article excerpt on page 147 in this journal, section 2).

For Metacognition to realize its potential from ages 15-18, it requires a) adult level staging areas for formal study and for curricular and social challenges, b) global experiences such as social service and ecology projects both locally and internationally, c) formation of work identity, personality reflections and topics mentioned by metacognition article later in the Journal on page 120. The chart summarizes metacognition for quick reference.
The Four Planes of Development?

Spring 2023

METACOGNITION

Mid-line/Ages 14-15

Chart A

What's happening at Mid-line?
- New maturity-synthesizing knowledge base
- Higher metacognition
- More objective sense of reality and social relations
- More accepting of peer and adult shortcomings
- Enjoys freedom and responsibility
- Looks to individual career trajectory

Chart B
When the adolescent collective had a metacognitive collection of data for the third plane we needed a structure for the fourth plane. The fourth plane would launch new initiatives and responsibilities such as the Montessori Institute for the Science of Peace, Educateurs sans Frontières, and a Montessori university. In 2020 no one has developed the 18–24 section of the four planes. We are close, but we need to go one step further. With the addition of the fourth-plane practice we could achieve a social rebirth hinted at by the Montessori essay “The Adolescent, a Social Newborn” (1938). This article recalls the Montessori reflection ‘life is a series of rebirths’. The fourth-plane question must go beyond the speculative. It speaks to the Montessori idea of the formative role of 18–24 practice with alternative universities and better research material for Montessori archives showing the full potential of the fourth plane. Chart C shows small flames as new births across the planes.

This depiction of the development of the four planes was first suggested by Jenny Hoglund (2010), who showed the six developmental categories across the planes with a full array of developmental links for each plane. Montessori education seeks to explore the emergent personality that finds its roots in nature’s norms, evolving in an optimally prepared environment. When unobstructed, adolescent flow finds power and focus in life’s pursuits and brings a high degree of self-realization to the end of adolescence. (18-24).

This developmental documentation had also been published in part by Annette Haines in a compilation of outcomes through the first, second, and third planes. This was published in sections by NAMTA beginning in 2000.
It provided the platform for Mihaly Csikszentmihalyi’s developmental psychology to link up with Montessori’s psychology — an AMI legacy achievement. Haines writes:

This relationship is developed and maintained through activity in the environment, requiring physical, cognitive, affective, and social engagement. Such activity begins at birth and evolves as an adaptive process driving the efforts of the organism. It culminates (by the age of three) in the emergence of an autonomous, enduring self — a self who can store as well as communicate memories, feelings, and perceptions. During the school years the face of the child’s activity changes, expressing itself in increased intellectual industry, competence, social and moral interest, and self-sufficiency. In early adolescence, the self becomes peer-oriented, ideological, and conversational, finding special nurturance in a cooperative community of peers. (“Optimal Developmental Outcomes: The Social, Moral, Cognitive, and Emotional Dimensions of a Montessori Education”, The AMI Journal [Amsterdam: Association Montessori Internationale, 2017–18], p. 18)

Haines’s deep exploration across the planes inspired a new consciousness about the study of developmental characteristics with the four planes of development as a backdrop. The following chart symbolizes the psychological highlight ‘life is a series of rebirths.’ It speaks to the unique contribution of each plane of development: infancy (the absorbent mind), elementary (cosmic view), adolescence (metacognition, social recognition), and finally ‘becoming’ adult.

This listing of the developmental formal divisions across the planes represented in Jenny Höglund’s chart is a turning point for Montessori education because Annette Haines wanted integration with university developmental divisions to find their way to Mihaly Csikszentmihalyi’s dialogue. Montessori now has a tie-in with contemporary developmental psychology universals suggesting Montessorians are prepared to go further with metacognition and research.
**Chart E**

**The Australian Adolescent Inversion**

**Chart for Developmental Stages**

This chart was prepared by Karen Bennetts, a Ph.d. after her graduation from the 2016 orientation in Brisbane, Australia.

The third plane here is represented as a beacon to show the older adolescent's cognitive peak of metacognition at mid-adolescence ages 14-16. The outcome is a revolutionary synthesis for the four planes perceived jointly by faculty and students. The adolescent's vision becomes a new social resource and suggests a transformation is near for becoming adult. The vision of the adolescent becomes the realization of the adolescents contributing role in all social life—in school, in the local community, in the world. The vision is on top indicating a new third plane dominance in the hierarchy of four Planes development.

**Chart F**

**Adolescence Shines the Light of the World from Xavier Barrameda**

*(the Philippines – 2020)*

The chart communicates the emergence of the third plane vision that enlightens all planes of development theory, providing more insight for the world diffusion of developmental Montessori education.

**Chart G**

**The Adolescent’s Imaginative Awareness Shines Brightly on the Land Community Reality**

This chart conveys the importance of the native adolescent social and cognitive abilities interacting with the land school experience and the adolescent consciousness that contributes to a vision for peace and social harmony worldwide.
Ye are the light of the world. A city that is set on an hill cannot be hid. Neither do men light a candle, and put it under a bushel, but on a candlestick; and it giveth light unto all that are in the house. Let your light so shine before men, that they may see your good works, and glorify your Father which is in heaven. 
Matthew 5:14–16

Graphic by Julia Angelica Paez Barrameda
Human Tendencies
Authentic Guideposts to Human Characteristics Across the Planes

Xavier Angelo P. Barrameda

Xavier Barrameda demonstrates his deep knowledge of the four planes developmental psychology in his writing about an evolutionary implementation step for the human tendencies as viewed across the planes. Xavier grew up in a Montessori family who manage multiple Montessori schools, including four fully developed schools from primary to Erdkinder in the Philippines. Xavier is a trained Montessori guide and head of school.

The basis is psychology and pedagogy can be built on it. The art of education must become a service to these powers inherent in all children. It must be help to life […] We must study the psychology of each different period of life […] there are different periods when energies and possibilities are different and it is only in some of these periods […] that it is possible to acquire certain characteristics […] Therefore, this study is not limited to children alone, because even if the study of the child were not interesting to the adult, it is important if it is to further the maturity of humanity as a whole. We must explore the fields where man is created. We must learn to direct the development of man.

—Maria Montessori, 1946 London Lectures, pp. 18–22

Maria Montessori leaves us with guiding principles on how to allow natural human development to unfold in order for humanity to achieve its full potential. She says that we must consider psychological characteristics, the human tendencies, freedom within a prepared environment, and a prepared adult. If these things are taken into consideration, then we are able to witness a new type of humanity, one that will be elevated to a higher level, encompassing all of humanity and its well-being. Margaret Stephenson describes this as the ‘formula’ of the Montessori method (“Adolescent and the Future”, p. 16).

This then gives us a framework within which to study natural development. We first have to identify the goals of each plane of development, then recognize the powers that nature has endowed the human being in order to meet or achieve those goals, identify specific needs that have to be met at each stage, and make a plan to allow the human to meet these needs, unhindered by external forces, allowing his inner directives to guide his development, trusting that this will result in a more complete adult. Montessori wrote, ‘To cultivate mankind signifies precisely to activate the hidden psychic energies existing in the child, allowing this flower of humanity to develop with greater richness and beauty. If we do not adopt this method, humankind will forever remain imperfect’ (San Remo Lecture I, “The Creative Capacity of Early Childhood” in Citizen of the World, p. 79). In terms of the preparation of the adult, she continues,
Before preparing himself for this work, the floriculturist must make sure that he has a thorough understanding of the nature and the requirements of the plants. Particularly, he must possess thorough knowledge of the laws of their development, observe their manifestations directly and study these methodically; only such scientific study can be a help to life. This holds true as well for the scientific study of humanity. (p. 79)

In order to follow natural development, one has to study the laws and patterns of nature and then relate them to the uniqueness of the gifts that allow the human being to both follow and dictate his role in nature. In order to survive, he must build himself adapted to his environment.

**Adaptation**

Montessori stated, ‘Adaptation to the environment is something positive, one of the first necessities, because, without adaptation, man is extra-social [...] Only those who are adapted to their environment can be said to be really normal’ (“The Meaning of Adaptation” in *Citizen of the World*, p. 11). This makes adaptation our starting point. Adaptation is defined by Montessori as, ‘a relationship of mutual exchange between every living thing and its environment’ (p. 11). This means that all living things are able to get what is needed from their environment, in various ways, according to the laws that they were given, while at the same time contributing to or affecting our environment.

Nature seems to show that there is a mutual exchange between the different kinds of life, and the general environment, meaning that each kind can find what it needs for life and happiness in that environment but also that life and happiness can only be fulfilled by its particular form of service rendered to the environment. So adaptation means fulfilment of conditions necessary for life and happiness. (p. 12)

The child is more than a being that needs to be cared for, dressed, fed, or clothed by the adult. The child is the builder of the man. His task, in fact, the task of all human beings, is the formation of a person oriented to his environment, adapted to his time, place, and culture. Ideas like this were formulated later in Montessori’s work. This idea came from many years of scientific study and observation of children from her travels around the world.
We have to realize that humans will develop continually, and the only thing that can stop development and growth is death. The environment, and our own actions, will determine how this development is to progress, whether or not we maximize the potential within the human being, or hinder it, obstruct it, and hold it back through restrictions and obstacles imposed upon this being. Mario Montessori Jr wrote, ‘To understand the child’s tendencies with the purpose of educating him, we must see man in correlation with his environment and how his adaptation to it is created’ (p. 4). Knowing this, we now direct our attention to the human being, and how he adapts to his own environment. He was given the unique freedom of not being given the hereditary laws that limit the other creatures to doing one particular task or being fixed to a particular geographical region. Human beings can adapt to almost any landscape and any circumstances, changing the conditions of the environment so that they can thrive and meet their needs. While humans can adapt to anything because they have no hereditary laws, they have to prepare themselves for the adaptations they need. This is the great difference between humans and the rest of creation. We have then to study the human being, and how this adaptation occurs, if we are to understand how to best support our inner potentials.

**Human Tendencies**

The American educator Jerome Bruner suggested, ‘The more elementary a course and the younger its students, the more serious must be its pedagogical aim of forming the intellectual powers of those whom it serves’ (p. 73). This means that if we are building the foundation of the human being, we must take this work seriously in order to support this human being in his growth into an adult. The most basic things should be given serious effort in order to build the foundations of the child. Mario Montessori wrote, ‘During the period of human growth these tendencies assume different aspects by the aid of […] “sensitive periods”. It is logical that if one can discover both tendencies and sensitive periods and one is able to second them, he will have found a secure and permanent foundation on which to base education’ (p. 24).

One must undertake to study the natural human tendencies that are operating in each human being. According to Bruner, we have to ask the questions, ‘What is human about human beings? What makes them human? How did they get that way? How can they be made more so?’ (Takaya, p. 29). These are the same questions Maria Montessori may have sought to answer about what is inherent in human beings that the child uses to construct himself, to form the adult. This must be found if we are to truly serve the child. Montessori wanted to know if there were universal factors within children that extended to the lifetime of man. She wanted to know if there was a link that bonded all human beings that would allow her methods to make sense to anyone who wanted to help the children, anytime, anywhere in the world.

These human tendencies, while operative through all of life, manifest themselves in different ways as humans pass through different stages of development. Many educationalists during Montessori’s time recognized this truth of human development. Human beings pass through different stages of growth, and at each stage, they exhibit the same human tendencies in different ways, according to the emerging powers that nature will endow this human, and which will be appropriate according to the natural development that has to take place in order to meet their changing needs as they try to take their place in this world.

According to Maria Montessori, there are universal tendencies which connect the child to humankind. She observed that children, and all of human beings, have inclinations to behave or act in certain ways to meet their fundamental needs. They have propensities to do certain things. These are the tendencies that she saw children exhibiting. Adults have these tendencies as well. All human beings have propensities to act in a certain way.

Margaret Stephenson defines human tendencies:

> The human tendencies are innate in man. They are the characteristics, the propensities, which allowed the human being, from his first inception on earth, to become aware of his environment, to learn and understand it […] Each child, as he is born, enters, as did the very first human being, an environment created for him but unknown to him. If he was to live his life securely within it, he had to have a way of making a knowledge of it. This way was through the human tendencies. (*Dr. Maria Montessori: a Contemporary Educator?*, pp. 10–11)

For as long as human beings have graced this earth, they have been strong, intelligent, and capable. The earliest human beings needed food in order to survive. We can only surmise from our limited knowledge of the past, but logic tells us that they were unprepared and susceptible. The animals had fur to keep them warm, and claws and teeth to defend themselves from danger. Humans were at the mercy of the elements, and the animals around them. However, they were endowed with something greater than what the animals were given, for they were given the unlimited gifts of intellect/reason and love/will.
Reason/intellect is fairly straightforward. It is identified with cognitive ability. The gift of will, or love, is more elusive to define. Montessori referred to this gift as ‘the ability to choose what is inherently good or right’. For example, we can wish that everyone has enough to eat. We can care about or love people who we have never met. We can wish them well. This idea of love shouldn’t be confused with romantic love, or that fluffy feeling we get when we’re doing something we like or enjoy. We have a responsibility in our classes to assist the development of both human gifts: intellect or reason and will or love. We help the children develop reason through our presentations and our lessons, in how we comport ourselves in the prepared environments, by how we work with them, and by allowing them to work towards their own understanding.

The children we serve have the same gifts of intelligence, love, reason, and will. With these gifts, early humans had the freedom to be able to adapt to their environment, even to go so far as to modify the environments they found themselves in. We must always remember that each child comes to us with this same potential. We assist in the development of will or love. For the first plane child, we assist this development by offering choice. Grace and courtesy activities also offer opportunities for the development of will, the conscious ability to make a choice or determination. Will is the part of the human mind that makes decisions.

In the elementary, we greatly extend the development of choice and the development of will. Therefore, we extend the ability to love what is in the immediate environment and ecology as a whole. This development all began with practical life, choices, points of interests, and developing self-control.

In adolescents, the development of choice and will is extended well beyond the classroom, but first to the immediate school community and then later to the community beyond school. They will find themselves in positions that can impact their own societies and making decisions that can either help or harm others. Emotions will be the driving factor of the adolescents’ decision making, but we hope that their wills and reason will have become developed enough to for them to suppress their inner urges for the greater good.

The human tendencies work together with these unique gifts, allowing the human being to transcend the self and even their surroundings and immediate experience. Will and intellect work together, and we see that human beings have a great responsibility. Human beings have many ideas, but should all of these ideas be realized? Is every idea a good one? We can’t help but acknowledge that there are destructive thoughts. There are people who do not use their wills to control negative impulses.

Our goal is to foster positive, constructive development. Our goal is to make a difference in the lives of young people participating in, and then leaving, our programmes. These children will grow up and become the citizens of tomorrow. They will become the leaders of tomorrow. It is our hope that they will always consider the Earth and its inhabitants and be consciously aware that their decisions may have impact beyond the present moment. It is our hope that the children we serve will be conscientious and thoughtful when they are faced with difficult situations. There are people who are aware of repercussions but make decisions without regard to the broader picture. They have not incarnated a sense of love for the world and for humanity. They have not directed their wills towards preservation.

With these gifts, the early human came as an individual with unique potentialities and instincts. He had needs to be met; such as food, shelter, and clothing. He had to look for, find, and experiment with what was around him in order to meet those needs if he was to survive. All human beings have propensities to act in a certain way. These inclinations made possible the formation of the human being. There is no sequential order to the tendencies, but they are apparent in the way each human strives to meet his fundamental needs. We can think of all these human tendencies as verb forms.

To Orient

The tendency to orient is needed to find one’s way around the environment. The early human being was given the intelligence to be able to find his way and to be able to realize and recognize his surroundings. He has the ability to make his environment a part of his mind, to picture it, and to make a mental map in order to navigate the world.

We continue to exhibit this tendency as adults. It is most apparent when we find ourselves in unfamiliar territory. When we find ourselves disoriented, we feel anxiety, discomfort, insecurity, and stress while we try to orient ourselves. As time passes, we gradually begin to feel at home and then it becomes easy and even automatic to find our way in our environment, which lessens our stress and anxiousness.

The child also orients himself to a new environment. This is not automatic. The effort to establish a relationship comes first. We see this in a very young child reaching out to an object. He reaches out in order to establish a relationship with the object, then he places his hand on the object, creating a physical connection, and brings the object closer to his body.
For the young child, everything in the world is new and unfamiliar. He has to orient himself first to his own body, figuring out movements and the functions of the different parts of his anatomy. Then when he has gained basic mobility and motor function, he begins to be more conscious of the physical order of the environment, as well as of the adults found within that environment. They are wary of changes both in their caregivers and in their physical environment.

As the child transitions to the second plane, physical order will not be as crucial to their development. They have formed minds that are quick to adapt to changing physical environments, but their development is dictating them to orient to their peers. They will experiment and establish anchor points on social behaviour, on what is and is not acceptable among their immediate peers.

At the adolescent level, the children will orient inward once again as their bodies go through puberty and all the changes that come with this process. They have to get used to their new bodies, which are preparing themselves to be capable of reproduction, and greater physical ability, as they transition towards adulthood. In addition to this, the child tries to orient himself to where he belongs in his community and how this affects and is affected by his identity. They need to know who they are and to gain a sense of themselves and what they can contribute. This is a time in which they need to create who they are, have a sense of themselves and what they can be in the future. They ask questions such as, Who am I? What am I good at? What can my contribution be? After puberty, the focus becomes on orienting towards the adult society and finding how he can contribute to it through what one may call his ‘calling’ in his chosen role.

The person orients and adapts to the environment he finds himself in. Adaptation is a strong principle in early childhood. The child adapts to learn the language, culture, customs, dress, dialects, and values of his environment.

**To Order**

The tendency to order brings and builds security. The human being needs sequence to make sense of his explorations and orientations and, sometimes, he learns it well enough to be able to reverse the sequence. This is true for the exploration of places where he needs to know the sequence of the landmarks in order not to get lost and to be able to reverse those landmarks to make his way back from where he came. As man explores, he can mark his
path with objects to help him, and this is developed further into maps, then into compasses, and charts for him to be able to find his way.

We are talking about all of humanity and its need for order around the world. Explorers studied the movement of stars and systematized and analysed them. They gave constellations their names and meanings in their stories. They compared and catalogued their experiences in order to understand the world around them.

The young child exhibits this tendency most strongly. The order of the environment is as essential to the child as air or water. The child is trying to find his place in the world, and he has to have stability and order so his energies can focus on developing his understanding of the world and himself. His need for physical and external order is so great that even moving furniture around the room causes confusion and panic and disorientation. In The Secret of Childhood Montessori writes about children who have tantrums for seemingly incomprehensible reasons; the reason for the tantrums is that the child’s sense of order was disturbed. The structure of the Casa dei Bambini and the Montessori prepared environments meet this need to facilitate the natural development of the child.

But order is also important as the human being gets older. Order is connected to other tendencies. For example, to the tendency for orientation. At the elementary level, the tendency to order is connected to the building of the mind and the content of the mind. Second-plane children are not so concerned with the external order that is so vital to the younger children. At the elementary level, the concepts and the ideas that we introduce need to be presented in an orderly fashion. In this way, the child can take them in, understand them, and make use of them. If things are presented haphazardly, the mind has difficulty finding order in the disarray. We have to help this tendency to order, to allow the children’s development to take place in our classrooms, acknowledging that the focus now is on the order of the mind and the intellect. This doesn’t mean that an elementary environment should be disorderly.

At the adolescent level, the children regain a need for physical order, but they need to be constantly redirected to it. The sharp mental faculties they had in the elementary will dull, and instructions have to be repeated multiple times or presented as written guidelines that they can reference to keep order around them, such as to-do lists, task charts, procedure guidelines, and the like. Socially, they look to the ‘pecking order’ of their community and try to make sense of their place in it. Later, this will expand to knowing where they will belong in the adult society. Intellectually, they want to study the laws of nature and the universe, what and how the laws work, and how they can be applied to themselves and their immediate community. This is a time where chronology and history fascinate them as they try to make sense of their community and relate what they are learning to their present lives.

To Explore
The tendency for exploration can be attributed to the early humans’ search for food. In order to meet this need, human beings needed to explore and to experiment with what was in their surroundings to find out what was safe or good to eat. In order to meet fundamental needs, man needed to explore the world around him. A shout of joy or pain transmitted his discovery to the others in his society and this reaction led to more exploration. Such primitive beginnings led to the vast explorations of our time — Magellan, Cook, Marco Polo, and Neil Armstrong, among many others. Exploration is very important to the work of the children. The first plane child naturally explores using his senses: touching, tasting, everything.

The child exhibits this tendency from a very young age. We are able to observe this in a young child who is placed on a mat. He raises his head to see around him, he looks, and tries to move little by little, and he explores using his taste, touch, sight, smell, and hearing. The young child is a very sensorial explorer. As long as it is safe and appropriate, we should allow the child to explore the world around him using these senses.

The young child is a great scientist. He has to create a hypothesis, research this hypothesis, and test it out in order to form his own conclusions about the world around him. There are few adults, even in the scientific field, who can equal the infant’s zeal and energy in sorting data through his primitive mind, and with such rudimentary tools as his hands and mouth. By the age of two-and-a-half, the child is already an avid explorer. He investigates the objects around him with his hands. He sorts impressions, and from these impressions he is able to formulate the concepts of the world around him. This is done without conscious effort, absorbed through all the senses which provide contact with the physical world. In this plane, the child receives the tools of vocabulary and of mobility, and of basic skills to navigate his environment.

This tendency to explore refers not only to physical exploration, but also intellectual exploration. We can explore ideas in our heads, and we can think of grander and grander ideas without limits using our powerful minds. At the elementary level, children are ready to use these tools and facts gained to extend their knowledge and their understanding of the world. Throughout our lives we continue this kind of exploration. The imagination and
the reasoning mind enable the elementary-age child to explore the unseen, as well as ideas and concepts which are not explorable through the senses. The mind takes in impressions and the imagination allows us to manipulate and combine these impressions in our mind to form an understanding of concepts that are not otherwise accessible to us. This is why and how we give the universe to the child at the elementary level.

At the adolescent level, the focus once again shifts inwards towards themselves and their immediate society. The exploration at this plane continues to use the understanding and knowledge that was built up in the first two planes and further extended to better understand themselves and their community. Explorations at this age make use of the reflective mind in understanding how society works in the way adults live in it. When they go through puberty, their explorations will take them to understand biological changes in themselves and their peers.

Adolescents also need to explore the social and economic world by doing purposeful physical work that will contribute to their community, and then later, to take on intellectual tasks that are aimed to improve their lives and have impact beyond their school. The questions they ask now are no longer simple whys and what ifs, but become existential and philosophical about their purpose and the meaning of their existence.

The tendencies of exploration, orientation, and order operated in the earliest human beings to aid them to meet their fundamental needs. Animals such as the woolly mammoth had thick fur to keep them warm during the harsh winters of the ice ages. Sabre-toothed tigers had sharp claws and teeth to defend themselves from others. The human being had bare skin and dull hands. While he seems incapable of surviving in such a harsh world, he had something that gave him an edge over the other creatures that was attacking him (or to hunt). Human beings need shelter, and while animals have a natural instinct to make their own unique shelters such as hives, nests, and dams, humans had to fashion what they needed to meet these needs. They could build dwellings out of wood, or adapt a cave into a habitable space. They needed tools for this, but first had to imagine these tools. This leads us to the tendency of abstraction.

**To Abstract**
Abstraction is the ability to imagine, or picture in your mind, a material thing in its absence. Until a million years ago, nature influenced all development and directed evolution. Natural selection is based on environmental conditions, and it was natural selection that decided which creatures would survive and which would not. When the climate was very cold, those that had fur survived and those that did not died off. During a time where grass was plentiful, natural selection leaned towards the development of grinding teeth. The dominance of nature over evolution was changed with the coming of man. He created, instead of waiting for natural selection to decide for him. Man was able to meet his needs and adapt and survive despite seeming ill-equipped with his limited physical attributes. The consequent cultural evolution, or the acquisition of material culture (bowls, baskets, artefacts, dolls, and so forth), and the capacity to adapt culturally were new to the Earth and were made possible by man’s capacity to abstract and imagine.

Imagination allows us to see into the past, as well as into the future. We can bring ourselves back to the age of the first humans and their cave paintings in Sulawesi, in Altamira, and in Lascaux. The people who put them there must have felt some great emotion before a hunt such as joy or fear. There was evidence of forward-looking anticipation, and in order to do this, the painters had to imagine what was going to happen. The ability of an individual’s imagination to work in a creative way depends on past sensorial experiences.

Although imagination is a second-plane characteristic, it begins to develop from birth. The young child’s eyes are bright and full of energy. They take in the world around them through their eyes, not yet being able to move with coordination and control. Gradually they gain motor movement and physical independence is achieved. If the child is left free to explore, orient, and order, then abstraction comes naturally. The child can classify, sort, and categorize all the impressions he has taken unconsciously in his mind and make newly formed impressions. If the child is working with the Montessori materials, he will make abstractions because they support his inherent tendency to do so.

Then with regard to the elementary child, we think of this ability or tendency to abstract as something that improves with age and experience. Montessori developed concrete materials for many abstract concepts. Across the planes, we often begin very concretely, very sensorially, and then move towards abstraction. This passage leads us to holding the ideas in our mind and understanding them without having materials present.

At the adolescent level, as the children go through puberty, there is a process called pruning, in which the brain goes into a ‘spring cleaning’ and synaptic connections which
were not strengthened get ‘pruned’ and forgotten. The effect of this is that concepts which they have gained and
generalized into formulas have to be shown to them again
in the concrete form. They will try to apply the abstractions
to real-life applications in their community and, at the same
time, try to bring the real-life challenges back into the
classroom to try to solve them. At this stage, they try to see
possibilities beyond their immediate concrete life through
others’ eyes as they try to validate their ideas and beliefs.

As they get older, their minds become able to think more
abstractly and they are able to engage their thoughts
towards more complex intellectual challenges and play
with scenarios and situations in their heads, being able to
mentally picture possible outcomes, then come to a sound
conclusion.

**To Work**

Hard work was necessary for the early human’s survival.
He had to struggle to meet his needs. But even after taking
care of necessities, he continued to work, using his hands
to express his intellect. He improved on his constructions
to fulfill his spiritual aspirations. After bones have turned to
dust, his artefacts and creations remain as a testament to
his work.

According to Mario Montessori, the difference between
man and animal is that the animal has a head that only
has enough psyche to direct the powerful body to meet
its immediate needs and that man has a puny body but
a great spirit. That spirit of man had a life and needs of its
own. Spiritual needs were present after the body’s physical
needs were satisfied. This gave the mind inspiration and
problems to solve. Problems are for the mind as cold and
hunger are for the body.

Think about the work of the young child. Work and life are
inseparable. The child’s development is his work. Through
this, he can explore and orient through his hands. When a
child is working purposefully with coordination to achieve
some aim, he is establishing new patterns of action,
developing his mind, body, and spirit. His work can be
observed mainly in his physical activities which develop his
intellect.

In the elementary, the child’s work takes on a different
dimension. Because of the development of the reasoning
mind and the imagination, a lot of the work at this plane
will be focused on stretching the intellect. The children test
the limits of concepts and they go on adventures within
their minds to explore the wonders of the universe.
This intellectual work is best supported by physical
demonstrations which can become aids to the imagination
of the children.

At the adolescent level, the children get drawn to wide,
sweeping stories that give context to certain ideas, and
this helps initiate their work. The children are drawn to
different varieties of physical work, but will also engage in
deep intellectual discussions based on previously gained
knowledge from multiple disciplines. They will try on
various ‘adult roles’ and do the work as an adult would do it,
but this lasts only for a short time before they go and try on
a different role. The work they do has to have a visible effect
on their community in order for them to gain satisfaction
from it. This is a time where they will also test out their
changing bodies, exploring the limits of what they can and
can’t do with them. Once they get used to their new bodies,
the focus of their work becomes more intellectual and they
look for ways to affect not only their immediate society, but
the society beyond their school, often coordinating with
agencies in the wider community.

**To Self-Perfect (To Repeat, To Exact, To Control Error)**

The tendency to self-perfect first occurred when the
creations of the hand did not reflect the image in man’s
mind and he had to start in an effort to reach a likeness
to the creation in his mind’s eye. We continually strive to
correlate what we make with our hands to the picture we
have in our mind. It is amazing to realize that, starting from
nothing, human beings have reached the point we are at
today. The processes of making tools have been refined
and progressed over time. Man repeats, hones, and strives
to perfect his art in order to satisfy himself.

The precision required to make the first tools had to come
from other tendencies. In the same way, self-perfection
has some tangential tendencies to support it. These are
Exactitude, Repetition, and Control of Error. The tendency
to be more and more exact was necessary in order for one’s
results to match the expectations formulated in the mind.
If the form reality took wasn’t exact, it had to be repeated;
control of error is needed to be able to direct one’s efforts
towards achieving the goal. For instance, consider the skill
of pottery. You want to throw a pot. You have an idea in
your mind of what the pot should look like. And you work
towards achieving that pot. The first attempt may not be
what you wanted it to be. It may not meet your vision or
your intent. So, repetition comes in, with this exactness also.
Repetition brings the result more in line with your inten-
tion; this is a manifestation of exactness. Our actions, or our
products, need to conform to what we have in mind or we
are not satisfied with the result. Revisions are necessary
and even as adults today, we still exhibit this tendency to be
more and more exact in our activities. Athletes refine their
movements to get better at their respective fields. Control
of error is the judgment, self-evaluation, self-monitoring of
one’s work that allows one to be satisfied with it.
This is easy to see in young children. They repeat an action over and over seemingly without reason or purpose until coordination is achieved and they reach a point of satisfaction. To the child, this is important work in order to coordinate his will to move his hands with his mind in order to be able to control and practice his movements. We have to understand the psychology of the children as they try to perfect their movements and the results of their work. There is an unconscious urge within the child to do an activity over and over until the mind is satisfied, and then it is done. This is because they are still practicing the movements needed to do a task. In the Montessori classroom, the very young child is free to work on a material for however long he needs until his urge is satisfied or the work cycle is completed; this is done without rushing or limiting the child’s time.

At the elementary level, children will repeat activities in a different way. They will repeat tasks with variation and intensity. You cannot expect an elementary-age child to repeat an activity in exactly the same manner over and over again. They want to test the limits of concepts and so they will experiment and play with the concept and challenge the ideas presented to them.

At the adolescent level, now having found the reasons for things, children strive to master a variety of skills that they find will help them contribute to their community in a meaningful way. During puberty, children will work with short attention spans and will only be focused on a task for a few weeks at a time before they want to try out something else. This is why we have to be able to give a particular concept or idea to them in multiple ways, across various disciplines, so that they gain the mastery that they need. The older they get, the more their wills come into play, they gain responsibility for their development, and they can begin to schedule their own activities in what they need to practise. They still need adults as mentors. They need adults in their lives to watch and learn and to give them skills and lessons.

Adolescents at this level will also be driven to repeat activities that trigger a positive emotional response. The statement ‘If it feels good, do it’ is biologically wired into their being. Social and emotional reward wins out in adolescence, and even if they understand the consequences of something risky, they will still take the risk if the social-emotional reward is big enough. At sixteen years, the biggest gap between these rational thoughts and social-emotional rewards occur and they are driven...
to take more risks. Then after, the development comes together. Metacognition and executive function start to develop, and the young person gets better at decision making from ages of eighteen to twenty-four.

This is why it is so important that they have activities that will help promote positive development during adolescence, when emotions, rather than rational thought, direct their actions.

To Logicize Through the Mathematical Mind

The human mind naturally reaches to mathematical precision and logical thought. Throughout history, as we look at our inventions, we find that our work improves and becomes more efficient. Human inventions and tools, such as the ruler, callipers, and calculators of today, exhibit precision. To develop this propriety, the child has to work with a sequence to help him develop his logical thought processes and mathematical mind.

Across the planes, the development of the mathematical mind has different manifestations. At the first plane, the mathematical mind is helped to develop using very concrete, precise materials that materialize abstract ideas, especially in the area of mathematics. A lot of the activities follow logical sequences that the children use as points of reference as they go through their work. We know that accuracy, or getting a correct answer, is important in mathematics. But in addition to the importance of accuracy, we need to also keep in mind the importance of the process. The use or manipulation of the material in a consistent way leads to understanding of the concept. Eventually we do show the children how to check their work for accuracy, so that they can be exact in both the process and result.

At the elementary level, as their intellects work together with their imaginations, children will manipulate sensorial materials but will move much more quickly to problems beyond the limits of the materials. The children are more fascinated with the processes of things and will experiment with various ways of trying to accomplish a task, whether it makes sense to us adults or not. They are still very much into understanding concepts using physical materials, but they will move away from this to doing work abstractly either on paper or mentally.

As they grow older, the children will go from the abstract back to the concrete materials, and there will be a back and forth between the abstract concept and the concrete representations. The children at the first sub-plane of the third plane require the freedom to be able to do so in order to strengthen the connections in their brains as their brains go through the process of pruning. Children will go back to the concrete materials, and there will be a back and forth between the abstract and concrete, until the child is able to filter out those that are not needed for human communication. In order to do this, the sounds must come from a real person and be used in a natural, social setting. The child will not be able to get this from a recording or from a television. Being able to walk, feed, and clothe one’s self is a sign of physical independence, but mental independence is achieved only when the child is able to express his ideas to others. An interesting note is that these two things, taking the first steps and speaking the first intentional word, usually occur at around the same time.
The young child comes into our environments with his own vocabulary that he has been accumulating from the home. When he enters the classroom, he enriches and builds upon his vocabulary through socialization and through the acquisition of nomenclature in the environment. This develops as he goes through the primary, gaining in the process the rudimentary tools of reading and writing.

Communication is not just language development, although that is part of it. Communication is about the human spirit, about cooperating and sharing with each other. Beyond that, human beings have minds that can imagine and reason, resulting in the desire to communicate thoughts and ideas. This tendency is crucial to what makes us uniquely human.

We do not expect the children to be quiet. And it is not desirable for them to be quiet. We want them to communicate while they are working. Elementary children are very talkative because they are very social. We want them to talk and interact with each other about their work. They will talk, share, discuss, cooperate, and they will debate. These interactions help their minds develop.

In these interactions, they are reasoning, listening, articulating, and defending their opinions and values.

Adolescents will communicate verbally with others, but more important are their non-verbal communications. They will be more conscious about how people perceive them and so be more calculated in their words, especially with those they are not yet comfortable with. With their peers and their friends, they will have their own language, which gives them a sense of belonging to that particular community. At this level, the adolescents use various means of communication, including digital and social media, in order to connect with others and to understand the dynamics of negotiation and peace-making. As they get older, they use the communication skills they have gained in order to interact with adults in society as they look for their place in it.

Both children and adolescents will also talk about things outside the prepared environment and we want to make sure that they have opportunities for these conversations as well. We need to be sensitive and open to their need to communicate. We need to be able to help them work out
disagreements, or to talk about a private home matter. But we cannot let them spend the whole day talking about what they saw on television or the newest computer game. We have to evaluate whether or not conversation is productive. We can and must allow for some social conversations, but we cannot allow it to become excessive.

**To Seek Spiritual Life**

The last tendency to be discussed is the tendency towards a spiritual life. This is not about religion or spirituality. Man has always felt the need to explore the invisible and explain what cannot be explained. Religion and a culture of the dead (burial practices) provide this and are present in all human societies that have arisen. Death and life concerned the earliest human beings and they treated their dead carefully and with respect. They buried bodies in areas where people once lived and sprinkled the corpses with red dust like undertakers do to prepare the dead today. Elaborate grave offerings expanded to great heights as they paid reverence to the departed.

Early humans fashioned gods to explain phenomena which were otherwise inexplicable. From this need for spiritual life and answers, customs, religion, legends, and folktales came about. This was man’s expression of his highest self. The child needs to adapt to this aspect of humanity if he is to be truly part of this world. Expressions in music, dance, poetry, and so forth need to be present for man to be able to completely accept the world around him. Man’s deepest emotions were expressed through his art.

The young child’s deepest feelings are not yet masked, and this tendency is exhibited in the fact that they are drawn to beauty. The Montessori approach responds to this need for beauty which springs from the mind of the child. The child will incarnate a bond to others within the Montessori environment. He will unconsciously know, by participating in the everyday life of the Casa, that he belongs in that community and that he can affect it, and that the community in turn, affects him and his development.

At the elementary level, the children see themselves as a part of a bigger world, in fact, the universe, and the encompassing questions of creation and beginnings and limits will fill their thoughts as they search for answers that make sense to them. Aside from the grandeur of the universe, they begin to understand the idea of cosmic tasks and what role in the world they might have that will be part of fulfilling the cosmic vision. Because children think in the abstract, they begin to realize that the universe follows laws and order caused by unseen forces.

At the adolescent level, this tendency comes back from the cosmos into the immediate community and the spirit of community life. This spirit is developed through community work and awareness that the adolescents are part of a much larger community beyond their school. They look for their identity, compare their beliefs and values with those of their peers, and begin to form their own ideas about things that cannot be explained through intellect and reason. They are sensitive to the idea of justice and will be more aware of the tensions between people, countries, and ethnic and social groups. They use both hearts and minds to come to explanations that best fit their perspective on the world and try to come up with solutions to their perceived ills of society. They will then move on to understanding the threads that connect all humans and that we are a part of something much bigger than ourselves or the local community, that we are part of the world and that we have roles to play and relationships to care for.

**Conclusion**

These tendencies of exploration, orientation, order, abstraction, work, self-perfection, and the need for a spiritual life are what all human beings hold in common. These are exhibited across age, gender, culture, race, belief, and status. They have existed since the earliest days of humans on earth and will continue to be true for all yet to come.

But there is one thing that will never fail: that is the Montessori Method — if you understand it as Dr. Montessori understood it [...] Because the essence of that method is: ‘to help the development of the child and help the child to adapt himself to the conditions of his present’ [...] there are certain things that do not change [...] They are the very same things which enabled humanity to rise from the low level where it found itself at its origins to the present level. (Mario Montessori, p. 22)

The Montessori method will endure because Montessori took into consideration serving the needs that human beings have had since the beginning of time. These tendencies are true for all humans, and they will continue to flow as long as we adhere to them and keep them at the forefront of our minds. Individual humans will manifest these tendencies in their own ways, based on their respective environments, but they are free to express them without being dictated by nature or instinct. We need to work in service to the children and to their development to help their conscious will or love develop and become integral to their lives as human beings. Developing these tendencies enables the individual to become an adult human being, one who we can hope to be capable, independent, morally alert, self-sufficient. People who will
### Human Tendencies Across the Planes

<table>
<thead>
<tr>
<th>Powers Endowed</th>
<th>Absorbent Mind (Unconscious)</th>
<th>Absorbent Mind (Conscious)</th>
<th>Reasoning Mind/Imagination</th>
<th>Social Drive/Hyper-empathy</th>
<th>Meta-cognition/Empathy/Executive Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Tendency</td>
<td>1st Plane (0–3)</td>
<td>1st Plane (3–6)</td>
<td>2nd Plane (6–12)</td>
<td>3rd Plane (12–15)</td>
<td>3rd Plane (15–18)</td>
</tr>
<tr>
<td>To Orient</td>
<td>Orientation</td>
<td>Orientation</td>
<td>Socially, relationally with peers. An orientation to culture, and moral orientation. Initiation to society and its rules through groups</td>
<td>Re-orientation to physical body, community, peers, and adults alike. Orient to basic elements of society (production, produce, exchange, service)</td>
<td>Finds his “calling” to fulfill his chosen role</td>
</tr>
<tr>
<td>To Order</td>
<td>Physical order, predictability, and routine are essential</td>
<td>Sensitive period to physical order in his outer environment</td>
<td>Intellectual/Cognitive Order</td>
<td>Social Order within peer group, needs more defined structure</td>
<td>Social Hierarchy of the society beyond the school, more complex</td>
</tr>
<tr>
<td>To Explore</td>
<td>Senses develop in a predictable timeline to acquire sensorial impressions</td>
<td>Sensory exploration to build the intellect</td>
<td>Intellectual exploration supported by previous sensorial experiences</td>
<td>Social exploration/intellectual exploration (more social)</td>
<td>Social exploration/intellectual exploration (more intellectual)/Maturation</td>
</tr>
<tr>
<td>To Abstract</td>
<td>Concrete sensorial impressions build a general understanding of the environment</td>
<td>Concrete sensorial impressions build abstract classifications within the mind</td>
<td>Materialized abstractions work with imagination and reasoning</td>
<td>A back and forth between concrete experiences and abstract conceptualizations in perspectives and roles</td>
<td>Faster abstractions, application to more philosophical and idealistic ideas</td>
</tr>
<tr>
<td>To Work</td>
<td>Construction of the individual towards functional independence. Physical objects to provide sensorial impressions and isolate parts of development</td>
<td>Functional independence as a means for social cohesion Physical with materials</td>
<td>Intellectual independence and finding out reasons behind facts Physical with materials, intellectual with stories</td>
<td>Social belongingness and figuring out identity within his community. Use of stories to initiate manual work. Practise “adult” work</td>
<td>Contributes to society socially, economically, and morally. Using manual work as a basis for intellectual studies. Work resembles that of the adult in society</td>
</tr>
<tr>
<td>To Self-Perfect</td>
<td>Repetition to understand how reality works and understand sequence and order. Controls of error are found naturally in the environment and materials. Mistakes are how we learn</td>
<td>Repetition of activity for the sake of practising and perfecting movements. Controls of error are found naturally in the environment and materials</td>
<td>Repetition with variation and intensity. Errors are reasoned out, analysed, then acted upon. Accuracy takes importance</td>
<td>Emotions drive repetitions. Mastery of a skill towards purposeful and meaningful work for his social organization through variation</td>
<td>Logic and reason drive repetition. Mastery of a skill towards purposeful and meaningful work for social organization by raising complexity of the activity</td>
</tr>
<tr>
<td>To Develop the Mathematical Mind</td>
<td>Order and orientation, with the Absorbent Mind allows the child to absorb patterns. Attracted to exactness and purposeful actions</td>
<td>Works with constant patterns and consistent gradations in materials in the environment. Will explore relationships and create experimental patterns</td>
<td>More abstract mathematical concepts and logical reasoning behind facts. Diverse in their use of the materials and patterns in fields of cosmic education</td>
<td>Relates abstract concepts to Concrete materials and experiences in relevant real work. Uses the materials as a proof and not as a discovery process</td>
<td>Finds solutions to various real-life problems using acquired experiences and knowledge of abstract concepts. Mathematics becomes a discovery of the depth of the soul</td>
</tr>
<tr>
<td>To Communicate</td>
<td>Non-verbal, will communicate instinctively for basic needs. Absorbs language’s used in surroundings</td>
<td>Verbal, as related to basic needs and emotions. Develops fluency and clarity. Literacy begins</td>
<td>Verbal and non-verbal, relational and intellectual communication. Literacy used as a tool to access remote knowledge</td>
<td>Verbal and non-verbal, related to needs and emotions, relating himself to his social group. Literacy used as a tool to interact with others</td>
<td>Verbal, related to intellectual ideas that can be of use to the social group. Literacy is used as a tool to collaborate to solve global problems</td>
</tr>
<tr>
<td>To Fulfil the Spiritual Life</td>
<td>Dependent on love and care and intimacy from adult through positive experiences</td>
<td>Drawn to beauty and grace in the environment and nature. Enjoys “living”</td>
<td>The child begins to ask about the inexplicable and the invisible. In awe of the grand and majestic. Love for the Universe and creation</td>
<td>Self-expression, in all its forms, becomes increasingly important as a way to bind community spirit through community work</td>
<td>To look at global problem solving and human solidarity as a principal motivation</td>
</tr>
</tbody>
</table>

Physical development will at some point match and enhance psychic development and it becomes a dance where they support the development of one another. (Integration)
be kind, conscious of the environment, and who will love learning.

A Vision for the Future: The University Years
Montessori describes four planes of development, the last of which she calls ‘Man’. In her Bulb Chart, she indicates the ages 18–21 as included in the developmental stages of the human being. These are the university years, which Montessori envisioned as years of specialization. After having gone through the successive planes, with his natural tendencies nurtured and allowed to manifest, we are now faced with a young adult on the path of natural development. This long preparation must now find an environment prepared to continue to nurture his love for gaining knowledge and continue to kindle his passion for his social mission. A university equipped to meet the needs of this human being must be built, one that allows students to be truly free in order to be able to study for the sake of acquiring knowledge and to find their own place according to their values. This university must have many possibilities for association and real social experiences that will place the student in touch with his community and the rest of the world. This is the work we find ahead of us, in order that we may be given a glimpse of the ‘fully developed man’ (Citizen of the World, p. 38) who Montessori describes as ‘a live spark, and aware of the open gate to the potentialities of prospective human life and of his own possibilities and responsibilities […] [for whom] the self becomes secondary, the tendency must be for the whole of humanity’ (p. 37).

References
———, “Dr. Maria Montessori – a Contemporary Educator?” AMI/USA National Conference (Bellevue, WA, 1996)
Takaya, K., Jerome Bruner: Developing a Sense of the Possible (Dordrecht, Netherlands: Springer, 2013)
Metacognition
Inviting the Democratization of the Adolescent

Paige M. Bray and Steve Schatz

Montessori adolescent practitioners working with fourteen-, fifteen-, and sixteen-year-old students have noticed their significant thinking patterns, the beginnings of metacognition. As Montessori education moves into the second sub-plane of adolescence (15–18), there are more complex metrics for understanding brain development pertaining up to age thirty. Paige Bray, director of the Center for Montessori Study at the University of Hartford, is invested in a Montessori application of metacognitive tools and how it predicts future needs of adolescents. A study by Paige Bray and Steve Schatz will initiate a series of customized articles for Montessori initiatives about the adolescent brain and the implications for Adolescent studies.

This is a thought piece about metacognition, adolescents, and democracy. As humans are wont to do, we as individuals pursue answers to life’s questions. Professionally as teachers, researchers, instructional designers, and community-engaged scholars we have dedicated ourselves to an inquiry stance (Cochran-Smith and Lytle) and posing questions in formal, intentional, and systematic ways. To inquire, to ask a question when poised to listen deeply, is an authentic pursuit of information, skills, and knowledge. To democratize your inquiry is to make it accessible to everyone, disrupting hierarchy through a genuine line of questioning, which elevates not sameness but equity.

In the last decade, we have seen a trend of implementing metacognitive tools as a means to improving knowledge retention by first year college students (Tuckman and Kennedy) as with each passing year we have more detailed specificity on how our brains work as a driver in our individual development (Hammond; Kahn). Our working definition of a metacognitive tool is an intentional process used to plan, attend to, and evaluate one’s own understanding and results (e.g. product, performance, practice, and praxis). As you are examining yourself and your processes, there is an inherently critical aspect (not a judgement, but an analysis) as you look at your own thinking and see yourself as a learner.

Over the past decade we saw the need to create an explicit tool with intentional activities, requiring use and fostering understanding, which would encourage developing practice and skills that could be transferred to other situations and could be used throughout the teaching career (Bray and Schatz, p. 52). We addressed this identified need and developed metacognitive tools to develop critical thinking as an intentional and essential component of preparing teachers. Beyond preparing them as teachers who understood the immediate classroom and school environments they would be launched into, we committed to preparing them with the metacognitive tools they would need to imagine and create future democratic classrooms and school environments for each child and adolescent in their care. This, in Montessori terms, is the preparation of the adult. The nuance we examine is: If we understand teachers as knowledge producers and not just knowledge consumers, how do we best equip educators to be architects of the very structures they reside in today and will define tomorrow?
Also during the first decade of the twenty-first century, colleague Erin Kenney and I (Paige) led a community-based, intergenerational, multiyear, state-wide co-constructed inquiry project with co-researchers and leaders (Bray and Kenney). This multiyear project was supported by both state and national philanthropic funders committed to knowledge development. The knowledge-producing capacity of parents to determine for themselves the best supports in their specific communities was a well-distributed human capacity completely under-acknowledged by education, health, and community institutions. We documented valuing of parent perspectives in their own voices through video. This co-constructed work underscored that indeed parents have been producers of specific knowledge for their children through shared inquiry and that systematic engagement with each other validates their collective wisdom as ‘producers of enduring knowledge’ (Parenti; Bray and Kenney). This work amplified the multiple and intersecting perspectives that are held about even one single child or adolescent by the adults that care for him/her. Consideration of the multifaceted and intersecting perspectives on any given child or adolescent informs their self-understanding and our interactions with them.

In Montessori, the enduring commitment is the development of the will, intelligence and spirit of the child. The questions we thought would be intriguing for Montessori educators include: If we know adolescents to be producers of knowledge, in what ways are we assisting them to articulate that knowledge in their own voice? What structures are we co-constructing with them to support systematic engagement with each other that enables them, and others, to see their collective wisdom?

For centuries humans have embraced forms of democratic government. Anthropology and inclusive histories reveal forms of proto-democracy originating among small bands of hunter-gathers such as the Ju/'hoansi of Namibia that predate the establishment of governmental structures, including the Greeks. These tribal democracies have endured, virtually unchanged, among many indigenous peoples who have maintained their lands and ways. It seems democracy in some form arises and can be sustained in any well-bonded group or tribe. Critical theory and critical social theory in the past century through the works of Paulo Freire, Maxine Greene, Miles Horton, and Patricia Hill Collins, among others, have brought a wave of theory, activism, imagination, and innovation into our
lives to more fully understand the wealth of capacity and perspectives in our collective human tribe, including adolescents. What follows is our assertion that metacognitive tools provide preparation and practice for the adolescent to develop critical thinking skills. Thinking-about-thinking and employing tenets of critical social theory, acknowledging a plurality of paradigms and individuals’ lived experiences, questioning of societal norms, and politicizing of social problems provides for a critique of power structures. The relevance of critical thinking to the internal life of the adolescent and how s/he makes sense of the larger world will now be explored.

**Metacognition: Releasing the Intrinsic Capacity of the Adolescent**

As children move toward adolescence and then on to young adulthood, they gain increasing independence and must learn how to, what to, and when to apply skills, knowledge, and techniques (Bray and Schatz). Our work with young adults affirmed that metacognitive tools could increase efficacy in what Cook and Brown identify as ‘knowing in action’. This is a notion worth understanding so we will take the time to elaborate. The epistemological model used by Cook and Brown asserts that there exist two types of knowledge: a) knowledge that is possessed and b) knowledge that can only be accessed through action. Knowing when to shift gears in a car is our illustrative example. While one might have explicit knowledge of revolutions per minute, even use the high revving sound of the engine as a signal to shift, there is no explicit knowledge of an individual or group that can establish how to safely operate a car in all conditions. To further the example, you cannot say you always shift at 25 miles per hour or even after traveling 6.2 miles — the conditions matter. If you are shifting a car in the flat lands of Kansas, there are specific environmental features that will inform how to, what (gear) to, and when to shift that are emerging in that context and yet distinctive from performing this shifting on, say, a hilltop in San Francisco. That kind of knowing, what to do across contexts, is ‘knowledge in action’. And it is the interplay of these two types of knowledge (possessed knowledge and knowledge in action) that creates new knowledge. Cook and Brown call this the generative dance. One learns how to drive a stick shift on a hill by using possessed knowledge in the action of driving and through this “tension”, new knowing is generated. Preparation of the environment and engagement in learning are areas where possessed knowledge in action generates new knowing. This kind of knowledge is needed to work with adolescents in different settings so they can learn to be inherently responsive, adaptive, and flexible. Metacognition explicates and values this generative dance, inviting those creating knowledge to consider what they have learned, how they learned it, and how they might create more knowledge in the future. Legitimate Peripheral Participation is a well-established form of apprenticeship through communities of practice (Lave and Wenger). What is distinctive, and required for the use of metacognitive tools, is that both the expert and the apprentice must be seen as a legitimate knowledge producer in their own right. Without this multidirectional legitimacy the learner will not be able to own their ‘knowledge in action’. In other words, the adolescent must be seen and see her/himself as contributing new knowledge and that the process by which they create new knowledge is a tool they will continue to use throughout their lives.

Maria Montessori in the Circles of Attraction “captured a momentous and iterative problem of becoming an adapted individual” (The Absorbent Mind). As Montessori illuminated the problem of both the ‘attraction’ to the centre, one’s core internal life, and the ‘attraction’ to the surrounding world, the external life, are presented as a kind of personal ecology. In our interpretation there is a productive tension in the simultaneous, yet opposing, pull inward and outward. As David Kahn stated in one of our animated conversations, ‘The adolescent is the last person to show you their core.’ Yet we all would agree that the development of both the internal and external are essential. Dr Montessori in fact underscored that the ‘adapted individual’ was the foundation of society itself. We titled this thought paper ‘inviting the democratization of the adolescent’ as we see metacognitive tools as one avenue for offering an open invitation to adolescents to critically learn about themselves as learners, to use and share the knowledge they generate, and to consider how they may become even better creators in the future. The function of the metacognitive tool is not to ask, What are you doing? or even, Why are you doing …? Metacognitive tools promote asking, How do you know what to do? What more do you need to know what to do or do it better? And, How do you get to a place you identify? This ‘place’ might be internal, personal ‘core’ work, and/or very explicit external work identified as a contribution to the collective (i.e. harvesting food or fixing a machine). With great specificity in the learning moment there is a recurring, intertwined, and generative tension in the determining of what informs and guides our actions. ‘How do you know what to do?’ is the metathinking that demands an analysis of actions.
The relevance of metacognition to the internal life of the adolescent and how s/he makes sense of the larger world is worth exploring. Through intergenerational, interconnected apprenticeship opportunities all adolescents can leverage iterative experiences that develop their ‘knowing in action’ and their metacognition so they ask themselves, How do I know what to do? How did what I tried work for me? What else could have helped? What might I try next time? The pursuit of these questions not only gives shape to the ‘core’ but also releases the intrinsic human capacity of the adolescent to be a contributor to the collective, to society. Engaging the adolescent with an action orientation supports their development of a critical stance and their experience with a participatory democracy like those of the first peoples, centuries ago. This is dramatically different than ‘othering’ or ‘poking’ at the raw core of an adolescent whose heightened intensity and self-consciousness in new situations can create vulnerability and anger. Rather, invite them to be part of a collective, a small band of people, and to seek their own personal, culturally sustaining path, where they will be guided by a critical understanding of what they are doing while doing it. They will be able to proceed using their knowledge in action and knowledge possessed to engage in the generative dance, generating new understanding and knowledge.

Thinking About Thinking:
Action and Next Steps

We have discussed thinking about thinking and the democratic orientation of the adolescent, and now we discuss employing tenets of critical social theory, which honours the plurality of paradigms and individuals’ lived experience, promotes questioning of societal norms, and examines social problems with a lens that critiques power. It would seem that by and large Montessori educators would concur with metacognitive tools supporting the development of the adolescent. Those of us who work with adolescents, as we do during their first semester of college, appreciate that they consistently expose us to new ideas. We can embrace the disequilibrium often caused by what is new or unexpected, for it requires us to grapple with our understandings and assumptions, and it requires that we make sense of the ever-changing world around us.

This interacting with new, often contrasting, information is how we learn how to be critical consumers. For example, critical pedagogies demand that we seek multiple perspectives and disrupt dominant narratives — sounds like an adolescent! Culturally sustaining practices also require seeing more than one dominant culture and questioning the power and dominance of any single ‘norm’, and/or rejecting it for not capturing the authentic complexities of our humanity. In the months to come we will be continuing our research utilizing metacognitive tools with eighteen-year-old adolescents and arcing through twenty-six-year-old adults.

In our human timeline, the events of 2020 emphasize that we are interconnected as humans, that the only certainty is change. Nature demonstrates this repeatedly with sudden shifts and century-long adjustments. Change is what can bring health and wellness to all of humanity. Every adolescent in every generation is gifted with the task of making their world, making our collective world. It is imperative that they have their tools of choice so they may take the necessary actions that shape the world they imagine and desire. Maxine Greene located critical pedagogy ‘as a problem of the future experienced in the present’ (Britzman and Dippo, p. 132). We proceed in our work with adolescents, who are deeply experiencing their own core development and the intensity of the world around them, as co-constructors of the knowledge needed for the future.
Notes


References


Steve Schatz, PhD, has consulted with corporate, government, and education on effective design of learning events and breaking the isolation of online learning. He has studied and applied useful technologies at the bleeding edge of learning, leading workshops throughout the country. Schatz’s work focuses on change initiatives in organizations, specializing in communication, sharing knowledge, and effectively using the organization’s knowledge pool to create learning events and boost performance. He is an advocate for learning through activity and providing information at the moment of need. He is also a published author of young adult and middle grade fiction. His books emphasize individual efficacy and responsibility and the power of intentional, creative action.

Paige M. Bray, EdD, is director of the Center for Montessori Studies and Associate Professor of Early Childhood Education at the University of Hartford, Connecticut. She has worked with colleagues, allies, and accomplices in community to address systemic inequities for over three decades. Her teaching expertise focuses on the personal ‘reflexes’ and professional identity transitions fostered through dynamic inquiry and the use of metacognitive tools with both undergraduate- and graduate-level pre-service teachers. Her work focuses on transitions occurring in the first semester, during the clinical experiences, and across the career continuum of credentialed teachers. She earned her BA and MEd from Sarah Lawrence College and her EdD from the University of Massachusetts, Amherst. Bray integrates her research, theory, and practice through the URBAN network by focusing on public scholarship.

The Lifelong Impact of Cosmic Education
When Taught from Age Six to Twelve

Guadalupe Borbolla

As the cosmic view has ramifications across the planes, its approach must be presented in its fullness to elementary age children, yet understood for its long-term influence for each of the developmental stages. The elementary teacher must keep in their mind’s eye the importance of cosmic education.

The “Bulb” chart helps us see that all stages of development are connected and follow one another in an ongoing progression from birth to death. Cosmic education at the elementary level is located at the stem, but the origin of the stem is in the bulb. This stem, of course, leads to the appearance of the bud. Maria Montessori points out that the whole of development is a continuum. One stage is the basis for the next. The child takes what is constructed in one stage with him to the following ones. This structure does not evolve in a linear path, but with ups and downs.

The origins of cosmic education are found in the very construction of the mind. When the young child’s absorbent mind has done its work, it cedes place to the appearance of the reasoning mind through a long process. At the age of five, in the Casa, this reasoning mind is already under construction, beginning to take the place of the absorbent mind. This is why Cosmic Education is taught at the elementary level; once the mind is formed and the psychic organs have developed, it wants to ask different questions than those that were asked at the Casa level. Order is also seen in a different way. For the first-plane child, order is imposing an object on an image; these two go together and are the same. Gradually the child’s order becomes matching a word to an object. Every object has a name, and through knowing these names the child can see the relationships among objects that go together: spoons go with forks and knives and they are called cutlery. Great! The child is at peace. Cosmic education depends on this mental construction. It is based on the child’s ability to know and understand that everything is connected and that nothing stands in isolation.

Cosmic Education is a philosophical approach that begins with the universe as a unified whole. From there we work towards the parts that are interconnected, and then we come back to the whole. This gives the child the big picture, a foundational sense of perspective. A global vision of cosmic events makes an impact on us. When the child sees the connected parts as a whole, it captures their imagination. The child’s interest may fall on one particular part of these great lessons, perhaps the impressionistic charts or the experiments.

Once the Montessori child has constructed this cosmic mind, once his intelligence has been organized in this way, it stays there forever. I have seen this in former students who are currently more than forty years old. These
students, now adults, think about everything that matters or happens; it is not a matter of choice but a product of the way their mind is wired. They consider this wiring indestructible and believe that they will carry their own sense of place on the planet and their cosmic task with them forever. Montessori tells us that this can be seen in how they display their creative energies. All that is left is to confirm this empirically. This is a great opportunity for research.

There was a time when we had to admit older adolescents who had not been Montessori children to our high school to keep the programme open. It gave us an unforgettable experience. Montessori adolescents started to notice, in a very casual way, that they had a different way of thinking than their non-Montessori friends. The non-Montessori adolescents wanted to solve problems in a straight line and they had difficulty seeing the big picture, struggling to connect things that in the opinion of the Montessori adolescents were indivisible. The Montessori adolescents were genuinely curious and wanted to know how this worked.

Ana Camila, my daughter, came up with the idea that a visual representation would help the non-Montessori. Camillo Grazzini had presented the ribbon game in Ana’s Bergamo training, and so she asked the Montessori children to go to the Casa and elementary and choose a material that they remembered or that had a personal meaning. They brought a variety of materials from different areas of the prepared environment. Providing long ribbons of different colours, Ana asked the adolescents to unite the materials that had a connection in their understanding of how knowledge is constructed. They started discussing and placing the ribbons as a result of their consensus. The non-Montessori students were observing. The students who were demonstrating the connections explained how the connections were made and why. When finished, they explained that this was called Cosmic Education and that it was the way their minds were constructed since they were very young and the way their minds worked since then. The non-Montessori students had an enlightening experience. From that point on, every time discussions took place, they made an effort to rehearse how to make their mind work in a ‘Cosmic Education’ mode, which for the Montessori adolescent was not a conscious process.
Next we showed them the chart of interdependencies. Many of the Montessori adolescents remembered very well what the chart was about, but they now discovered that the chart was not only a representation of the way the world functions. It was also a reflection of how their minds had developed to understand the world as a whole of interconnected parts. We also see an image of the farm in the interdependencies chart. The chart demonstrates how the farm works. It was as if the chart came alive: This chart is the blueprint of the farm school and teaches us how the farm must work to honour Cosmic Education. It also demonstrates that it is important to continue developing knowledge in the only way possible for the Montessori adolescent’s mind.

Our 12–15 environments are based on Cosmic Education. Our projects are based on the capacity that a Montessori child has developed during the previous plane. This is very difficult for children that come from other pedagogies, including those who come from Waldorf education. They struggle to connect knowledge in a way that is not disconnected from the real world. I ask myself, from the Greeks to the modern era, where did we lose this connection?

If an adolescent teacher does not know how Cosmic education works, they will not be able to understand the mind of the Montessori adolescent. Such a teacher will not understand their students. The teacher will observe that the students come ill-prepared from the elementary, they have big gaps, things they don’t know, and instead of answering questions, they want to tell you a story! Cosmic Education is also important for the 12–15 age group because their projects are designed under those principles. The humanities teacher needs to connect all areas of history, geography, and language. Similarly, they have to connect science projects to physics, chemistry, mathematics, and more. Simply put, without Cosmic Education, you can’t run the farm. Imagination put into practice in a semi-controlled real environment is the elementary child’s paradise come true. That is why 99 percent of our students pass from elementary to the farm school; their inner teacher tells them that this is the path to follow.

At the 15–18 level we take a subject-specific approach. The mind of the mature Montessori adolescent is a cosmic mind and functions in this way even when they study each subject separately. Even so, the teacher uses a Cosmic Education approach that interconnects all knowledge, giving the adolescent the perfect setting for his mind to flourish in this last stage of his development.

Regarding students in the fourth plane of development, the feedback that we get from universities is that they think differently, that they have a different way of understanding the world, and that their minds work in a holistic way. They are able to connect in an exceptional way how the world functions and how knowledge can be constructed to mirror this interconnected system. Once a professor told me that he observed these Montessori young adults as humans who were able to imagine what they were thinking at the time they were talking and that he could see this in their eyes and in their body language. It was as though they could see a whole film passing through their inner sight as they spoke. ‘They have a powerful imagination! Being able to do that must be fun’, he said. I answered that this is called Cosmic Education and is the backbone of Montessori thinking from age six.

Guadalupe Borbolla, MEd, who holds dual citizenship in Mexico and Spain, has been involved in Montessori education since 1977, first as a parent and then as a practitioner. She has three AMI Diplomas (0–3, 3–6, and 6–12) and is an AMI trainer at the 3–6 level, directing training and assistant courses in Mexico, Spain, and Portugal. In addition, she holds the NAMTA/AMI Adolescent Orientation Studies certificate. A pioneer in the implementation of Montessori education at the adolescent level, she operates two schools in Cuernavaca and Querétaro, México, including a farm school and high school. She has been actively involved in parent education since 1990. Borbolla holds an MEd from Loyola University and degrees in political science from Birmingham University and special education from the West London Institute of Higher Education. She is an international speaker, an AMI/USA School Consultant, and served as an AMI board member from 2010–18.
The Lifelong Impact of Cosmic Education When Taught from Age Six to Twelve
An Interpretive Summary of an AMI 12–18 Diploma Course Design

Laurie Ewert-Krocker

This document provides a summary and interpretation of a proposal for an AMI 12–18 Diploma Course, a result of the collaborative efforts of NAMTA, AMI, and Great Work Inc. through the establishment of the Adolescent Initiative and the work of an Executive Studies Team (EST), with the input of practitioners through a series of deep dives and colloquia. The EST included Laurie Ewert-Krocker, Jenny Höglund, David Kahn, Ben Moudry, Patricia Pantano, Brian Sense, and Michael Waski. Laurie Ewert-Krocker is a founding contributor to the Hershey Montessori adolescent project and the AMI Orientation to Adolescent Studies.

The AMI 12–18 diploma course is designed as a two-summer immersion in the experience of ‘social organization’, the way in which communities and societies organize themselves to thrive, create, and productively collaborate to maximize the rich contributions of the potential in individual human beings. Working, studying, living, problem-solving, functioning, and growing together in community is the essential developmental experience adolescents require to propel themselves toward mature adulthood — so it is also the essential experience for the adult who is preparing to work with adolescents.

The 12–18 Diploma Course is designed to prepare teachers to work in adolescent communities (not just classrooms, but communities) in a variety of discipline areas and in a variety of settings and contexts. The course engages the participant through rigorous academic study of Montessori theory and philosophy and through carefully guided experiences, so the participant is prepared to observe, practice teach, do research, and scaffold plans of study and work for their own communities.

It is the experience itself of working in the context of social organization with a group — on tasks and goals that are common to the group, with the specific context of a place, and with an immersion in the dynamics of the group as it evolves its own learning process and trajectory — that comprises the core of a ‘training’ for Montessori adolescent practitioners.

The Farm as Prepared Environment

Maria Montessori left a fairly detailed blueprint for the environment she envisioned for adolescents, even though she never had the chance to develop it herself. She suggested it be a farm. She saw the need for a balance of ‘manual and intellectual’ labour for all human beings. She recognized the importance of the work of the hand as fundamental to holistically experiencing the world in order to understand and belong to it. She observed — even before modern neuroscientists — the role the hand plays in building intelligence, language, and social connection. She saw an environment where food is grown and economics are connected to local and land-based activities as an opportunity to offer ‘a limitless field for scientific and historic studies’ (Montessori, p. 65). She saw the farm as a first-hand experience of the foundation of all civilizations.
and the development of organized and interdependent human work. She also saw it as a place to be in touch with the natural world — a place to heal.

A farm as a context for study, work, and human development conjures up a wide variety of personal responses from people. For some it suggests a simpler, more earth-bound, self-reliant life connected to the seasons, the land, and the origins of human civilization, with a close awareness of nature and the gift of natural resources. Some see it as an important alternative to a life of a non-stop stream of interactions with and through technological devices. For others, particularly Americans, the farm can suggest historical and current oppression of people through slavery, indentured servitude, migrant labour, Depression-era poverty, and a life of intense physical labour dependent on the elements and the expenses of land ownership and tenancy. Farming as a life has been all of these things. The question is, what can it be now for the emerging adult who is growing up in a world of climate change and virtual existence through electronic devices?

The value of a farm as a prepared environment for adolescents is not about becoming a farmer, but about having rich and real adult-level experiences, handling adult responsibilities, and understanding how people organize themselves to take care of one another and their communities. It’s about experiencing genuine social organization in which adolescents themselves meet their own fundamental needs and solve their community’s problems — physical, social, environmental, and intellectual. It’s about building; designing; creating; managing; feeding people; and understanding production, exchange, sustainability, and diminishing returns. It’s about the opportunity to have real impact and real agency with just the right amount of adult support. It’s about experiencing adulthood before completely entering adulthood.

Many past participants of the Orientation to Adolescent Studies Course have remarked that without living on the farm while they studied and worked, they never would have fully understood the power of the communal, land-based social organization that Montessori envisioned to support emerging adults. In the process, many of them discover that adults have lost that sense of Earth and human connection in their own lives and long for it. They take it back with them as spiritual grounding for their work and
find that it reveals the core understanding that Montessori education provides for all of us—the truth of human interdependency on the planet.

A two-week residential and community life experience on a farm site is built into this course as a pedagogical experience of genuine social organization and an opportunity to build community and reflect on the dynamic endeavours needed to sustain it.

**What the Course Includes**

**Summer 1**
- A study of general Montessori theory
- Foundational studies of children ages 0–12, with a focus on key points of interest and materials that inform our work with adolescents
- Montessori principles and practices for adolescents ages 12–18
- Frameworks and implementation strategies for integrated study projects
- Essential experiences in social organization, economic activities for adolescents, self-expression, and residential and community life
- Work on the land
- Seminar discussions on Montessori texts
- Writing papers on Montessori principles applied to adolescents

**Interim Academic Year**
- Observation of children and adolescents ages 0–6, 6–12, and 12–18
- Supervised planning and implementation of study and work side-by-side with adolescents
- Additional study and writing on Montessori principles
- Independent literature review on topics related to adolescent development including urban environment

**Summer 2**
- Share, analyse, and digest observations and practice teaching experience
- Share and examine students’ reviews of literature on topics related to adolescent development and education
- Deepen understanding of Montessori theory and consolidate learning
- Learn from experienced practitioners about practical strategies for working with adolescents
- Generate additional frameworks for study and work with adolescents
Other Design Components

The course is designed to model and enact a three-stage learning cycle: Lectures/presentations are followed by seminar discussions and then by guided experiences that enact the principles being learned. Reflection (through journals) and demonstrations of understanding (through essays) incorporate the experiences and integrate theory and experience in a way that is being modelled for how to work with adolescents.

Key experiences occur to support preparation for the student to do careful observations and to experience practice teaching:

- During the course, students experience the organic, dynamic unfolding of a plan of study and work which has a purpose in the community and develops collaboratively with the group that is working on it over time.
- Students experience Key Lessons for study and work in ways that model how Key Lessons might occur in their own work. The experience of what individuals do as follow-up work and how the group designs its own inquiry together is dependent on the group’s unfolding awareness of the challenge they face — a dynamic process that cannot be pre-packaged.
- The ‘real, purposeful’ work happens in the context of the community — testing water quality, exploring sustainable land and building practices, designing an animal structure, participating in local government policy making, running a business, studying local history, examining local effects of climate change. What is experienced in the course is a process that can be transferable to any community, any site, and any topic representing the local community’s need.

Guidance and coaching for student design of their own study and work plans occurs as needed during independent work time from personnel who are on site to offer strategies for different discipline areas and different age groups (math, science, history, language arts; 12–15, 15–18). (This is parallel to supervised practice work with the materials in the 3–6 or 6–12 course.)

Care of self, others, and the environment occurs in a social context and is experienced first-hand in the course (taking care of the environment, having community meetings, cooking and serving food, helping each other study, and so forth). This is all modelling for how an adolescent community works as a complex social entity.

References

Maria, Montessori, From Childhood to Adolescence (Amsterdam: Montessori-Pierson Publishing Company, 2019)

Laurie Ewert-Krocker has been a presenter and Course Director for the AMI–NAMTA Orientation to Adolescent Studies and has consulted with Montessori adolescent programmes around the world for fifteen years. She holds AMI diplomas at the 3–6 and 6–12 levels. Ewert-Krocker was the founding head teacher of Hershey Montessori School’s Adolescent Community in 1996 and served as both Middle School Program Director and Upper School Program Director at Hershey where she worked for twenty-eight years. She is now director of training at the International Montessori Training Institute of Ohio.
For Families

Remembering Our Humanity as We Support Adolescents

Laurie Ewert-Krocker

What Do Adolescents Need Right Now?

Adolescents need us to remember that they are fundamentally human beings who want to be respected and treated with the same level of dignity with which we treat other adults. Montessori education recognizes that we all share the same human tendencies and basic needs throughout our lives — and that as children grow through stages of development particular needs and characteristics are highlighted and need support to build the potential of adulthood. In a time of instability, it’s important to remember what’s fundamental for all human beings — and then consider particularly what is important to teens right now.

The need to orient

We are all experiencing new and changing schedules as well as significantly restricted environments. Adolescents suddenly have limited access to peers and adults other than parents and family members. They will grieve this loss on some level. Not having their peers and their ‘tribe’ close by will be impactful for them on a social/emotional level. Sensitivity to that loss is paramount. They are also going to experience different kinds of expectations than is usual — from teachers, from parents, from friends. And those expectations are likely to change as everyone follows a learning curve and responds to unpredictable events. These expectations might also go unarticulated or be ineffectively communicated. Adolescents need the people in their lives to help them orient to the changing conditions of their lives right now. Clarity, patience, and kind honesty need to rule the day.

The need for order

We all need enough order and some level of predictability to stay healthy and functional. Everyday chaos is overwhelming. Routines will be helpful — just as long as the routine considers the adolescents’ needs as well as everyone else’s. Their need for order will be more internal than external, while adults might cling to external order as an anchor. Give them some space to own their own disorder (like in their rooms) and express where order is helpful to them. Lovingly explain how order helps each person in the family to feel safe and secure — but perhaps in different ways. Offer to help them keep order from time to time — rather than demanding it.

This partner essay by Laurie Ewert-Krocker was written during the COVID-19 pandemic, which has placed new restrictions on adolescents. These timely suggestions establish a baseline of what adolescents may need in their relationships with adults.
One idea: Have regular family meetings to check in with everyone (even if there are only two of you!). What’s going well? What’s challenging? What are everyone’s current needs? How can we help each other? How can we paint a picture of a hopeful future with each other? How can we share some quality time together that is fun, joyful, playful? What will make us laugh?

The need to imagine positive outcomes
Adolescents need a certain level of consistency and assurance from adults about the future; we will get through this! Help them imagine what that will look and feel like. Invite them to consider positive changes for the future based on what they are experiencing and perceiving. They need messages of hope and regular assurances that their needs are being considered and attended to as best the family can. But beware — they can tell if you are being disingenuous — so this means incorporating hope and faith in the future into your own outlook.

The need for work
‘Work’ is what we all do to contribute to the sustaining of our lives and our communities. Humans work to adapt to the environment and improve life. Work gives us purpose and meaning. For an adolescent, work needs to feel relevant and valuable — not just something to keep them ‘busy’ or ‘out of people’s hair’. Work needs to feel either like a valuable step toward their future or like a contribution to the community’s needs. Their schoolwork should feel like it has a purpose in their lives. The work they do for the family needs to feel like a contribution. Can there be a family rotation of chores, menu-planning, cooking, and so forth that includes the adolescent — but also considers that their timeline for getting things done might be a little different than an adult’s? (If they don’t get something done until later in the day or week than you would like, be patient and let the timeline be theirs, if possible.)

Is there service work they can do in their family or for their community while maintaining social distancing? Can they put your family budget on a spreadsheet to track expenses? Can they work in the yard or take on repair or maintenance projects like painting or building? Can they write letters to elderly relatives? Can they make babysitting kits for families with young children? Can they record storytelling or reading aloud sessions online for the
children of busy working-at-home parents? Can they make board games and mail them to children of family friends? Can they put together simple building kits for children? Use some of their own Legos to create unique construction kits? (Disinfect and mail or drop off outside the door?) Organize music playlists for people? Can they sew protective masks?

The need for communication
Communication may be humanity’s number one need right now. Adolescents need lots of communication opportunities — lots of opportunities to share what they are thinking and feeling.

- Communication from parents: Regular, short meetings and check-ins that ask them how they are doing and feeling (not just telling what the adults need and think); honest, clear information about what is happening in the world (but not that everyone is swirling around in the worst-case scenarios); lots of ‘I’ statements from adults: ‘I think this is what is happening’; ‘I think this is what we need; but what do you think?’
- Task and responsibility charts for the family where everyone gets to choose several tasks from a list and commit to a timeframe for completing them; a sense that everyone is partnering in the situation and no one is shouldering the labour for everyone else.
- Examine your own expectations for your adolescents: What are you expecting them to take on (like care of siblings or housework)? Has that been articulated? Have they been diplomatically asked and negotiated with? Do you know how they feel about that? Adolescents are often very willing and able to step up into adult roles when needed — but they need to feel that they are being treated with respect and that their perspective is considered.
- Communication from peers: Peers are an adolescent’s primary need, so making sure they have access to friends and classmates is crucial. Seeing their peers face-to-face online regularly would be helpful. Relaxing the phone and technology rules a bit for now makes sense — but not at night when sleep is still the primary mental and physical health requirement for adolescents.

The need for self-expression
Adolescence is a time of life focused on identity formation and internal processing. Self-expression happens through open dialogue with others but also through the arts and
physical activity. Being restricted from playing sports and going to music or dance lessons is going to be painful. How can they continue to be involved in their chosen forms of self-expression? What space and materials might they need to set up a studio or workout space at home? Are there online programmes that can keep them motivated? (Don’t be surprised if they feel the need to have a digital connection with friends while they engage in self-expression activities.)

One of the insights of a Montessori approach to education is that whatever a child/adolescent might be doing in the moment (that may look questionable to our adult minds), there may be a very important human drive or developmental reason behind it. We try to stop ourselves from reacting, observe, consider what that need might be, and respond by supporting. Knowing that our human tendencies are always an active force in our lives — but may look different at different times — helps us to consider our own humanity and the humanity of those around us. We will all be compelled to orient, order, work, explore, communicate, abstract, imagine, self-express in the coming time — but those tendencies will look different for each of us. Our everyday work will not only be to remain consistent, calm, and flexible, but to work at truly seeing and listening to each other.
Maria Montessori left us a legacy of close to fifty years of work with children across the globe. Over the course of this time, her lectures and writings focused on recurring themes, with varying degrees of emphasis depending on the context of the times and the audience. Hers was a method that evolved, not from educational aims, but through hands-on work with children. Her path was simple: to observe children and to respond to their developmental needs. She had a clear vision of the natural path to development rooted in her ‘discovery of the child’, which served as a compass in her work. The theory evolved from the practice and the organic growth of the method, and her thinking can be traced through her lectures and writings. Her training courses were less about the practice of the method than about the development of human potential. Collections of her writings and lectures are a juxtaposition of the conceptual framework and specifics of practice.

The core principles presented here did not emerge chronologically in sequence — they evolved over her lifetime and found further definition in the works of her son Mario M. Montessori and other pioneering Montessorians. Since her death in 1952, Montessorians all over the world have carried on her work and legacy. The practice of the method at each stage of development has been refined and more clearly defined. What were the fundamental principles that guided this work?

The Montessori Core Principles Course (MCP) provides operational principles on all levels of Montessori education and creates a formal orientation to the most relevant understanding of Montessori in contemporary terms. The course looks at the human scientific point of view with an innovative across-the-planes overview. In the summer of 2020, 140 colleagues from around the world attended virtually.

On behalf of the Association Montessori Internationale, AMI trainer Uma Ramani piloted the Montessori Core Principles Course with the support of the Montessori Institute of North Texas. The course is the foundation for the Blended 3-6 diploma course and also serves as an introduction to Montessori principles and as a professional development tool for others. A visionary approach, the Montessori Core Principles Course grounds us in Dr Montessori’s vision of an interdependent universe and helps us understand her work as a social movement centred on the rights of the child and the evolution of a just and peaceful society. The Course draws out the golden threads that weave through all Montessori work and underlines the fundamental unity of the Montessori method across the life span.

Montessori took from biology, geology, and anthropology and with her clear vision presented us with an integrated framework of the universe. This theme is prevalent in her writings on education and peace. Camillo Grazzini explains this as Montessori’s Cosmic Vision. Montessori writes about adaptation as the first essential of life and offers us a perspective of adaptation as a ‘mutual exchange’ between life and the environment, where ‘the earth is the creation of life’. She calls this the telluric (tellus for earth) economy, where all life works for the formation and upkeep of the earth.

She highlights the fact that while all of life has evolved to maintain the telluric balance, humans have to create their adaptation and find their place in this telluric economy.
This process of creative adaptation is aided by what she called the guiding ‘instincts’. These guiding instincts were identified by Mario M. Montessori as the Human Tendencies, underlining the important role they play in our lives. In his seminal article “The Human Tendencies and Montessori Education”, he offers the Chart of Interdependency (unconscious exchange of service chart in the HT, where this term of interdependency is not found), which very simply explains Montessori’s cosmic vision and helps us understand the role of humans in the telluric economy. There is another chart in this article that warrants further study. This unnamed chart shows the work of the child, that of incarnating the environment and creating the fundamental adaptation to time and place. This chart is the bridge to the study of the planes of development.

Towards the end of her life, Montessori presented two representations of the process of fundamental development of humans — the Rhythm Chart and the Bulb Chart; these charts were a way for her to summarize her lifetime work of studying human development from birth. The unnamed chart in “The Human Tendencies and Montessori Education” illustrates the idea that the child is the link in the long chain of history that ensures human evolution, and places the work of the child during this stage of fundamental development in the context of the integrated cosmic vision. The theory of the planes of development offers us a radically different perspective on the child — a figure of immense power with the unique capacity for creative construction that results in the formation of the human adult. There are innate powers and natural laws that guide this development at every stage. However, these natural laws can only find expression when the environment supports their functioning: the child uses the environment to construct their individual personality.

Since children live in an adult-made world, it is critical that adults have an understanding of the process of fundamental development and the influence of the environment. We have to provide an environment which offers all the materials for the formation of the human personality and we must ensure the conditions of freedom so that children can complete this work of self-construction according to the natural laws of development. This is what Montessori sees as the role of education as an aid to life. A study of the Montessori approach to education as an aid to life must be grounded in an understanding of freedom. As early as in 1913, Montessori writes about the ‘biological concept of freedom’ and explains freedom as finding the ‘conditions favourable to life’. For human life to unfold along the natural path of development, it is critical to find these conditions of freedom.
Montessori’s writings on education and peace present to us a concept that peace is an active state of harmony. It is only when humans can function in harmony with the interdependent cosmic whole that the telluric equilibrium can be maintained. Long before the Earth Charter was published in 2000, Montessori wrote of peace as an integrated functioning of human systems, systems in nature, and of the ‘single nation’, a global, interdependent, interconnected human society that can be in harmony when there is equity and justice for every individual. Fundamental to such equity and justice is the need to ensure that every child at birth finds the conditions for the optimal realization of the human potential. When this basic right is denied to the child, the result is a society of adults in whom the human potential is not fully realized. And so, we come to the ‘social question of the child’, the realization that in a society that is configured for the functioning of the cosmos, they can offer this cosmic context for the child’s self-construction. Natural development facilitated in the context of this cosmic vision will result in a society of adults who can take their place in the telluric economy and contribute to the creation and maintenance of the telluric equilibrium. This harmony is at the foundation of peace.

Montessori referred to as the social question of the child and she wrote strongly on behalf of the rights of children — the necessity to ensure that every child finds the conditions of life in human society. It is the child who creates the adult in society; when children do not have the freedom to follow the natural laws that guide their development during this formative period, the result is an adult society that is unable to take its place in the telluric economy. The fundamental injustice of denying children the conditions to follow the natural laws of development is a violence inflicted on every human. And humans formed in such violence cannot build a just, peaceful world. Peace as an active state of harmony, as Montessori envisioned it, can only result from the active collaboration of the human adult and human child. This will result in the development of human potential and adults who are able to contribute to the creation and development of the telluric equilibrium.

These are the core principles that must inform the formation of the adult during Montessori training. They are the foundation in which the educational practices at each stage of development are embedded. The framework of the cosmic vision and the understanding of the social question of the child offer us an understanding of Montessori’s work for human rights and for social reform in an ecological landscape defined by the concept of a telluric economy.

In the decades since her death, the development of Montessori’s work has focused on the method of education at each stage of development. In conjunction with her writing on the planes of education, the Rhythm Chart has been the bedrock on which the method has evolved. The practice of the method at each stage of development continues to grow and be refined, focused on offering the ‘conditions for life’ in the context of the needs and characteristics of each plane of development. This work and the format of the trainings has resided in the rhythm chart, with clear divisions of each plane and sub-plane of development. This division belies the fundamental unity of the method and the guiding principles of our work.

In 2018, AMI constituted an ad hoc committee of trainers for a 360-degree review of Montessori training and practice. The group, which included trainers from each level of practice, focused on identifying and explicating the shared principles that inform Montessori work. The outcome of the review was the creation of the Montessori Core Principles Certificate Course. The vision for the Montessori Core Principles Certificate Course is to highlight the golden threads that run through the practice and to move trainings to be more representative of the Bulb Chart — an organic, natural continuum of life-long human development. The Montessori Core Principles Certificate Course draws from the body of Montessori’s work to present the key elements of her work in a clear, logical sequence. The course presents the themes that are central to all Montessori practice.

What we realized through the year-long process was that each of us had a picture of a ‘whole’, and as we put all our ‘wholes’ together there emerged a dynamic vision that offered a deeper understanding of and insight into Montessori’s legacy. It was as a result of this work that we began to formulate the Montessori Core Principles Certificate Course. In June 2019, the Montessori Institute of North Texas piloted this new course in a ten-day immersive programme with some off-site work to follow. The course focused on experience and discovery and was a personal journey undertaken by each participant. A refined version
of the course was planned for June 2020, but due to the social restrictions in place in the spring and summer of 2020, we decided to move it to an online format. Since the pilot course was so focused on personal and interpersonal experience, much thought has gone into the structure of the online course. Though I approached this task with great trepidation, the online medium has helped me crystallize the Core Principles with greater clarity. What has kept Montessori education relevant through the last century is that it is based on human tendencies; the online Core Principles Course approaches training through this lens. The virtual prepared environment for training offers purposeful activity that allows students to explore and experience the core principles in a guided, self-scheduled format. Live sessions are crafted to foster group interaction and learning. We are excited to be presenting this foundational course in this accessible format as a first step to making it available through AMI centres worldwide.

Personally, this has been a deeply spiritual and intellectual journey that has taken me back to the roots of my training. Over four decades ago, I began my Montessori training in India with Albert Max Joosten and S. Raghavendra Swamy. Joosten had lived and learned with Maria Montessori and came to India as her personal representative when she left India for the last time in 1949. Swamy studied with Maria Montessori in Kodaikanal and was part of the cohort at the birth of the practice of cosmic education for the elementary child. The first lecture on my training course invited us into the Montessori Movement — a global movement for the rights of the child. Our training in the method was always embedded in this vision of social reform. On our second day we were introduced to the cosmic vision and our task of creative collaboration with the child. These two threads were woven through the ten months of training in twice-weekly lectures that always brought us back to the larger context within which the myriad details of the 3–6 training found meaning and relevance. It was a story that unfolded over the course of the training, but at age nineteen I did not quite comprehend the gift that I had received. The story stayed in my subconscious and informed my work, but the opportunity to coordinate the work on the Montessori Core Principles has helped to crystallize and deepen my understanding of our work.

To the members of the 360-design team: Annette Haines, Judi Orion, David Kahn, Gerry Leonard, Elise Huneke Stone, Carol Hicks, Karea Lontz, Jackie Maughan, and to Merry Hadden: thank you my friends.

Notes

2 Montessori, Maria, Creative Development in the Child, II (Chennai: Kalakshetra Press, 2007), p. 177
4 Montessori, Mario M., “The Human Tendencies and Montessori Education” (Amsterdam: Association Montessori Internationale, 1956), p. 44
5 Montessori, Maria, The 1913 Rome Lectures (Amsterdam: Montessori-Pierson Publishing Company, 2013), p. 54
7 Montessori, Maria, The Formation of Man (Chennai: Kalakshetra Publications, 2005), p. 58

Uma Ramani, MA, holds the AMI Primary Diploma from the XLIV Indian Montessori Training Course and the AMI Elementary Diploma from the Montessori Training Center Northeast. She has taught in India and the United States and has experience as a coach for public Montessori programmes. Ramani is a director of primary training at the Montessori Institute of North Texas, where she presents the Montessori Core Principles Certificate Course and the Blended Primary Course and offers professional development and consultation for schools. She continues to work with the Montessori community in India, where she guided the development of the Community Rooted Education initiative (CoRE), an introduction to Montessori principles with a focus on the preparation of the adult and environment to aid the work of the child.
Montessori Adolescent Construction for the Future

David Kahn

The “Bulb” chart shows X, the unknown depth of human development that we find at the threshold of adulthood. AMI has announced the opening of a new adolescent course (two summers and one academic year beginning in 2021). This new Third Plane Course will present curriculum for ages twelve to eighteen with extensions into the fourth plane.

I

Explication of the Montessori Text: From Childhood to Adolescence Appendix C

Appendices A and B provide a density of data and suggest different treatments for the 12–15 and 15–18 experiments. In comparison Appendix C has a scarcity of material with the 18–24 age group. The content and design of the third plane, which encompasses ages 12–18, has not been finished. Montessori left this task to us.

The fourth plane encompasses the period from 18–24. There is very little documented in the 18–24 literature. As a result the fourth plane does not have a specific role except to review incomplete third plane work. The fourth plane can provide feedback for student outcomes. Experiential practice and foundational psychology are needed to authenticate the insight and background of the fourth plane pedagogy and related psychology moving toward adulthood.

At the present time (2020) perhaps only five percent of adolescents (12–15 and 15–18) in Montessori schools in the United States have experienced authentic Montessori Erdkinder. Questions about subject matter (disciplines versus developmental components) have often concluded with the expansion of content. The 9–12 age group has a strong intellectual tradition which can be overshadowed by a loss of content and neglect of the disciplines.

In 2017, AMI undertook research in the United States to learn directly from Montessori parents. While a number of important insights were gained as to why parents choose Montessori and sometimes choose not to continue, three key areas stand out where AMI Montessori can provide the highest value: Helping children develop into capable individuals by focusing on their moral, behavioural, and emotional development; providing the highest quality teachers to facilitate that development; and, bringing parents into the Montessori experience so they can understand the process and aid in their child’s growth.

(“Montessori Parent Aspirations & Motivations”, p. 1)
Almost all parents expect that their children will face more direct external demands on their time in the future than they do within a Montessori school, and they worry about their child’s preparation to meet those realities in school or work. Concerns about specific academic preparation in maths, science, and technology also exist. In addition, there are social considerations; many parents seek a ‘mainstream’ public education setting with peers in local communities and the accompanying network of friendships, athletics, and other group extracurricular opportunities. The gates of adulthood or maturity are open to all. Montessori schools welcome diverse cultures and diverse personalities. The fourth plane is a time of enhanced personalities with high social interest and very ideal community interests. A fine balance between academic studies and community endeavours must be maintained. Such a balance must be maintained for sustainable normality of the individual and the interface of the child.

Montessori in her own writings suggests that formal studies with clear curriculum articulations offset the more psychological and spiritual identity exploration allowed by adolescent farm school academics. The 18–24 ages would be a time for more academic reorientation. Such academic warm-up could be a junior college or a self-directed independent study approved by a university as a responsible, individual project to finish the formal or vocational training of the third plane.

I am going to plead for something that may seem strange to you, but which seems to me not only fine but essential: the child should have a holiday for the three years he has saved. This will coincide with the age of physical development, of puberty. The child whose chief mission should be to develop his own integrated individuality stands at the threshold of adult life. I should like to see children leave their narrow homes and go into the hills or to the sea, or into the country, where they will be in touch with nature and learn some practical trade. Here they can meditate and their innate sense of justice and of life will blossom tranquilly under ordered labour and this natural existence. Under such conditions humanity will attain a state of freedom and kindliness in which it will sense the answers to many questions which seem to us obscure and difficult. I can imagine these children returning to their formal studies when they are sixteen, feeling that they understand something of life and have achieved a sense of...
direction. (Montessori, “Disarmament in Education”, p. 259, 1932; emphasis added)

The following extracts from “The Functions of the University” in From Childhood to Adolescence are accompanied by brief explications.

If we consider the natural development of the human individual, the ‘preparation of the organism’ is completed by the end of the eighteenth year, when the age of adolescence is officially over. The law recognizes this physical maturity by allowing marriage at that age. At twenty-one a person becomes free of guardianship and is declared to be of age. (p. 84)

Education should not limit itself to seeking new methods for a mostly arid transmission of knowledge: its aim must be to give the necessary aid to human development. This world, marvellous in its power, needs a ‘new man.’ It is therefore the life of man and his values that must be considered. If ‘the formation of man’ becomes the basis of education, then the coordination of all schools from infancy to maturity, from nursery to university, arises as a first necessity: for man is a unity; an individuality that passes through interdependent phases of development. Each preceding phase prepares the one that follows, forms its base, nurtures the energies that urge towards the succeeding period of life. (p. 84)

Montessori’s Appendix C suggests that the fourth plane of education, looking at successive planes of development, provides a time for consolidation for all seasons of development, especially the third plane.

What our marvellous civilization lacks today is the strength of the spiritual man, the straightness of conscience that feels its responsibility, but above all the feeling that human life is triumphant over the cosmos: humankind should feel itself king of all that has been created, transformer of the earth, builder of a new nature, collaborator in the universal work of creation. (p. 90)

The realization of the cosmos-centred spirit of the human personality is praised; not human supremacy:

He who arrives at the university has left behind him childhood and adolescence: he is a formed person: A great part of his social destiny, of the success of his studies will depend on how he was formed. What interests him now is the mission of humankind. (p. 90)

Montessori suggests that the formation process for the student is beginning to change; the university is the synthesizing point for growing into adulthood. Montessori exhorts that it is time to start the ‘great work’ of self-healing (normality) and the healing of their society:

From the universities educators, therefore the guides of the new generation, the leaders of the new humanity emerge. From the universities come those men who will be called to lead the masses and to defend civilization.

When they take their examinations to get their degrees they will be facing the gates of the world, and must possess a great moral preparation. They did not remain at school after they had already become adults merely in order to acquire a little more knowledge than others. Culture forms a great part of their preparation, it is true, but they could have found culture all around them, for today culture has pervaded the entire social environment. The functions of the university would be to intensify it and to make it penetrate into the conscience as a weapon for the defence of humanity and of civilization. (p. 90)

Maria Montessori’s concluding remarks are how to philosophically encounter adulthood:

I shall finish by comparing the life of the human being to the three stages of the life of Christ. Behold at first the miraculous and sublime Child. This epoch is the period of ‘creative sensibilities’ of mental construction, of such an intense activity that it is necessary to sow in this period of life all the seeds of culture.

Then comes the epoch of adolescence, an epoch of inner revelations and of social sensibilities. Christ as a boy, forgetful of His family, is heard to discuss with the doctors. He does not talk as a pupil, but as a Teacher, dazzling by the flashes of His light. But later He devotes Himself to manual work and exercises a craft. He shows that the adolescent should be able to manifest his hidden treasures and at the same time work and be initiated into a craft.

At last comes the Man Who prepares Himself for His mission in this world. And what does He do for this preparation? He confronts the Evil One and overpowers him. This is the preparation! Each human being possesses the strength of becoming aware of, and of facing the dangers, the temptations of the world so as to become inured to them in order to overcome them.
The temptations to be overcome are literally those illustrated in the Gospel: the temptation of possession and the temptation of power. There is something in humankind that stands above them: it is able to understand what is required to create a very powerful, a very rich, and a purified world. (p. 93)

The purities of the world must be enhanced by humanity and not diminished by supranature. Here are Montessori’s closing words for *From Childhood to Adolescence*.

There is only one way: that each individual know how to overcome the temptations of power and possession. That is the path of his kingdom. But in order to attain this level through education, it is necessary to seek the child and to consider him under a new aspect. (p. 93)

The light of the fourth plane of development frameworks is the new aspect that validates all the previous three planes of development.

**Bibliography**


———, *From Childhood to Adolescence* (Amsterdam: Montessori-Pierson Publishing Company, 2007)

“Montessori Parent Aspirations & Motivations” (AMI)

---

II

**Summary of Adolescent Outcomes for Montessori Third- and Fourth-Plane Education**

Outcomes are the developmental rubric to indicate that the formation of the personality has taken place. The wording of these outcomes is from Montessori’s text from all three appendices. Outcomes are relevant to assessment for the end of the third plane and beginning of the fourth plane.

**Social Outcomes**

- Learning what it means to make a contribution
- Understanding interdependency and the need to cooperate with adults and peers in relation to the rest of the world
- Assuming work roles and their social and cosmic implications; projecting the benefits of an active role in society
- Adapting to a variety of work demands for the sake of others; the beginning of social consciousness
- Understanding work as a product of commerce necessary to community life, leading to a beginning view of economic independence and interdependence
- Balancing individual initiatives in relation to community goals
- Learning the meaning of rules and their importance to harmonious living

**Moral Outcomes**

- Respect for others and their roles
- A sense that work is noble and the assumption of adult-like responsibilities
- Grappling with social and moral problems, such as the right use of the natural environment or the ethics of science
- Individual initiative; commitment to freely chosen work
- Pleasure in individual progress that enhances group progress and contributes to others
- The development of a mission orientation and service to the universal needs of a larger humanity
- The asking of big moral questions, i.e. What makes for a virtuous life? How can we build a better world?
- Conscience exercised by community values and responsible dialogue
Cognitive Outcomes

• Has the opportunity for personal expression integrated within a variety of artistic, speaking, musical, and media modalities in direct relation to occupations and role development within the community
• Philosophically addresses questions of nature and cosmos
• Analyses scientific causality in the natural world and the cosmos
• Has an increased understanding of the mathematics directly connected to the practical needs of the farm environment and in the symbolizing of scientific observation of data
• Has increased facility in a variety of languages and the ability to use language to penetrate different cultures and improve human understanding
• Connects the history of life on earth and its civilizations with principles of the evolving self as well as the social evolution of a human community
• Views the whole of history, including the future destiny of humans, and reflects on the individual contribution one makes to the creative direction of the future
• Understands the nature of interdisciplinary studies, the relationship between the disciplines and the totality of the natural and human built worlds, and the available tools and technology to continue the inquiry as to how knowledge can best serve the world

Emotional Outcomes

• Revelation of the innermost ‘vocation’ (deep calling) of the soul, a sense of mission or commitment to one’s work and life
• Understanding of the connection between personal vocation and the ‘vocation of man’ (p. 112)
• Feeling of self-sufficiency, taking care of self and others, the feeling of self-confidence
• Inner harmony and happiness due to personal contribution, love of work, love of study and achievement, and a personal participation in the work of society
• Hope of future world progress
• Joy in seeing the relationship of one’s own life with the history of human culture; the importance of being keepers of human culture
• Freedom in the spontaneous collaboration with others in a harmonious connection with the natural world
• Feeling that human life has value and a role to play in the cosmos, a feeling of triumph over evil
• Feeling of belonging to the world human community and to the earth
• Feeling of personal discipline, creativity, beauty, and productiveness in connection with the learning of handcrafted art and practical achievement
• Feeling that one can be in control of change, internally and externally, in one’s personal and social evolution
• The feeling of usefulness and an understanding of one’s ‘many sided powers of adaptation’
• Belief in human capacity to solve problems and in the spiritual source of strength to overcome adversity
When Is It Time to Grow Up?

Contrasting Needs and Characteristics of the Twelve- to Fifteen-Year-Old and the Fifteen- to Eighteen-Year-Old

Gena Engelfried

Human development is an experience held in common by all people, and all humans experience growing up and growing older. When does it become time to ‘put away childish things’, and what does this mean in the context of the twenty-first century?

When my generation was young, many years ago, maturity, responsibility, and the expectations placed upon young ladies and gentlemen were slightly different than those of today. This was no doubt true for Maria Montessori, who wrote about adolescents in the 1930s–40s from the perspective of an older (and wiser) person. However, as Montessorians, we know that there are aspects of human development that are timeless, universal, and impervious to changes in culture and society. Finding these characteristics and then building environments to meet the needs of those who are in these developmentally unique stages is our task, and it is no small one. Thankfully we have Montessori’s insights, our own observations, and the indomitable spirit of youth to guide us.

What does Montessori have to say about the mysterious third plane of development? What are the characteristics and needs of the twelve- to eighteen-year-old human being, and how are they split between the first and second stages of this split plane? Montessori, with her physician’s hat on, said that this ‘period of life in which physical maturity is attained is a delicate and difficult time, because of the rapid development and change which the organism must go through’ (From Childhood to Adolescence, pp. 62–63). She goes on to explain that “the human organism becomes so delicate that doctors consider this time to be comparable to the period of birth and the rapid growth in the first years thereafter” (p. 63). She also stresses the need for a good diet, exercise, and a healthy lifestyle as means to psychological as well as physical health.

The adolescent’s physical fragility also seems to be a metaphor for a deeper instability, but from this uncertainty springs great potential for growth. Montessori discusses the psychological characteristics of the young person in adolescence. She describes the lack of concentration, characteristic of this age, as an involuntary reality. She discusses the crucial nature of this period of development for the individual and for society:

The chief symptom of adolescence is a state of expectation, a tendency towards creative work and a need for the strengthening of self-confidence. Suddenly the child becomes very sensitive to the rudeness and humiliations that he had previously suffered with patient indifference. These reactions, bitter rebellious feelings, sometimes give rise to characters that are morally abnormal; while this is the time, the ‘sensitive period’ when there should develop the most noble characteristics that would prepare a man to be social, that is to say, a sense of justice and a sense of personal dignity. It is just because this is the time when the social man is created, but has not yet reached full development, that in this epoch practically every defect in the adjustment to social life originates. These defects may have very dangerous results, either for the future of the individual (timidity, anxiety, depression, inferiority complex), or for society (incapacity to work, laziness, dependence on others, or cynicism and criminality). And all of the dangers that spring from the very nature of man become still more serious at a time when social life is so disturbed and uncertain as it is at present. (p. 63)

How do we create an environment for such an important and seemingly delicate creature? Does the twelve- to fifteen-year-old have a different set of characteristics from those of the fifteen- to eighteen-year-old? The answer to this lies in answering the question: What are the needs that go with this fragility? When we look at this plane of development, we see, along with self-expression and psychic development, that the final focus of Montessori’s syllabus is ‘education as the preparation for adult life’ (p. 76). The need for this preparation becomes increasingly urgent as the young adult approaches adulthood. The adolescent’s attempts to meet this need, whether through formal or informal means, become more obvious as time goes on. Montessori writes of the need for freedom — to act on one’s own initiative — and respect — not being treated as a child — as the two preeminent needs of the adolescent.
Figure 1 is based on observations over the course of ten years of working with adolescents in our high school and lower adolescent programme, which has since evolved into a farm school. The continuum between twelve and eighteen years of age varies enormously between individuals and genders. This may be, in part, due to variations in the environment as well as the backgrounds of the students involved.

The generalization that we have observed is that as the personality develops and becomes increasingly defined, the individual gains a more realistic perspective between self and other and at the same time becomes less dependent on the group identity. The *them* and *us* attitude of early adolescence seems to fall away at about age fifteen, as does the need for tribal trappings and the blind loyalty to the group. At age fifteen (or fourteen or sixteen) the young adult appears to turn the corner and become not just capable but willing to take increased initiative and responsibility. The fact that this phenomenon is observed in conjunction with the split in the third plane is no coincidence.

References


---

**Qualities of Adolescents (First and Second Sub-Plane)**

<table>
<thead>
<tr>
<th>12 years</th>
<th>15 years</th>
<th>18 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>need for social validation</td>
<td>“Sensitive period for poetry”(^1) (entire plane)</td>
<td>increased self-reliance</td>
</tr>
<tr>
<td>need to present ideas and talents to peer group</td>
<td>need to present talents and ideas to world at large</td>
<td></td>
</tr>
<tr>
<td>absorbent and impressionistic</td>
<td>capable of articulation and analysis</td>
<td></td>
</tr>
<tr>
<td>intolerant of hypocrisy, failure, and shortfall in others</td>
<td>tolerant of failure and shortfall in others and in self</td>
<td></td>
</tr>
<tr>
<td>concerned with social justice</td>
<td>concerned with individual justice</td>
<td></td>
</tr>
<tr>
<td>impulsive articulation of ideas, feelings, and thoughts</td>
<td>increased care in articulating ideas, feelings, and thoughts</td>
<td></td>
</tr>
<tr>
<td>impassioned responses to situations</td>
<td>more reasoned, pragmatic responses to situations</td>
<td></td>
</tr>
<tr>
<td>intermediate reality</td>
<td>world reality</td>
<td></td>
</tr>
<tr>
<td>bonded with place (campus/farm) identity</td>
<td>take school (group) identity into outside world</td>
<td></td>
</tr>
<tr>
<td>deconstructionist</td>
<td>synthesis into own reality</td>
<td></td>
</tr>
<tr>
<td>creating world paradigm</td>
<td>plugging information into world paradigm</td>
<td></td>
</tr>
<tr>
<td>“taste testing” ideas and opinions</td>
<td>applying ideas and opinions</td>
<td></td>
</tr>
<tr>
<td>blindly loyal</td>
<td>practically loyal</td>
<td></td>
</tr>
</tbody>
</table>

History can show various social sciences from different cultural perspectives combinations.

**History** is the study of human civilizations through time with the intent to find patterns of cause and effect and to create narratives that make sense of the human story. History gives insight into the human condition by identifying human universals and hopes in order to create awareness of opportunities for positive change in the student. In ninth and tenth grade, students focus on important episodes in world and national history, and they develop a strong understanding of the roots and methods of the discipline. Students conduct original research, discuss primary and secondary sources in seminar, and develop clear and coherent writing. Students learn to orient themselves in space and time, assisted by the use and creation of maps and timelines. The overarching theme is the human tendency for migration, as identified by Maria Montessori, and its effects and consequences. The study of history is enriched by work with the following social science disciplines or lenses, which provide an emerging social-justice perspective appropriate to the adolescent.

**Social and cultural anthropology** is the comparative study of cultures and human societies. The study of the particularities of social and cultural life and emerging appreciation of general principles that govern human societies fuel the students’ understanding of self and other, empathy, and a drive to be engaged citizens of the world.

**Geography** is the interdisciplinary study of place in relation to economics, health, climate, plants/animals, and human populations. At Montessori High School at University Circle (MHS), geography orients to the study of place and human migration in close connection to orientation in time through the study of history. Students study both physical and human geography and build their understanding of how human population impacts the planet through the building of civilization, thus connecting to the unifying central value of sustainability in the study of the sciences.

**Psychology** is the study of human experience through thought and feelings and how they inform behaviour. The introduction to psychology focuses on developmental and social psychology as a reflection of what it means to grow and become an adult in twenty-first-century society. It explicitly explores the role of motivation in exploration throughout history.

**Philosophy** is the critical, systematic study of the fundamental nature of knowledge, reality, and existence. Students are introduced to both Eastern and Western philosophical traditions, with an explicit focus in ninth and tenth grade (ages 14–16) on the Enlightenment in relation to the study of revolutions and nationalism. Chinese philosophy in the context of European exploration and the evolution of global trade is also a focus.

**Sociology** is the study of society through empirical investigation and critical analysis, applying it for the betterment of society. Students are introduced to the discipline when they study the Industrial Revolution and the socialist challenge to capitalism. They continue their study of migration, urbanization, and demographics in application to the history of the late-nineteenth and early twentieth centuries.

**Political Science** is the study of the theory and practice of politics and analysis of political systems and behaviour. Students are introduced to the discipline in the context of
studying the revolutionary political, social, and economic changes associated with Enlightenment thought and the industrialization of the eighteenth and nineteenth centuries.

**Economics** at MHS is the holistic study of humans’ production, distribution, and consumption of goods and services with the understanding that market exchange has ecological, ethical, social, political, and social-psychological dimensions. In ninth and tenth grade, students are introduced to the discipline in the context of exploring the history of colonialism and imperialism.

**Current Events and Ethical Thought** challenges students to think through current events by employing ethical theory as a tool of both critical reflection and discussion as well as moral self-construction. The course engages students to see themselves in relation to others and in service to society. It engages students by moving through concentric rings from virtue-focused individual ethics toward the ethics of human relationships, society as a whole, and the environment, considering the ethics of distributive justice, distribution of resources, and human rights from the perspective of the modern adolescent.


---

Courses of study are put into an integrated curriculum design based on the following principles:

**Integration of community work** implies that full participation in several community staging areas will result in greater understanding of community participation and its relationship to knowledge and skills. Adolescents need to know about their world as it is, but they also need to see the best aspects of human organization; see the gifts, the accomplishments, and the possibilities that emerge from social collaboration; and experience what social harmony is like within a consciously cooperative community as well as how social harmony builds the individual. This facet of integration will be worked out in detail between the IB curriculum and the staging areas presented above.

**Integration between the levels of education** means that Montessori is a flow experience; it builds on the self-construction of the person throughout the planes of education from birth to adulthood. Even though Montessori schools are divided into different levels: parent-infant class, infant, and toddler (ages birth to 3), preschool (3–6), lower elementary (6–9), upper elementary (9–12), and adolescence (12–15 and 15–18), the prepared environment introduces an uninterrupted series of learning passages, a continuum.

**Integration of the arts, sciences, geography, mathematics, history, and language** begins in the elementary and continues through high school; the unifying theme relates directly to the concept of the web of life (interdependency of life on earth).
Integration of history of thought, moral consciousness, values, and philosophical connections between the natural world and cultural history points to an evolving human global world view. The last sixty years of history show increasingly interdependent subthemes in world affairs, subthemes Montessori alludes to in her book *Education and Peace*:
- What does it mean to be a citizen of the world and a national of my country in the world?
- The struggle for peace in the twentieth century
- Society and its relationship to women, religion, and minorities
- Economics: the worker and entrepreneur
- History of environmental decline in the world including America’s impact on the world
- An in-depth study of a country other than one’s own

Integration refers to an overarching perspective throughout a course of study that knowledge will have unity and meaning from beginning to end, that the disciplines will ‘hang together’ throughout high school using an overarching theme. Fundamentally the studies emerge around one theme, the study of nature and civilization, and every subject is incorporated into that central theme. This allows the cultivation of a universal intelligence that can be applied to any specialized subject; a student can explore any aspect of human social experience with ‘sureness of footing and certainty of touch’ (Alexander Meiklejohn).

Integration through historical narrative is effective for adolescents because it is history that shapes their lives and generates a now perspective. A global history based in our time provides an interactive ambience for the adolescent’s studies. The global combined with the local can inspire because it provides a living whole that includes the familiar, a world ecological system that includes the surrounding regional environment, an outlook on the planet that is contrasted with the adolescent’s own lived outlook, a community narrative within the world community. The relationship between local and global is a personal and community vision.

Integration of practical and intellectual knowledge occurs through accepting practical responsibilities in the life occupations and staging areas combined with academic inquiry in many different subject areas.

Integration with personality formation allows knowledge and self-knowledge to be combined, furthering the adolescent’s self-construction as an individual and a member of society.

References
Montessori, Maria, [1948], *From Childhood to Adolescence*, trans. by A. M. Joosten (New York: Schocken, 1976)

Philosophy of Knowledge

David Kahn

Certain characteristics of Montessori philosophy are apparent in the selection of literature: self-expression, a study of humanity, real-world situations and applications, student choice, a pedagogy of place focused on land and culture, and the world of work and entrepreneurship.

1. Self-expression and creativity are fostered through project work (and the use of multiple intelligences): skits, creative writing, dance and other performances, dramatis personae, artwork, videos, PowerPoints, the writing and production of children’s books, essay writing, and journal writing.

2. A study of humanity takes place with the use of diverse texts (multiple genres, cultures, countries, authors, and time periods) and through integration across the curriculum.

3. Real-world situations and applications involve internships requiring reading and writing skills, editing and publication, group writings, in-school projects such as yearbooks and newspapers, and exposure to professional writers.

4. Student choice is encouraged in texts, projects, and shared presentations.

5. A focus on pedagogy of place connects students to staging areas where students become involved in protracted community projects and to the land through a study of nature literature and super-nature: readings from Rachel Carson, Gilbert White, Thoreau, Emerson, and Whitman; current writers in the field such as Bill McKibben and Michael Pollan; and visits to cultural centres such as museums, newspaper offices, and other writing centres.

6. Connection to the world of work involves marketing, advertising, market research, letters to government officials, letters to the editor, writing of grants and grant proposals, business letters, resumes, college essays, and other applications.

7. At the experience core of the MHS studies, economics education is initiated by a student-run business that functions as another integrative mechanism for all studies. The business represents an opportunity specially created for adolescents to do real work and earn money; hence, learning to gain economic independence in the field of society. We assume that the complex concepts of economic theory are best understood and most valued in the context of this real-life experience.

It is the purpose of this course, as well, to turn back to an earlier conception of economics as a holistic human science that understands production, not only as an economic concept but also as a concept that has ecological, ethical, social, political, and social-psychological dimensions. The human is a complex being with a variety of social ambitions, including political, humanistic, and moral concerns.

Prepared Environment for Adolescents

David Kahn and Regina Feldman

John Wyatt, former professor of classics at University of Chicago, writes:

The nature of knowledge is to be incomplete. And students, from the beginning, should be aware of this mystery; one never completes the sometimes depressing, always fascinating infinite puzzle of anything under examination. It is always just there and there and there and on and on, an infinite there and here — no private time to escape. How does the concept of a margin of error in a synthetic manner fit across the subjects selected for a curriculum so that the end of any knowledge search is a ‘logical potentiality’? (pp. 182–83)

The educational approach of MHS forms an all-inclusive field of study, which induces ‘maximum effort’ (the Montessori term for intense, self-motivated work arising out of optimal engagement), not of the individual alone, but a collective maximum effort of the high school community and surrounding community. This is different than a curriculum concept of maximum knowledge. Human capacity to know is less important than the human social endeavour to learn. Students build toward a systems analysis of nature and society by exploring an existing body of knowledge, with its associated theory and methodologies, through the following expanding circles of the self:

- Interactions within the adolescent’s emerging identity
- Interactions within the school community
- Interactions within the disciplines and sub-disciplines
- Interactions within the local community
- Interactions within the global community

The prepared environment of MHS responds to all of the above interactions. It is a place of study and work, a field of study in both the literal sense of being indoor and outdoor spaces and the figurative sense of comprising each of the disciplines formally introduced within the context of places from schoolyard to universe. It is a progression from the school garden to the walkable neighbourhood of University Circle’s cultural institutions to the urban and rural regions of Cleveland and its outlying areas to people and places around the world. This field of study is a fertile field, comparable to the one mentioned in Montessori elementary psychology as the fertile field of imagination, where the seeds of knowledge are sown, but now the field is richer and more diversified, encompassing not only imagination but also social experience, applying to urban and rural places that afford not only study but living field experience.

The concept of prepared environment also extends to the use of technology at MHS. Beyond the typical technological capacities for information storage and retrieval, the students are equipped, trained, and encouraged to utilize technology both as a means of communication and also as an enhancement of social interaction. The school sees the technology programme as a token of the trust we have in them and a demonstration of our intent to prepare them for full engagement in today’s increasingly technologic society. To this end, our students are provided with access to the same technological tools as modern-day professionals, as well as guidance in the etiquette that governs the use of technology. The teacher is careful that technology is utilized in a manner that enhances the connection between individuals and societies and that it is not misused as a barrier. MHS’s technology ranges from the careful installation of cutting-edge technology in the science laboratories to high-tech multimedia capabilities in the classrooms and libraries as well as our student laptop program.

References


We see the presence of disciplinary integrity in Christopher Kjaer’s science outline for Montessori High School’s ninth and tenth grades (ages 14–16), wherein the sciences are introduced in an almost evolutionary order using definitions from the *New Oxford American Dictionary*:

- **Cosmology**: the science of the origin and development of the universe. Modern astronomy is dominated by the big bang theory, which brings together observational astronomy and particle physics. An account or theory of the origin of the universe.
- **Astronomy**: the branch of science that deals with celestial objects, space, and the physical universe as a whole.
- **Physics**: the branch of science concerned with the nature and properties of matter and energy.
- **Chemistry**: the branch of science that deals with the identification of the substances of which matter is composed; the investigation of their properties and the ways in which they interact, combine, and change; and the use of these processes to form new substances.
- **Geology**: the science that deals with the earth’s physical structure and substance, its history, and the processes that act on it.
- **Biology**: the study of living organisms, divided into many specialized fields that cover their morphology, physiology, anatomy, behavior, origin, and distribution.
- **Ecology**: the branch of biology that deals with the relations of organisms to one another and to their physical surroundings. Also, human ecology: the study of the interaction of people with their environment.

This is not to imply that one begins with these specific definitions, but the first period of study needs to define the discipline as a material for development, that is, not merely a subject in school but a way of seeing the world.

Once again, the inquiry method and focusing energy is found in the student’s questions. These questions can be aroused by the field experiences themselves or by the use of literature and philosophy, e.g., Plato’s concept that the ‘state is individual writ large’ in *The Republic*, Aristotle’s exploration of the master-slave relationship in *Politics*, Locke’s ‘social contract’ as that which brings individual states into international cooperation. Here are some hypothetical examples of interpretive questions for the humanities:

1. What is progress? Is it progress to devastate the planet?
2. Where does human history begin?
3. Can one know the past? What are the limits of knowing the past? What is the purpose of historical analysis?
4. Is all knowledge historical knowledge?
5. What makes history significant? What role do famous people play in determining history’s significant parts?
6. Should humans have power over nature and power over other humans?
7. What is justice?
8. What is equality? Why rich and poor?
9. What are the rights of the majority and the minority?
10. What is the role of human life in relation to the web of life?
11. What ought to be vs. what is: Which dictates what is right and wrong?
12. How do we satisfy our needs in relation to others?
13. What is belief? What is science? How do we tell the difference concerning history?
14. What is unfinished in the world? Do we need to concern ourselves with global realities, especially with other people’s suffering?
15. Does might make right? What are the limits of power?
16. What is our manifest destiny? What if our destiny conflicts with that of another country or person?
17. What is the true wealth of a nation?
Mumford’s book presents the development of archetypal cities from early beginnings to their climax, overgrowth, and decline, giving way to a period of ‘unbuilding’ and the birth of a new form of city. This framework allows not only for focused study of exemplary cities but also for an immediate and contextually rich categorization of any city, past or present.

The following are some potential cities for study:

1. From nomadism to the circle of the village: first human appropriation of territory and construction of space; role of ancestor cults; agriculture in permanent sedentism (Mesolithic, Neolithic); connection to economics, anthropology, geography, arts
2. Origin of the city; comparison of Mesopotamian (Ur—anxiously walled in) with Egyptian (Memphis—calm, ceremonial) cities
3. Alexandria: a civilization that emerges out of a combination of Hellenistic, Roman, and Arab influences; cosmopolitan
4. Athens: in comparison with Plato’s utopian city; development of two forms of Hellenistic city, one, on the mainland, organic and irregular, the other, on Ionia, rigorously systematic
5. Rome: leaving its standardized imprint all over Europe, Northern Africa, and Asia Minor; (both Athens and Rome can be studied in terms of myths as basis of power)
6. Jerusalem: region of pilgrimage and international controversy; a city in conflict; religion meets myths, history, geopolitics
7. The Heavenly City: monastery, medieval town; a city still showing medieval core, relation to modern parts
8. Venice: in comparison with Thomas More’s utopia of Amaurot
9. The baroque city: Washington as example
10. Hoketown: in contrast to clean, green suburbia; Ebenezer Howard’s ‘garden cities’ and ‘social cities’ as examples of organic approach
11. Vienna: portrait of a city at turn of the twentieth century, precursor to study of psychoanalysis and psychology
12. Nantes: city described by an author from adolescent perspective by Julien Gracq; MHS students describe Cleveland (connection to language arts)
13. Metropolis: problems of congestion, sprawl, predominance of transportation and communication (see also Jane Jacobs, The Death and Life of Great American Cities, 1961); compare/contrast Beijing, Shanghai, New York, Buenos Aires, Sao Paulo
14. Study a city through time (film-like study); study a city at a particular point in time (photograph-like study); compare cities at one point in time, e.g., London-Beijing
15. Contemporary, non-Western cities: Beijing or Hong Kong as contrasting histories of independent power vs. colonialism; Timbuktu as example of the rise and fall of a city; Tokyo/Kyoto, Shanghai as modern coastal cities

Potential organization of cities:

1. First stages: nomadism to village
2. Gods and cities—religious unity, rising political power, social diversity: Ur/Memphis; Paris (medieval European city); Tenochtitlan (pre-Columbian civilization); Shanghai, Tokyo (pre-industrial cities in Asia); Baghdad (Muslim city), a vertical, tripartite city, shaped by alliance of religion and rising power of kings (Georges Dumézil); connection to economics, geography, anthropology, political science, religion, arts
3. Rationality, order, and emancipation from religion: Athens (democratic model, fragile balance of freedom, equality, rationality, traditions) and development of Hellenistic cities; seventeenth- and eighteenth-century Paris (Cartesian city, new urbanism, domestication of nature, dual society of elite/populace, destruction of the past, mechanization); Paris-Manchester-Cleveland (industrial city, capitalism, implosion/explosion of city, social diversity and segregation, homogeneity of economic activities, society de-humanized, Marx); turn-of-the-twentieth-century Vienna (Freud); connection to political science, anthropology, psychology, geography, arts, philosophy, religion
4. Contemporary Metropolis: the city emancipated from territory, the human emancipated from the body? Delocalization, flux, evolution from stable city to mobile city based on perpetual movement; disappearance of centre/periphery, inside/outside, dematerialization, abolition of bodies/time/space. As Mumford writes, ‘No town plan can be adequately described in terms of its two-dimensional pattern; for it is only in the third dimension, through movement in space, and in the fourth dimension, through transformation in time, that the functional and aesthetic relationships come to life’ (p. 305)
Hence, history takes adolescents on a journey in seven-league boots with a fluency of travel between the past, present, and future that allows

1 a deeper grasp of the present city in time and space, saturated with the knowledge of the past;
2 a re-experiencing of the past as true lives lived;
3 an increasingly abstract understanding of how cities work that lets us identify principles or ‘laws’ of the urban condition (e.g., concerning infrastructure, development of law, diversity of people, division of labour, education, governance, worship, etc.); and
4 a higher-level understanding of the urban condition and what it reveals as universal in human nature to help us envision and plan for a better future, the ‘single nation’.

This fluency of travel is not a natural given, but in fact constitutes the central methodological and metacognitive challenge for both history and the social sciences, and, hence, will be explored in all humanities courses as well as Theory of Knowledge. Explicitly stated, both history and the social sciences conceptualize their subject as other than one’s own (the other): In anthropology, the other is different in culture and remote or separate in space; in history, the other is remote in time (Edward Said, Nicholas Thomas, Johannes Fabian), and may be different in culture as well. The challenge is to negotiate this gap in space and time through the scientific methods the disciplines offer, but also through a habit of heart that embraces understanding the other, empathy and solidarity across time and space as a guiding value.

References


IV
Editorial Summary: The Fourth Plane of Development:
Adulthood’s Point of Arrival

Gerard Leonard

By the age of eighteen or thereabouts we observe certain milestones in development. Adult height is generally attained and the bones cease to grow. The aptly named wisdom teeth now announce their presence and the brain development and the process of pruning the neural connections is entering the phase of completion. It should be noted that recent research indicates that the brain continues to mature until at least age twenty-five and perhaps even into the thirties, especially in areas involving reasoning, abstract thinking, metacognition, judgement, goal-setting, and impulse control. This new research has implications for the types of prepared environments and teaching approaches needed for the university student or the young adult during their early years in the workplace (Jeffrey).

For the individual who arrives at the university at around age eighteen and whose healthy total development has been fully supported throughout the previous eighteen years, ‘what interests him now is the mission of man’, writes Montessori (“The ‘Erdkinder’ and The Functions of the University”, p. 29). She relates this characteristic to one of the functions of the universities going back to their foundation in the Middle Ages when there was a sense that the student had a moral and intellectual responsibility for the state and indeed for the civilization. This is crucial because, she writes in “The Functions of the University”, ‘From the universities come those men who will be called to lead the masses and to defend civilization’ (p. 29). The well-integrated person now understands that ‘it is in order to study, that one has learned to study’ (p. 30). And yet it is not only by study and science that one can reach this level. All the good of all the ages must have been absorbed and surpassed’, writes Maria Montessori (The Four Planes of Education, p. 6). What a remarkable statement this is to reflect on! ‘All the good of all the ages must have been absorbed and surpassed.’

There is a great and growing intellectual capacity during these years and a passionate desire to reach out and do good in the world. The ‘love of power, love of possessions and love of an easy life must be overcome in the fourth plane’ (The Four Planes, p. 6). Many of us have witnessed how life changing it can be for a person in their late teens or early twenties to live for an extended period of time in another nation far removed from their own life experience.
While psychologically there is a greater capacity for self-reflection; emotionally there is an increased ability to understand and feel compassion for the needs of human beings everywhere. One also observes in the fourth plane of development an emerging calm after the sometime storms of the adolescent years. Young adults of this age care deeply about service to the less fortunate in society and are passionate about social and environmental justice. Today, they have become increasingly skilful at using the global internet and social networks to reach out and establish interconnections and action for change across the entire planet.

Such individuals are adapted to their time and have learned to be creatively adaptable. Mario M. Montessori emphasized that the adaptation is not just to one’s nation but nowadays must be to the world, or one is not truly adapted (pp. 12–13). Maria Montessori time and again stressed the great importance of adaptation. ‘Adaptability, this is the most essential quality; for the progress of the world is continually opening up new careers, and at the same time closing or revolutionizing the traditional types of employment’ (“The ‘Erdkinder’”, p. 6).

Our goal as educators is to strive to remove the obstacles to development at each plane, so children and adolescents can self-construct and create the adaptations needed for the global society of their time. We adults have to learn to recognize the driving energies of each stage and observe when the individual is manifesting a characteristic of the particular plane of development. When a two-year-old is determined to button up or zip up their own coat, it is clear that we have to step back, help a little, and only if necessary, and believe that ‘final development’ is predicated on such moments being lived with independence and dignity. We can keep this example in mind as a metaphor for our role as adults during all four planes of development. Montessori in her “Four Planes of Education” lecture concludes by encouraging us to have patience and confidence in our efforts to traverse the four planes with the developing human being. She says to put all before the growing person — the school, the culture, religion, and the world itself, and to be a help in their development of understanding. What a beautiful and simple way of putting it ... ‘to be a help’, simple and yet also not so simple because we have to become acute observers, patient watchers, humble servants of this process. The goal according to Maria Montessori is a man or woman of peace and justice, a man or woman with a strong conscience and personality (“The Four Planes”, p. 7).

We need new human beings that have the clear social conscience and the moral/ethical strength to fight the errors that darken our destiny. Without this we only have knowledgeable human beings. But we already have so many of those! (“The Stages of Education”, p. 7)

Bibliography


MacDonald, G., “The Four Planes of Development”, unpublished lecture

Montessori, Maria, Basic Ideas of Montessori’s Educational Theory (Oxford: Clio Press, 1997)

———, The Discovery of the Child (Adyar, India: Kalakshetra, 1948)

———, Education and Peace (Chicago: Henry Regnery Co., 1949)


———, “The ‘Erdkinder’ and The Functions of the University, The Reform of Education During and After Adolescence” (London: The Maria Montessori Training Organisation, 1936)

———, “The Four Planes of Development” (Amsterdam: Association Montessori Internationale, 1971)


———, From Childhood to Adolescence (New York, Schocken Books, 1973)

———, “The Meaning of Adaptation” in AMI Communications 1990/4 (Amsterdam: Association Montessori Internationale)


Montessori, Mario M., “The Human Tendencies and Montessori Education” (Amsterdam: Association Montessori Internationale, 1956)

Psychodisciplines meant something to Montessori in her thinking about the advanced Montessori design. Her books on Psicogeometria and Psicoaritmetica were first published in Spanish in 1934 and then in English in 2011 (Psychogeometry) and 2015 (Psychoarithmetic). When Mario Montessori felt it was important to have an Italian edition of this title published, he asked Camillo Grazzini to translate and update Psychoarithmetic from the Spanish edition — since no Italian manuscript had survived. This edition was published in 1971 by Garzanti and from thereon became part of the Bergamo Course. The long absence of these books in the English-speaking world has meant that the advanced study on the Montessori adolescent did not start until relatively late. The following article sets up patterns of thinking about psychodisciplines which suggest bridging the gap between formal traditional subject matter and developmentally sensitive curriculum.

Part 1
The General Idea

The idea of a psychodiscipline is not abstract but a concept that is truly embedded in reality. To explain this concept in a very brief and direct way, we can say that it is the study of a subject based on the psychology of the child. Thus, as we know, at a certain point in her life Dr Montessori starts to speak of psychoarithmetic rather than simply arithmetic, psychogeometry rather than geometry, psychogrammar rather than grammar.

To explain the history or what led up to these expressions is quite another matter. I shall take San Lorenzo, the first Casa dei Bambini, as the beginning of this history. In 1907, Dr Montessori took charge of what was more or less a day-care facility for those three- to six-year-old children in San Lorenzo. She was in charge but she was not present every day; she only came in about twice a week. Therefore she was supervising but someone else was there every day. Fortunately for Dr Montessori, that person always did as she was told, and the first instructions she received from Dr Montessori were that the children should be happy. This really impressed me: such simple yet highly significant instructions. I think that we still have to bear this in mind: the children need to be happy; they need to enjoy what they are doing. Otherwise, what kind of human development is actually taking place?

It is amazing to think about what emerged from such an apparently simple beginning because, as perhaps we need to remind ourselves, it is not the Montessori method that led to the first Casa dei Bambini, but the first Casa dei Bambini that led to the birth of the Montessori method. In The Secret of Childhood (1936), Dr Montessori recalled those early years and the many surprising observations and discoveries that she made at the time, observations and discoveries of such importance that ultimately she decided to dedicate her life to the child.

Speaking of books, in 1909 Dr Montessori’s first book about her experiences with the children was published in Italian with the title Il metodo della pedagogia scientifica applicato all’educazione infantile nelle case di bambini, a book which, in English, is simply known as The Montessori Method. But what happened then, of course, is that the children grew older very quickly: a Children’s House child
quickly becomes an elementary school child. Advanced Montessori materials were devised and made available to the older children and, in 1916, Dr Montessori published *L’autoeducazione nelle scuole elementari*, which literally translates as self-education or auto-education in elementary schools. In English, perhaps predictably, the book is published as *The Advanced Montessori Method* and comes out in two volumes. Looking at the second volume, *The Montessori Elementary Material*, what subject areas or disciplines do we find there? Perhaps rather surprisingly, we only find Language, Arithmetic, Geometry, Drawing, Music (and Metrics). Yet it is clear that, in Dr Montessori’s thinking, these older children can use knowledge, or rather can use learning, as a way of developing themselves and this implies that they can learn without trauma, without fatigue, without experiencing school as a burden. And there the Montessori approach to elementary school seems to remain for quite some time.

Why did Dr Montessori limit herself to those particular subject areas? A couple of reasons spring to mind immediately: generally speaking, these are the classic subjects taught in elementary school and the children were obliged to engage with these branches of learning; more specifically, with the Montessori approach they could become an important means to development. In a lecture given in Bergamo, Mario Montessori recalled how there were many teachers who asked Dr Montessori to do something about geography, to do something about history, and so on, but all she would say in reply was that the means for the children to develop themselves were already being provided, and that the children could learn the other subject areas for themselves. In other words, the children could teach themselves geography, and history, and biology, and so on. Well naturally, we know that this thinking changed over time; we know that in the end the Montessori approach to the education of six- to twelve-year-old children underwent a transformation. The Advanced Method was eventually transformed into cosmic education and the latter conveys a rather different vision of how to fully satisfy the developmental needs of children during the second plane of development. Nonetheless, Dr Montessori always saw the disciplines (or, indeed, culture, which is the expression she often uses for human knowledge) as a means for the children to develop themselves, and not as an end unto themselves. The end goal is always development: human development is the centre, the focus, the goal of the Montessori approach to education. This is why Mario Montessori says that Montessori education is developmental education.


("Montessori Jargon" by Mario M. Montessori, published in AMI Communications 1977-2) and why Dr Montessori speaks of psychopedagogy.

Let us return to the nineteen-thirties, a decade which sees the publication of two books with the highly significant titles of Psychoarithmetic and Psychogeometry, respectively. What is Dr Montessori telling us with these titles? In her own words:

progress in the study of mathematics is guided by the child’s psychology instead of by pre-established programmes ("The Psychology of Mathematics", published in AMI Communications 1971-3)

Still in Dr Montessori’s words:

education should be viewed as an ‘aid to life’ which is in the process of development. Thus it is that psychology assumes its true place as the foundation upon which education has to be built. If education is to be in very truth an aid to life, it will no longer be the curriculum which is the centre of education; the pivot upon which all turns will be the entire life of the psyche. Spontaneous work will take the place of the forced activity rendered obligatory by the curriculum […] ("Principles and Practice in Education", published in AMI Communications 1979-1)

Dr Montessori also adds that:

The acquisition of culture is not thus being restricted but it has to take place in harmony with psychic characteristics. Nor is a programme vetoed; on the contrary, it is desirable that there should be one; only it should derive from experience — experience which shows the average level to which children attain when the instruction they receive is suited to their natural activities; and provided this is so, I see no reason why the curriculum should not be even ampler and more interesting than it is today; the existing programmes would bear enriching rather than pruning. The kind of programme I contemplate would stand for guidance, not coercion, and could do no harm at all; the danger is when a curriculum is forcibly imposed. (1979-1)

In Dr Montessori’s experience, when the children’s psychological characteristics were respected, they manifested eagerness to work and enthusiasm in the study of subjects such as mathematics. In fact she says:

what was really wonderful was to see the great spiritual happiness of the children, their amazing enthusiasm, their persistence with self-imposed, difficult problems and their great joy whenever they arrived at the solution, that was often reached through channels unheard of by the teacher herself, ("Psychogeometry" and “Psychoarithmetic”, published in AMI Communications 1982-1/2)

In her lecture, Psychogeometry and Psychoarithmetic, Dr Montessori points out that if disciplines such as mathematics often constitute a problem for education, it is because education is usually centred on an adult-determined curriculum and totally ignores important characteristics of natural development such as sensitive periods and the children’s natural attitude to work. Consequently, the usual approach to education does not take into account, for example, the following (in her own words):

1 Things which are considered one complete whole are in reality composed of several different items belonging to different ‘sensitive periods’.

In other words, complex abilities and complex knowledge can be analysed into various aspects (analysis of the difficulties) which can then be presented and mastered separately (isolation of the difficulty) and sometimes this needs to be done at very different ages (following the guidance of the age-related sensitive periods or sensitivities).

The solution is to develop knowledge of, and to respect, natural development which we can regard as the adult working in collaboration with the child’s inner teacher.

2 Children are not allowed to dwell upon matters long enough to achieve the inner maturity they naturally crave.

In other words, the children’s natural attitude to work (working with maximum effort, practising or repeating something for a long time, etc.) is being totally ignored. This means the children cannot choose their own work (leading to loss of interest and motivation and compromising the development of willpower), cannot work at their own pace and rhythm (compromising perseverance, the taking of initiative, etc.), cannot reach an abstract level of understanding (leading to a kind of dependence on memory which does not help the development of intelligence). The solution, of course, is to give the children the right kind of freedom which, once again, we can regard as the adult working in collaboration with the child’s inner teacher.

3 Information is being transmitted by word of mouth and not through an apparatus that permits individual activity. Children are being given things that are too simple for them and consequently instead of arousing their interest, the children are being bored and this causes ‘barriers’ to arise in their minds.
In other words, traditional education depends on the oral transmission of knowledge. Since this approach has nothing to do with how children develop naturally, the knowledge being transmitted has to be dumbed down. The resulting lack of challenge leads to a lack of interest and this then leads to the building of mental barriers; after all, only interest can lead to the kind of work, spontaneous work, that brings about healthy development during childhood.

The solution is to provide the kind of education that permits the children to be active, to work with their hands, to learn through movement as well with the mind. This means the children have to be provided with objects (materials) so that they are working with reality, with what is real. In other words, the children have to be provided with the kind of materials that help them to develop themselves. Another way of regarding the materials is to understand that the materials themselves teach the children. This is how Camillo Grazzini expresses it in his introduction to Psychoarithmetic (Italian edition, translation by author):

The material that teaches, [is] in brief: ‘a teacher who is always ready, who is constant in patience and constant in mood, a teacher who facilitates analysis and discovery until the root of the problem is reached’, writes Maria Montessori. And we could also add: a teacher who never tires and who provides prompt, objective and explicit correction, a teacher who not only revises [the work] without traumatising but who actually encourages [the child] because this teacher is in the service of learning and not that of judging. […] The material is an aid not to the teacher but to the child for the development of his potentialities.

Here we see the adults not only working in collaboration with the child’s inner teacher but also sharing their teaching role with the material that teaches.

**Part 2**

**Across the Planes of Development**

The Montessori approach to education differs according to the plane of development, which means according to the age of the child. If natural human development is not linear but takes the form of four different planes (or stages/periods/phases), each with its own psychology or psychological characteristics, it is clear that Montessori education (which is developmental education) must also take different forms. To highlight this difference, let us think of some examples relating to the Casa dei Bambini and to elementary school.

The letters of the alphabet are first offered to the young children (Casa dei Bambini) in the form of sandpaper letters where each is accompanied by the relevant isolated sound; the alphabet is offered to older children (six-year-olds in elementary school) in the form of a story about the history of written language and the alphabet, and the story is accompanied by illustrative charts. The former appeals to the senses and movement and leads to literacy; the latter appeals to the imagination, feeds the mind that is hungry for knowledge, and leads to an appreciation of humanity through time and space.

We see something similar with numbers: sandpaper numbers (or sandpaper digits as Dr Montessori calls them in Italian) for the young children who are being offered the key to writing numbers in the decimal system; the story of numbers for the older children.

When it comes to shape, the young children are offered prepared shapes to trace and manipulate whilst the older children build the shapes themselves. The former appeals to the senses and movement, and leads to, among other things, an intuitive sense of geometry; the latter requires conscious understanding and reasoning.

In the case of plants and animals, Dr Montessori has some very interesting things to say in The Discovery of the Child:

responding to the characteristic needs of the young child for sensorial and motor activity applied to absorption of fundamental knowledge, the ground was prepared for a vast and far-reaching development in the elementary school. It provided the solution for the problem of satisfying the interests of the older child without burdening his mind with a preliminary and boring effort to master terminology and static notions, when the interest for them has disappeared. It is the younger child who spontaneously and enthusiastically prepares the foundations, which the older child then uses to satisfy his own superior interest.

(Chapter V, “Nature in Education”, final note)

Dr Montessori is referring here to all the work the young children do, for example, in connection with the classified nomenclatures for plants and animals. This brings us to yet another characteristic of the young child, who is not only a sensorimotor explorer but also a passionate collector of words. This means the younger child can effortlessly acquire the vocabulary which will be needed later by the older child who has different interests, interests having to do with the how and why of things.
The most striking example of all relates to the world. The world is first offered to the young children in the form of the sandpaper globe which represents the Earth and shows, through colour and texture, how the surface of the Earth is made up of land and water. The older children (six-year-olds in the elementary school) are offered the story of God Who Has No Hands. This is a story of the Universe, Sun and Earth, a story accompanied by charts and experiments (aids to the imagination), a story which offers the grandest vision of all, a story which takes us back to the very beginning …

These examples are surely enough to illustrate how different the ‘subjects’ are at different ages. During the years three to six (Casa dei Bambini) one hardly thinks of subjects as such; it is a question of the young children exploring their natural and human world through the senses, movement, language. Therefore this is a world limited to whatever is visible, audible, tangible; in other words, a world that is accessible to the senses.

For the older children, a whole new world opens up for their exploration, and this new kind of exploration requires the imagination in addition to the senses, as well as a more abstract level of reasoning. If anything, what becomes fascinating now is what is out of reach for the senses; it is the unknown and the unfamiliar that now calls out across time and space. As the Montessori approach to education for the second plane of development (ages six to twelve) evolved, the advanced method was transformed into cosmic education and the subjects or disciplines not only served as a means to development but also became subordinate to the cosmic plan of education. Cosmic education not only offers the older children a grand vision of the universe, of life, of humanity, but also helps the children to find the interactions and therefore the interconnectedness or indeed interdependencies of all things. Therefore this approach tends to unify knowledge or, to put it in Dr Montessori’s own words:

This cosmic plan tends to direct all subjects of study towards a unity (Man in the Universe), whilst today, the different subjects are considered as an accumulation of unrelated bits of information. (Letter from Dr Montessori to Mr Nino Bobba, 3 December 1947)

But let us now consider the indications Dr Montessori gives in her book, Psychogeometry (published in Spanish in 1934) which, by the way, deals only with plane geometry. As regards the older child, Dr Montessori says this:

That which we are about to describe is not an elementary, systematic study of geometry. We only offer the means to prepare the mind for systematic study.

These means (the advanced geometry material) could almost be described as a gymnasium for the mind, which is evidently able to discover relationships and therefore not just carry out research and make observations, but also make discoveries. [...] We began by saying that the process we are describing does not relate to the systematic study of geometry. It is nothing more than mental exercises relative to geometry. It prepares the mind to act rather than receive and arouses interest that is always refreshing. The prepared mind is thus made active and when it is time to receive true systematic geometry teaching (at secondary schools), the pupil will resemble an intelligence that meets the teaching halfway with great interest and with an amazing capacity for understanding. (Chapter 2, pp. 55 and 57)

What Dr Montessori is saying here is very important for both the older child and the adolescent. As regards the older children (elementary school), we have to provide opportunities for the children to learn through their own discoveries and this is where the materials are absolutely essential. She gives various examples of the children’s discoveries: certain relationships between equilateral triangles, certain relationships between squares, the extensions to the theorem of Pythagoras. She also gives examples in relation to arithmetic, for example, extracting square root whilst working with one hierarchy (or category) at a time. (This is not the conventional way of extracting square root.) On the other hand, as regards the adolescent, Dr Montessori is saying that this is the time for undertaking a systematic study of geometry.

Let us now think about the first three planes of development. Despite the great differences we have seen in the Montessori approach to education in the Casa dei Bambini and elementary school, both the first and second planes of development are planes of childhood and consequently share certain characteristics when it comes to work, for example, the attitude to work and the need for materials. In addition, the six- to twelve-year-olds are living through a very healthy, strong and stable time of developmental life, which means this is an ideal time for what Dr Montessori calls the acquisition of culture, the acquisition of knowledge and an understanding of the world and human society. Indeed, in Dr Montessori’s experience, by the time the children in Montessori schools were twelve, their knowledge was such that they were a few years ahead of other children.

Adolescence, however, is a completely different plane of the development; it is the first plane of adulthood and, as such, it is a plane of transformation. During the first years of adolescence, the individual undergoes a physical
transformation, one which has its own special name, puberty. With puberty the child becomes an adult from a physical point of view, but the psychological transformation can take much longer. Anyway, this is a time when the individual is very vulnerable both physically and psychologically. Therefore the young adolescent becomes ill more easily and may show an ‘unexpected decrease in intellectual capacity’ (From Childhood to Adolescence [2nd Clio edition], Appendix A, “Erdkinder”, p. 63). Consequently, this is also a time when the adolescent needs to be protected and it is certainly not the right time for a lot of academic pressure. Psychologically speaking, the adolescents need to learn independence, independence in the usual sense of the word, and this means they have to become involved with adult work and everything that entails.

For these and other reasons, as we know, Dr Montessori spoke of an outdoor life in the countryside, she spoke of a farm environment. Since we are all familiar with the Erdkinder, there is no need for details, but there a few points I wish to make. Although a farm is by no means the only environment in which adolescents can live, there are a number of reasons that make it particularly suitable. I participated in some adolescent deep dives or discussions that were held in Sweden, and what became clear is that a farm provides an environment where the environment itself indicates the work to be done. The adolescents become quite naturally involved in the work of production and exchange. There is nothing artificial about the work and no need to think up projects to occupy them. In addition, since the adolescents also live on the farm, all the residential aspects of life also foster the development of an independence appropriate for the age, an independence which prepares the adolescent for adult life.

There are two human tendencies that are particularly important when it comes to adolescence: work and the tendency to associate with others. Both of them can be followed through the planes of development, but let us focus on adolescence. Dr Montessori makes a huge distinction between the work of the child and that of the adult. The former has development as its goal; the latter is directed at transforming the environment. Adolescents are new-born adults and they are interested in adult work, adult work which has to do with transforming the environment. Renovating a barn, building a recycling station or a veranda, these have to do with transforming the environment, and some of this work I witnessed in Sweden. Adolescents need adult work; they are interested in adult work. That means they also need to produce for the market and earn money. The processes involved require decision taking, effort, collaboration, perseverance, responsibility, all of which are important for learning what it means to earn a livelihood and develop economic independence and therefore prepare oneself for adult life. What is amazing about adolescent work is that it is simultaneously adult work and developmental work. Adult work, work that transforms the environment, is work that requires group effort, collaborative effort, and therefore organization. Adolescents learn how to associate with others, particularly their peers, for the purpose of adult work and therefore in a highly disciplined fashion. And if they have not done so before, they also learn how to organize and discipline themselves as individuals. This may not be a subject but it is discipline, and this is the discipline that, according to Montessori, leads to success in life.

When it comes to studying, or subjects if you like, the early years of adolescence are focused on studies relating to the practical work they are doing. For example, there is a great deal of studying that can be done in relation to building a recycling station, recycling after all is concerned with one of our most critical environmental problems. And adolescents who were in Montessori elementary environments are more than prepared for tackling environmental issues.

The later years of adolescence can focus on systematic studies of the kind that Dr Montessori mentions in Psychogeometry and, from talking with older adolescents in Sweden, it would seem that they are then more than ready to undertake such studies.
SECTION 3
Legacy and Academy

The Appeal of Pure Legacy: A Direct Orientation to Montessori Vision

The Legacy Catcher
A Tool Kit for Trainers and Trainees to Improve and Keep the Montessori Legacy Alive and Well
David Kahn

A Science of Peace
Annette Haines

On Becoming a Citizen of the World
Can Montessori Achieve Its Aim?
Kay Baker

Academic Integration: A Confluence of Formal Studies and the Flow of Montessori Legacy

Montessori: A Spiritual Path
Ruby Lau

The Montessori Cosmic Vision and the Judeo-Christian Tradition
Sofia Cavalletti

Maria Montessori’s Moral Epistemology
Solving the Problem of Moral Relativism
Patrick R. Frierson

Montessori Adolescents and Community-Engaged Work
Inherited Projects at Colegio Montessori de Tepoztlán
Guadalupe Borbolla

Me, Myself, and Cuentepec
Aarón López Flores

Technology and Its Use in a Montessori Environment
John McNamara
Introduction for Section 3

Section 3 provides a contrast between a legacy and a scholarly approach.

In the summer 1983 issue of The NAMTA Journal the label ‘philosopher trainer’ was invented. The editorial reads:

There is a continuing sense of loss with the deaths of prominent Montessorians: Abs Joosten, Lena Wikramaratne, and Mario Montessori. These principal actors form an inspired Montessori drama. Their personal commitment to Montessori was sacrificial. They saw the whole of Montessori’s work and devoted their lives to the integration of Montessori principles with the training of teachers. No one knows how they caught the faith, but their styles of presentation were that of creative inspiration. They operated from a humanistic pursuit of an ideal. They had the mark of a higher consciousness. (Kahn, p. 31)

In this journal additional legacy trainers are featured. The legacy group selection includes Kay Baker, Guadalupe Borbolla, Silvia C. Dubovoy, Camillo Grazzini and Baiba Krumins Grazzini, Annette Haines, and Nimal Vaz. This list is not a random choice, nor is it definitive. Their work shows a passionate advantage. They held the Montessori mission close to their heart from their career beginnings. Their minds are living archives and when they die, a piece of the Montessori legacy leaves with them. Not to be provocative or omniscient, I speak only as someone who has had the privilege of benefitting from the wisdom of many Montessori trainers throughout my long career in this life science.

A Montessori legacy trainer is imbued with a pure understanding of Montessori’s connected spiritual vision which comes before all other details. By contrast a Montessori researcher and objective scholar can document deeply, but the legacy trainer finds her truth in working with teachers, their trainer trainees, and children, along with their reverence for Montessori’s primary sources.
A Montessori legacy borrows from Montessori’s life, work, and spiritual vision. Montessori writes, ‘I had a strange feeling that made me announce emphatically at the opening that here was a “grandiose” undertaking of which the whole world would one day speak.’ This famous quote expressed her realization of a global dream which pertains to “the mission of man”. Her legacy seeks to fulfil its final aim: to benefit those who are underserved by their difficult birth conditions. The legacy trainer harbours the dream and looks forward to a time when Montessori’s legacy reveals a developmental truth from birth to adulthood and diminishes the unknown.

This AMI journal seeks to touch the vision that Montessori set before us more than a century ago and to convert our commitment to the promise of a just society, a balanced human-built world operating in harmony with nature. Yet all the footnotes and cross references, research and compilations cannot convey the essences without legacy. The legacy trainer is in touch with the Montessori soul; there is a fluency in her expression, and through a theory of development she shares a beautiful understanding of human growth.

But legacy is not enough! We need university scholarship to archive, develop, expand and refine our legacy. We need a myriad of voices to document our progress in the evolution of educational truth from a single original genius source. The Part 2 articles in this section demonstrate the value of Montessori compared to relevant alternatives outside of Montessori. Montessori’s expanding intellectual value reaches beyond her own inner circle and accelerates the global cultural assimilation of its rich legacy into mainstream without losing its identity. As Montessori educational reform reaches out to a wider band of awakening; the University is opening its acceptance of Montessori and Montessori is opening its process to the University. This is a noteworthy achievement for cultivating humanity’s potential for the future.

D.K.
Maria Montessori receives honorary doctorate in Philosophy and Letters from the University of Amsterdam, 18 September 1950. Photo: Daan Noske
The Appeal of Pure Legacy: A Direct Orientation to Montessori Vision
New trainers, when writing their required papers, need a research tool to search the historical legacy to make the acquisition of Montessori sources information possible. We named this system “The Montessori Syntopicon” about eight years ago, inspired by the interest of Annette Haines. Annette and I wrote the following. “A Syntopicon is a universal system of key concepts for Montessori research. The goal of this beginning phase of the project was to put together a list of key concepts which comprise great ideas of Dr Montessori.

The great ideas represent the voices of Maria Montessori, the intricacy of her thinking, the webs of meaning, and the perspectives of the world view she developed. For example, a ‘great idea’ may be normalization; its understanding might entail concepts such as polarization of attention, observation, work cycle, false fatigue, and so forth. The terms are not suggested as glossary jargon but as a support of educational reform for the refinement of understanding and precision in the use of Montessori language. The Syntopicon essays will lean towards the implementation or application of the Montessori ideal. Thus each essay will necessarily address the broader meaning of what might seem, at first glance, to be rather straightforward concepts.

For example, the concept prepared environment can simply be thought of as a physical space, a classroom with Montessori materials, but it can also be extended to include the adults’ influence. And it can be stretched even further: a womb, a home, or a farm all can be seen as prepared environments. Each is a fractal of the larger concept and each offers guidelines for good practice across the planes of development as well as a basis for a more in-depth understanding of Montessori.

To be a universal tool, the Syntopicon must guard against dilution of a concept due to overuse or banalization and at the same time unlock its meaning for both the novice and the practiced. A finite number of terms will be found to create a key set of annotated concepts that will unlock the general understanding of Montessori’s work. The Syntopicon, when complete, will thus distil, illuminate, and clarify the ideas of Montessori. Therefore the list will need to be discreet, elegant, and limited. Only those concepts which comprise the great ideas of Montessori will be included. Some of the concepts may be general, i.e. they cut across the human life experience. Others will be more specific, applying to certain phases, planes, or even sub-planes of human development. The Montessori great ideas and their
respective key concepts are selected for their central ability to describe life, a Montessori envisioned life pointing to observed psychological characteristics as well as those human qualities which are not always visible or ascertainable. The great ideas circumscribe while assisting the ‘science of man’. Most of the concepts used will be understood in two ways: in a specific Montessori sense and in a common sense. For example, the word nebulae has a specific meaning in a Montessori context, but in the common vernacular a nebula is understood to be ‘an immense body of rarefied gases in intergalactic space’.

Instead, a syntopicon or legacy catcher brings ideas together and clusters them to discover both their common ground and their inherent diversity. Thus, each great idea will be discussed in depth using an essay format with references to a wide range of original texts. Each section will introduce its topic with a multifaceted conversation to ‘flesh it out’ and bring it to life. These essays will act as bridges to the original sources, offering students and scholars avenues to more easily access the wide-ranging educational theory and practice of Maria Montessori. Each concept will be referenced (and cross-referenced when necessary) to elucidate each Montessori great idea leading to the core of Montessori’s thought. Additional readings will be suggested to show how each Montessori idea is part of a larger tradition or school of thought. This project will reactivate the dynamism of Montessori’s theory and stimulate reflections. As pedagogical works Montessori’s writing also teach; they raise questions and problems; they examine almost every educational proposition for all time; they reach for standards for experimentation where one challenge bears upon the next. It is hoped that the linguistic framework provided by the Syntopicon will provide cohesion for the Montessori experiment so new innovations and discoveries can be absorbed into the whole of the literature. Action must
become the muscle of Montessori social reform, and the complexity of Montessori’s thought must be absorbed into a living cyber tradition which can expand and develop and is easy to use. The common currency of fine Montessori distinctions can no longer come from those first-generation interpreters who experienced Montessori’s intentions first-hand but will require the unveiling of a thinking process implicit in the words of Maria Montessori. Her language should resonate in each teacher’s observations and allow a newly revitalized scientific pedagogy to progress within the structure, continuity, and interconnectedness of one hundred years of practice.

Thus, the Syntopicon will allow future generations to speak about the great ideas derived from the great work of the legacy trainers around the world — past, present, and future. Montessori’s Primary sources will also be Indexed. The Syntopicon will create a communication system that converts the everyday Montessori effort into a universal comprehensive vision and builds a sense of direction and a unity of purpose so that Montessorians may understand more fully the nature of their ongoing evolution. The quest for Montessori education is widening. As we approach the end of child development, we see the underlying push of the vision, where it leads, how Montessori psychology marches on, and to what end. The legacy trainers have the intrinsic intuition and core knowledge for a connected design of Montessori’s writings and how to express the science of the human-built world and the great need for peace through sustainability. An interdisciplinary understanding is needed to see the universal need of education for humanity. Gathering the following valuable archives in one location in cooperation with the various holders of the archives would further research and knowledge.

**Potential Partners**

- Archives of the Association Montessori Internationale, Amsterdam
- Angeline Lillard
- Paola Trabalzini and Benedetto Scoppola, Opera Nazionale Montessori, Polo Bibliotecario della Regione Lazio, online
- Baiba Krumins Grazzini, Centro Internazionale Studi Montessoriani, Bergamo
- Jacquie Maughan, Mortimer Standing Archives, University of Seattle
- Paige Bray, University of Hartford Montessori Studies Institute Archives (to be built using trainer research papers)
- Gerard Leonard, Collector and Montessori Historian, University of Hartford
- Laurie Ewert-Krocker and Jenny Marie Höglund
- Harold Ludwig, ed., Maria Montessori: Gesammelte Werke (in cooperation with Christian Fischer, Michael Klein-Landeck, and Volker Ladenthin in connection with the Association Montessori Internationale)
- Clara Tornar, Montessori bibliografia internazionale: 1896–2000

A legacy trainer makes a huge contribution to a Montessori sequence of key concepts. The trainer sees the woof and warp of the Montessori tapestry as it is woven into the soul of each teacher. The trainer brings the whole of the self and the universe to children. Legacy trainers immerse themselves in broad topics such as the origins of life, history, the life of Maria Montessori, and the disciplines from mathematics to science.

Annette Haines, whose article follows, was one such legacy writer and a visionary thinker. Her knowledge, passion, and commitment move our evolutionary path forward.
References

A Science of Peace

Annette Haines

I. Introduction

To ask anyone to speak on peace would appear quite foreign to our time, since we think today that nobody is worth listening to on any subject unless he is a specialist. How strange it is therefore that there exists no science of peace. Great numbers of people devote their lives to the study of the hidden causes of natural cataclysms, such as earthquakes, which mankind is powerless to overcome. But it can be asserted without hesitation that no research study of peace, even of the rudimentary character, has been undertaken.

These were the words of Maria Montessori in 1933. It was a conference like this where she was asked to speak on the subject of peace. Today, perhaps, we can begin to speak more definitively since, sixty-four years later, progress may actually have been made on the research study she alludes to, although those doing this research have not been consciously aware that they were doing it and little has been written, documented, or reported; no data has been collected or analysed or interpreted. Yet I am going to suggest that in 2007, we have already begun the study she wished for so long ago. Why would I say this? Because phenomena have continued to manifest themselves in the work of children which, taken together, constitute a hope and a promise for mankind.

II. The Discovery of the Child

In San Lorenzo, as we all know, Montessori felt she had made a momentous discovery. She said she had ‘discovered’ the child, had unveiled the ‘secret of childhood’. What was that discovery? What is the secret of childhood? It is that children, when allowed to develop according to the natural plan, display quite amazing characteristics: for example, they become calm; they are industrious; they enjoy silence and working alone. They are generous, loving, happy, and have an intense attraction to reality — characteristics that most people still would not ordinarily associate with children. What causes such a change? It is today as it was in San Lorenzo: the possibility of purposeful work, freely chosen. When young children are given freedom to choose their own activities and allowed to act from their own spontaneous (and at times mysterious) motivations, each will repeat the activity and concentrate profoundly on the work at hand.

Annette Haines explains Montessori’s unique knowledge of peace as part of character formation of developmental education. The proliferation of Montessori Education throughout the globe allows the child to become “the hope and promise” of world peace. As an exemplar legacy trainer, Annette looks at developmental learning outcomes increasing peace on earth for the long term. This transcendent future oriented article on peace connects good child development as a proactive pacifist source of making peace on earth possible.
III. Normalization:
The Young Child and Peace

Recognizing that ‘the longer one does attend to a topic the more mastery of it one has’, American psychologist William James remarked, ‘An education which should improve this faculty would be the education par excellence.’ Montessori, set out to do just that: to provide environments for children that would be conducive to concentration. She believed that if environments could be prepared with ‘objects which correspond to […] formative tendencies’ the child’s energy and interest would become focused on that aspect of the environment which corresponded to the developmental need.

She studied this phenomenon of concentration throughout her lifetime. She suggested that a child concentrates when he focuses his attention, his energies, on a single exercise, a single work — ‘where the movements of the hands are guided by the mind.’ She said that given ‘an environment favourable to the child’s spiritual growth’, the child ‘will suddenly fix his attention upon an object, will use it for the purpose for which it was constructed, and will continue to repeat the same exercise indefinitely.’

And with concentration, she said, the majority of the children grow calm. Their ‘nervous systems rest’. They only move their hands when they work. A child who concentrates does not disturb others. When children find objects that interest them, ‘disorder disappears in a flash and the wanderings of their minds are at an end.’

‘When a child concentrates’, she said, ‘his character is changed. It is as though he had taken off a mask.’ It is as though a connection has been made with an inner power or with the subconscious and this brings about the construction of the personality.

It is concentration of power which gives strength, and whatever means that provoke this concentration become a means of building up of character. ‘Concentration connects the exercises with something inside. If the creative energies of a child are disconnected, broken, concentration brings a new connection which results in normality.’ ‘When this spiritual connection is made, all the powers in the individual will function, all the little lights in the individuality begin to shine. When we have obtained this,’ she said, ‘we are at the starting point.’
The activities available to the children in a Montessori classroom are those which Montessori described as ‘purposive’ (1949/1967, p. 146) and which can be performed by the children for both selfish and social ends. When children work in this way they increase their level of independence while at the same time they come to realize their actions benefit others.

In a Montessori environment, one child will be seen buttoning the clothes of another, or helping tie his shoes or apron; they rush to sweep up a spill. When a child washes the dishes or scrubs the cloths, he cleans what others have soiled. When he sets the table, he works for the benefit of the others. Yet, he does not consider all this work done in the service of others to be special or in any way to be an effort deserving praise. It is the effort itself that is for him the most sought-after prize. In this way, the child develops a sense of social purpose — unconsciously, effortlessly, without even realizing it.

Once they have reached this level, the children no longer act thoughtlessly, but put the group first and try to succeed for its benefit. ‘This unity, born among the children in the prepared environment’, which seems to be ‘produced by a spontaneous need, directed by an unconscious power, and vitalized by a social spirit’, is what Montessori called ‘cohesion in the social unit’. And this cohesion, Montessori said, ‘forms the “warp” on which is later woven the “woof” of law, producing the fabric of society.’

**IV. Responsibility: The School-age Child**

So, in the early years of life, children construct their personalities. If allowed the opportunity for normal development, they emerge at around the age of six or so, adapted to the world of human beings as experienced in their first environment, the home and the family. If they have been in a Children’s House, they will already have experienced being a part of a working society, each having done his or her part. If they have had the opportunity to construct themselves normally, they will already be disciplined, happy, industrious children who are instinctive learners wanting to learn more.

In the next phase, the child is spontaneously driven to learn about the world outside the close confines of home and family and Casa, and for this we provide a different environment, for what suffices at one stage is no longer adequate at the next. The child, who is an adult-in-the-process-of-becoming, has no choice but to begin to orient to the greater world of human beings because eventually he will have no choice but to live in a social context, to live with others in the world. Therefore the child at this age must adapt to the world and the greater human culture out there.

The children should love everything that they learn, said Montessori, for their ‘mental and emotional growths are linked.’ Whatever is presented to him must be made beautiful and dear striking the imagination. Once this love has been kindled, all problems confronting the educationalist will disappear.’

She makes it clear that she is talking about Intellectual Love and not personal love. The younger child’s ‘love of the world’ is now sublimated to the realm of ideas, as Dante’s originally personal love of Beatrice was sublimated to a Platonic love, a more perfect kind of love. At this age, the possessive instinct can become a strong desire to possess not things, but a knowledge of things. In To Educate the Human Potential, she writes, ‘It is hoped that when this sentiment of love for all subjects can be aroused in children, people in general will become more human and brutal wars will come to an end.’ She asks us to call the attention of children to ‘the hosts of men and women who are hidden from the light of fame, so kindling a love of humanity; not the vague and anaemic sentiment preached today as brotherhood, nor the political sentiment [...] nor patronizing charity for humanity, but a reverent consciousness of its dignity and worth.’

**V. Man as Cosmic Agent**

In an address given in London in 1939, Dr Montessori said, ‘Men are better than they appear to be. Indeed human beings impress me as being extremely good and charitable, but they practise goodness and charity so unconsciously that mankind does not realize that it possesses these virtues.’

She goes on to say: ‘Even if men and women are fighting one another today or have fought in the past, [...] they have nonetheless been working throughout history to build the world that will be the world of peace.’ And so the history given to the elementary child is not the usual list of battles and kings, or dates to be memorized, that most of us remember from our school-age years; it is more the story of human beings, people living in different climates and geographical regions, solving problems and working together to meet their fundamental needs. It is the story of men and women and boys and girls, creating and inventing ingenious ways to fashion an existence in what were sometimes inhospitable circumstances, first in one way and then in another, based on the circumstances. And it is
the story especially of all those unnamed individuals who came before us and to whom we owe such gratitude.

In the cosmic tales told to the children at the elementary level, the animals, rocks and plants, the wind, the sun and the water, all work according to their nature: rocks, water, air, solids, liquids, and gases all work in a sense, and when they do their work — each in their own way — the balance is maintained. Today as yesterday and millions of years ago, the world spins around itself and round and round the sun.

When we see the order in nature, we can see the strange fact that all living things not only do things to benefit themselves, they also benefit others. The dung beetles and other scavengers, for example, are sweepers of the earth, they keep the earth clean. Trees take in carbon dioxide from the air (a poison for animals) and put out oxygen (a necessity for animals). Thus they keep the air pure. Nature has this beautiful arrangement whereby everyone does something for its own life, but in so doing also acts unconsciously for the betterment of everything. Elementary children learn that, when all the particles, living and non-living, do their jobs, the cosmic order is maintained and things run smoothly.21 When the school-age child understands how the universe works, they also understand how all the peoples of the world along with the rocks and the wind, the sun and the rain, the plants and the animals, and so forth, are interdependent.

VI. Valorization of the Personality:

The Adolescent and Peace

As you know, when it came to the adolescent, Montessori especially espoused secondary-school reform. Society, she said, was ‘reaching the bursting point...facing a crisis that menaces the peace of the world and civilization itself.’22 Science and the rapid material progress of the modern world had transformed social life but the schools had not kept pace. Education, she said, must be ‘very broad and very complete’. Labourers needed to learn to work with their heads and intellects needed to learn how to work with their hands, as ‘men who have hands and no head and men who have a head and no hands are equally out of place in the modern community.’23

She suggested a boarding school in the country, where a life in the open air, the sun, and a diet rich in vitamins would nourish the body of the adolescent while the calm, the silence, the marvels of nature, would nourish the spirit. On the farm, the ethic of the land and its destiny is deeply personal, touching at some unconscious level the will to live and to provide for future generations. ‘The ethic of the land and its preservation is a moral principle’, says David Kahn, who has worked with adolescents in Erdkinder settings. The ethic of the land asks the mind and the heart to work together ‘to make sense of the world and what is most valued’.24

In the first chapter of From Childhood to Adolescence, Montessori speaks of the insecurity of modern children: ‘We have lost that security which we had in the past’, she says, and she uses an agricultural metaphor to describe the extreme changes of the world. ‘The world’, she said, ‘is like a piece of land that is going through the vicissitudes of a settlement of the soil.’25 To counter a world that has an unsure future, especially from the point of view of the adolescent, the young person must have both feet planted firmly on the ground.

Montessori says a man must have strong character and quick wits as well as courage; he must be strengthened in his principles by moral training and he must also have a practical ability in order to face the difficulties of life. Adaptability — this is the most essential quality; for the progress of the world is continually opening new careers, and at the same time closing or revolutionizing the traditional types of employment.

‘[…] there is a need for a more dynamic training of character and the development of a clearer consciousness of social reality.’26

According to Kahn, ‘Adaptation at the adolescent level, because it encompasses a widening level of social reality, entails a higher level of complexity and a direct connection to emotional life.’27

And to Montessori adaptation meant ‘happiness, ease and the sort of inner equilibrium which gives a sense of security to the child. It is based on the permanency of the spiritual, ethical and economical equilibrium of the group environment […] For adaptation thus considered, “stability” plays a great role, because it represents the basis from which to start towards the realization of the individual’s aspirations. It is as the solid ground is under one’s feet when walking.’28

‘The value of the personality’ she said, ‘must be actively cultivated by concrete experiences.’29 The school of the Erkinder is designed to provide adolescents with the concrete experience necessary to create an emotional equilibrium whereby the shoals of adolescence may be successfully negotiated, enabling the young adult to emerge, when the time comes, ‘to make a triumphal entry into social life, not entering it debilitated, isolated, or humiliated, but with head held high, sure of himself.’30
VII. Conclusion: The Adult and Peace

Montessori felt that our modern age, our time, represented a time of crisis, a period of passage from one era to another comparable only to the opening of a new biological or geological period in which new conditions of life would be realized which have never existed before. Today, new knowledge in the fields of physics, microbiology, chemistry, and genetics is available to anyone online. We talk of the ‘information age’, and information, per se, is amoral.

Montessori warned us, “If the sidereal forces are used blindly by men in view of destroying one another, the attempt will speedily be successful in doing so, because the forces at man’s disposal are infinite and accessible to all.”

The natural boundaries of mountains, deserts and seas no longer limit man, ‘now that he can fly over them’, she wrote. In this new age, laws and treaties will not be enough; the limits will have to come from within.

For this, we desperately need a fundamental change in education: one which can contribute to the formation of man and his personality, for ‘the child who has never learned to act alone, to direct his own actions, to govern his own will, grows into an adult who is easily led and must always lean upon others’.

Dr Montessori, living through a period of great war, tyranny, and oppression, grappled with fundamental questions of man and society, and asked herself how education might best enhance our hopes for a world of peace.

She saw the possibility of a new kind of education: an education which would begin at birth: an education which, rather than merely helping children adapt to what presently exists, rather than helping them accommodate, would allow for the formation of individuals who are adaptive to human concerns, individuals with the critical insight and awareness necessary to penetrate ideology and ensure a more responsive culture. She understood that peace could not be brought about by marches or taught through a curriculum. She understood that a ‘New Age’ would not emerge from meditation or peak experiences. A peaceful society cannot be built on a foundation that does not seek to integrate body, mind, and spirit.

What the world needs — and soon — is whole men and women: not mutilated persons, but individuals who can work with their hands, their heads, and their hearts. I have seen some of these whole men and women that Montessori spoke of — and they are the same children who grew up in our schools and are now adults.

Today’s children can show us the way, just as they did for Maria Montessori one hundred years ago. Politics and peace talks may provide a cessation of war but they cannot create peace. Over and over we realize that we cannot change the adult. Peace will emerge only when there is indirect preparation. This must be the work of education. Education cannot simply give facts and pass on formal knowledge. It must be understood as the help we can give for the ‘normal development of the new man’.

To learn how to assist ‘the constructive work that the human soul is called upon to do, and to bring to fruition a work of formation which brings out the immense potentialities with which (all) children […] are endowed’ — this is the study, the science of peace Montessori asks us to create.

Today on this joyous celebration of the Montessori Centenary let us vow together to consciously pursue this study, this science of peace. For the children of today are still the bright new hope for mankind.
Annette M. Haines, PhD (1945–2017), was an internationally recognized AMI lecturer and legacy trainer. She was involved in the field of Montessori education since 1972 and had extensive background in the Children's House classroom. She held both AMI primary and elementary diplomas as well as a bachelor's degree from Washington University in St. Louis (Missouri), an MEd from Cleveland State (Ohio), and an EdD from Southern Illinois University. She was Associate Director of the North American Montessori Teachers’ Association (NAMTA), chairperson of the AMI Scientific Pedagogy Committee, and a member of the Executive Committee and Board of the AMI. Haines delivered this speech on a few occasions throughout the Montessori centenary year, throughout the world. The first time was at the Montessori Centenary Conference in Rome on 6 January 2007.

© Estate of Annette Haines.
On Becoming a Citizen of the World
Can Montessori Achieve Its Aim?

Kay Baker

The exploration of the meaning of ‘citizen of the world’ brings the Montessorian to the centre of humanity’s fulfilment of its destiny, backed by faith and hope in each individual’s development, and looking at Montessori education as the framework by which one gains specific knowledge about individual rights and the rights of others. Linking the concept of the citizen of the world to practices at both the elementary and adolescent levels, Kay Baker’s insightful article invites both the teacher and the student to become citizens of the world in the highest sense of the phrase. She was a legacy trainer of the greatest self-realization.

Introduction

I need to first examine some definitions and set the context for this topic. As I thought about the topic, I increasingly became convinced that we need to reflect on the meaning of being a citizen of the world before we attempt to answer the question as to whether Montessori can achieve its aim. Maria Montessori often writes about the meaning of education and how education is to be considered in the context of human development. She struggles to define its meaning and says in Education and Peace, ‘We find ourselves lost at this point in a maze of contradictions’ (p. 121).

Still, Montessori does not despair but turns to the child. She writes that the role of education ‘must no longer be limited to furthering the progress of material civilization, which may indeed have become too highly developed’ (Education and Peace, p. 119). She continues:

The child is our only guide to what education should be; only he can help us understand the complications of social life and man’s unconscious aspiration to be free in order that he may bring about a better social order.

Man seeks freedom in order to build a supernatural society. He does not seek freedom in order to go his own way, but in order to live. (p. 121)

The child has shown us the basic principle underlying the process of education, which he has expressed in the words ‘Teach me to do things by myself!’ The child resists letting adults help him if they try to substitute their own activity for his. The adult must help the child do things entirely on his own, for if the child does not reach the point of ceasing to rely on the help of adults and becoming independent, he will never fully mature intellectually or morally. (p. 120)

So we have to consider the topic first from the perspective of what it means to be a citizen of the world, then from the perspective of whether Montessori can achieve its aim of helping the child to become a citizen of the world.

Citizen of the World: Definitions

The word citizen (antonym alien) comes to us from the French cité, meaning “city.” Historically, a citizen is a native or inhabitant of a particular place and was understood to
be a freeman. Commonly, a citizen is a native, inhabitant, or denizen of a particular place, where denizen includes an alien granted rights of citizenship, more properly termed immigrant—a person who settles in the new land. Alien comes from the Latin, meaning “other,” and applies to a resident who bears political allegiance to another country.

In a more detailed definition, a citizen is a member of a state or nation, especially one with a republican government, who owes it allegiance and is entitled to full civil rights by either birth or naturalization. Further, a republican government is a state or nation in which the power rests in all the citizens entitled to vote and is exercised by representatives elected by them and responsible to them. Therefore, if the government is run by a dictator or monarch, the term subject, not citizen, is used.

The etymology of world is enlightening as well. World comes from the Old English, meaning humanity, and in a prior meaning was used to represent the ‘age of man’. (Interesting how egocentric the human being, where a word that also means the planet or universe started as meaning the age of man.)

In this presentation, I will use citizen of the world to mean an inhabitant of planet Earth, itself part of the larger universe, who owes the universe allegiance and is entitled to full civil rights. There being no republican government of the universe at present, it is necessary to define civil rights in the context of the universe. A right is that to which a person has a just claim: power, privilege, etc.; that which belongs to a person by law, nature, or tradition.

As written in the U.S. Declaration of Independence, 4 July 1776: Human beings are ‘endowed by their Creator [nature] with certain unalienable [inalienable: that may not be taken away or transferred] Rights, that among these are Life, Liberty, and the Pursuit of Happiness.’

In the Declaration of the Rights of Man and of Citizens by the National Assembly of France, 26 August 1789, prior to the French Revolution, one finds the first ‘sacred right’: ‘Men are born, and always continue, free and equal in respect of their rights.’ The second sacred right is this: ‘The end [goal] of all political associations is the preservation of the natural and imprescriptible [that cannot rightfully be taken away, lost, or revoked] rights of man; and these rights are liberty, property, security,
and resistance of oppression. The complete set of rights numbers seventeen.

There are other declarations of human rights, notably the United Nations Declaration of Human Rights, formulated in 1948. There is an American Declaration of the Rights and Duties of Man adopted by the Ninth International Conference of American States (1948). In the latter document, for example, the right to an education is matched by the duty to receive instruction, the right to vote and to participate in government is matched to the duty to vote.

Nevertheless, the acknowledgement of rights is not sufficient. There must be some means of securing these rights among the society of human beings.

Thomas Jefferson wrote to a colleague, ‘It is to secure our rights that we resort to government at all’ (cited in Thomas Jefferson on Politics & Government). Hence these natural rights became known as civil rights — those rights secured by the establishment of a government. Civil rights pertain to the private rights of individuals and to legal action regarding these, as distinguished from criminal law. Securing these rights falls to the government instituted by the consent of the governed. Should the government not secure these rights, the governed may change the government.

Thomas Jefferson wrote in the Declaration of Independence:

To secure these [inalienable] rights [to life, liberty, and the pursuit of happiness], governments are instituted among men, deriving their just powers from the consent of the governed. [...] Whenever any form of government becomes destructive of these ends, it is the right of the people to alter or abolish it, and to institute new government.

(Cited in Thomas Jefferson on Politics & Government)

Again, there is no government of the universe. No matter, the rights of humans are inviolable and come by virtue of birth as a human being. One does not need a government to have these rights. But who secures these civil rights? Here we can make a leap to the world situation where the consent of all people preserves these rights for all. This is what our children are preparing for — to know of rights and the securing of these rights for all by consent.

So the question is this: How can the people of the world be united and how can each person be a citizen of this world, where citizen of the world means a person who is responsible for establishing governments that preserve the rights and recognize the duties of citizens of the universe? This is what Maria Montessori proposed as the goal of education — the unity of the world/humanity. Surely this is a worthy goal.

Citizen of the World:
What Is the Syllabus?

What is this education that will lead to the unity of humanity, thus securing the rights of citizens of the world? Here are words of Maria Montessori on this topic of preparing children to be citizens of the world:

Déclaration des droits de l’homme et du citoyen
There is need of a syllabus that can give an understanding of the conditions of man in modern society with a cosmic vision of history and the evolution of human life. What purpose would education serve in our days unless it helped man to a knowledge of the environment to which he has to adapt himself! (Childhood Education, p. 14)

I note particularly that Dr Montessori uses the terms modern society and in our days. It is the present time to which the child has to adapt. So the syllabus must address life as it is today, knowing that one cannot fully grasp modern society without also knowing the evolution of human life, given by the study of history (one learns of past events by narrative).

What are the details of the syllabus? Montessori’s approach is to include everything. She adds that to give the whole of human knowledge is impossible, so she advises giving the child experience of the domains of human knowledge and letting the child explore whatever details the individual finds interesting. To be sure, details of some domains, such as language, music, and mathematics, are given to provide the child with enough information and skill to explore further details on their own.

Parenthetically, I want to make a statement with reference to technology. If I am to take the words modern society at face value, then technology is part of the syllabus. I think that we as a community need to define technology for ourselves and bring it to the child, who is living at a time when technology is part of our society. For example, the child of today cannot visit a library and find a book without the use of technology. Surely we can distinguish knowledge and use of technology from addiction to computer games.

Whatever the details of the syllabus, suffice it to say that it includes that which helps a human being gain the knowledge and skill necessary for adaptation in our day. Because of our human tendency to perfection, we adults struggle to find the perfect solution, the perfect time, the perfect sequence. Rather we should be thinking of opening the fields of knowledge to the child for exploration. Give them the tools — these days including technology — for gaining the requisite knowledge. Moreover, give them the knowledge and tools when they are eager for them. Fortunately for us, if we but listen and observe, the child shows us what he needs to do or asks what she wants to know.

Several examples may suffice as we assist the child to adapt to society.

Adapt to Physical Environment Plus Knowledge
For example, the need for a child beginning to move about is space to crawl and something to crawl toward. The items to crawl toward help the child focus and give the child the beginning of intention. So we prepare the environment — space and a few interesting items. The child who is walking well next wants to step up and down. So there need to be steps in the prepared environment. Then the child steps up and down, for as long and as hard as the child wishes. In essence, the child observes what human beings are doing and works to accomplish adaptation, including language. The child watches the adult and wants to do what the adult does.

Adapt to Social Environment Plus Knowledge
The process of development continues into the second part of childhood. The mind turns to what else the adult human being does. The adult is observed to know about things and how they work, for example. This is conveyed to the child. How do things relate to one another? This is conveyed to the child. What have I observed and how can I express a relationship I have discovered in words? Converse with the child. The adult does not put off until tomorrow that which can be presently brought to the child.
Adapt to Organized Activity Plus Knowledge

The child arrives at puberty and is now on the path to adulthood. A sense of time is now present and so the adolescent is able to look to the past and to the future. Needs continue to be manifest. Now the needs are directed to how modern society works. What is my place in it? What is my future? I know what kinds of work humanity does, but what is my work? I know of all kinds of things that I can do, but what do I find personal satisfaction in doing? I know I particularly like to do this, but what else must I do as my contribution to humanity? I know I am free and responsible.

Study Your Life’s Work Plus Knowledge

At whatever age, the human being lives within society, first adapting and then finding a personal place in the society. What the adult does is prepare a present environment and assist the child/adolescent to adapt. Environment must be understood as real-life experiences with real objects and identified by human language conventions. ‘Progress in a real acquisition of culture is evidently much more helped by these inner energies than by a voluntary and imposed effort’ (Montessori, Childhood Education, p. 58).

Summary

So here is the situation. A child has human rights, and the education of the child must take into account these rights. These rights must not be taken away. They are present from birth and exist until death. And to secure these rights, the child has to grow into an adult who knows that rights are only secured if each person consents within a society dedicated to preserving these rights.

Citizen of the World:

The Need for Faith and Hope

When I read the following passage, I saw a strong message that we all need to take to heart. Maria Montessori stated, ‘I feel as if I were addressing a strong family that must continue along the road we have opened up and that, young and vigorous though it be, has great need of faith and hope’ (Childhood Education, pp. 3–4).

Faith, in the meaning of complete trust, confidence, or reliance, needs to inform every decision we make with regard to the child. Montessori states:

To help life — this is the first and fundamental principle. Who, then, can reveal the natural ways along which the psychic development of man proceeds but the child himself, once he is placed in conditions permitting him to do so? 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. (Childhood Education, pp. 21–22)

So the faith is in the mysterious will, inborn in the human being, not faith in the passing fancies and whims of the developing human being. We have to have complete trust and confidence that the development of the human being is guided, that living in a prepared environment triggers the appropriate development. The conclusion is that the child’s will, a.k.a. passing fancies or activities that do not serve the purposes of adaptation, is to be guided by the famous word no. Of course there are plenty instances of the word yes. Helping the child to differentiate between what could be done and what is done is a service to the child, a real assistance to the developing human being. Although free will is a human characteristic, its exercise is bounded by limits of living within a society. This boundary is necessary to secure one’s own rights.

Hope, in the meaning of a feeling that what is wanted will happen, also needs to inform every decision regarding the child. Hope is a confidence, given what we know, that the expectations we have for the child’s development will happen. We humans are always so skeptical, needing proof and evidence. Nothing wrong with this approach, especially when we are exercising our reasoning powers. But when we take this to the extreme and need proof, right now, for all parts of daily living and development, we may fall victim to hopelessness, even despair, an utter lack of hope.

We have to have faith and hope in the child because it is only the child who can lead us to the development that is guided by the mysterious will.

I pose another dilemma. First you expect that I have faith in a mysterious will, then you expect that I hope for expectations to be fulfilled, but these expectations are unspecified. My adult mind knows better. I have lived and have studied and therefore can specify expectations. Why do I have to have faith and hope? Can’t I just guide the child’s will toward my expectations? Seems to me that the faith is in the mysterious will, inborn in the human being, not faith in the passing fancies and whims of the developing human being. We have to have complete trust and confidence that the development of the human being is guided, that living in a prepared environment triggers the appropriate development. The conclusion is that the child’s will, a.k.a. passing fancies or activities that do not serve the purposes of adaptation, is to be guided by the famous word no. Of course there are plenty instances of the word yes. Helping the child to differentiate between what could be done and what is done is a service to the child, a real assistance to the developing human being. Although free will is a human characteristic, its exercise is bounded by limits of living within a society. This boundary is necessary to secure one’s own rights.

This is the problem. That’s exactly what you get — an adaptation to your version of modern society. We have actually prevented that child from sitting on the shoulders of giants and reaching above. We have kept the child at knee level, not rising above the present status. So I ask, as Maria Montessori already asked. Our strong family is in great need of faith and hope.
Citizen of the World:
The Actions of a Citizen

How would a citizen of the world act? Recall that a citizen has full civil rights. From time immemorial, human beings have grappled with this notion of rights. What does it mean to have rights? A right, as stated earlier, is that to which a person has a just claim: power, privilege, etc.; that which belongs to a person by law, nature, or tradition.

Now one has to think about how these ideas of citizenship and civil rights extend beyond political boundaries. I think the key is that government arises from the consent of the governed. Here we have a fundamental problem. Many nations today have subjects, not citizens. Immediately there is a problem with being a citizen of the world. There is no world for one to be a citizen of. Does that mean we should abandon all hope?

No — Maria Montessori calls for a reconstruction of society:

With the passage of time we have become even more convinced of the importance of child education, and we wish to infuse new life into our endeavour so that it may become an effective means for the reconstruction of modern society. [...] The method seems egoistic; it wishes to go its own way and not to mix with any other; and yet, no other method takes every possible opportunity of inculcating world union and world peace as does this one. All this is contradictory—even mysterious! (Childhood Education, pp. 3–5)

What is this reconstruction? It is a reconstruction that will allow each individual to ‘oppose’ with manly firmness [any] invasions on the rights of the people’ (Thomas Jefferson in a draft of the Virginia Constitution, 1776, cited in Thomas Jefferson on Politics & Government).

How is this reconstruction to occur? Montessori says that first the individual personality must develop and that this cannot happen without individual freedom. Individual personalities, then, are the foundation of organized society. The key is to develop the individual personality within the framework of the human environment (Education and Peace, p. 121).

Montessori speaks about two levels of education (Education and Peace, Ch. 14). In the first level, individual freedom is the foundation and the goal is to assist the child to be capable of acting by himself. This is a period of self-education. The characteristic feature of education at this time must be the safeguarding of freedom, with the adult present for protection and encouragement.

In the second level, the development of the social personality is the foundation and the goal is to assist the adolescent to realize every one of her capabilities. If the individual has been given freedom at the first level, then performing social functions independently at the second level is possible. The adolescent is capable of acting as an individual but now in organized activity. Independence is necessary for both individual and social activity. Recall the idea of consent of the governed. To be a citizen and give one’s consent, one must be capable of individual activity and thought.

These two levels prepare the individual to enter the working world as a capable individual who is aware of social responsibility.

What are some actions of a citizen of the world?

All mankind must be united and remain united forever. The masses must be educated, and education must be available at all times. On this fourth level society must help every human being and keep all mankind at the same high level as the evolving environment, and then elevate man above the environment so that he may further perfect it as he perfects himself. (Montessori, Education and Peace, p. 133)

Who are some citizens of the world that could help us to identify preparation for being a citizen of the world?

The first example is Dr Maria Montessori herself. Her life was dedicated to life beyond political boundaries. She strove to help every human being to become educated. She spoke about ecological issues with innovative ideas of supernature and the collaboration of human beings and the environment so that both may be perfected.

A second example is Mahatma Gandhi. His life was dedicated to social action without violence. His ideas reached beyond his political boundaries.

A third example is the women’s suffrage movement. Its leaders worked so that the civil rights of women with regard to consent of the governed would be recognized.

A fourth example is the US civil rights movement. People worked, and some died, so that all could enjoy the rights of citizens and not be separated into a subsystem — citizens in name but not in fact. This movement goes on today.

Although some actions are performed locally, the results are universally applicable. Think about people today fighting for the rights of people in other political situations.
Citizen of the World: 
Assisting Development

Without a survey, I would have no way of knowing whether or not what we have done has produced citizens of the world. I am sure many of you know former students of Montessori schools, including yourselves, who have gone on to careers that reflect values of citizens of the world.

What I want to address now is what we do that potentially can help the child to become a citizen of the world. I will give principles of practice. The actual classroom presentations are too numerous to mention and are to be found in the intensive study of the adult preparing to take on the job of assisting human beings from crèche to university level. Here are the general principles:

• Give the young child freedom to develop as an individual.
• Give the older child freedom to develop as an individual whose actions are circumscribed by a society.
• Give the adolescent the experience of functioning in a society, complete with economic consequences, while exploring individual capability.
• Give the young adult the freedom to develop individual capability and become a functioning member of society.

Let’s explore each of these for some details of practice that are designed to provide assistance.

Give the Young Child Freedom to Develop as an Individual

• Individual presentations.
• Watch for child’s interest and capitalize on interests.
• Prepare an environment whose limits are set for the precise purpose of allowing freedom for choice of individual activity.
• Do not call attention to the personality of the adult, but rather focus on the activity (the hands). The adult has to know when to withdraw.

Give the Older Child Freedom to Develop as an Individual While Living in a Society

• Presentations to small groups, paying attention to the development of the individual within a society of peers.
• Foster interactions of peers so that moral development occurs as a result of having human rights within a society of human beings who also have human rights.
• Sow seeds of as much knowledge as possible; i.e., cosmic education.
• Prepare an environment whose limits are set for the purpose of showing the child that there is more to know beyond the confines of the classroom. All need freedom to go out and seek further information.
• The adult must show a personality, and in fact be the instigator of potential interests. Focus on the accomplishments of humanity. The adult has to know how to inspire.

Give the Adolescent the Experience of Functioning in Society While Exploring Individual Capability

• Presentations as needed for continuing knowledge and skills. Some presentations are geared to advancement of knowledge — some studying needed; some presentations are geared to how to function in society — study of economy, money, food production and consumption, food preservation, and food preparation.
• Reinforce knowledge with focus on what an individual needs to know to function in society. This includes knowledge gained that allows the child to appreciate the human mind — knowledge for knowledge’s sake.
• Prepare an environment where the adolescent runs an economy by collaborating with peers, trying different roles, forming a personality with individual capabilities that are seen as contributing to the common good. This is an important developmental passage. If the individual does not see the self as a contributing member of society, then civil rights may take precedence over civil responsibilities, if only for the reason that the individual does not recognize what can be done within society.
The adult provides whatever the individual needs to develop the personality. In particular, there are specific areas of study that require more specific knowledge if the adolescent is to find out if this is an area of interest. Thus the adolescent needs access to many adults.

Give the Young Adult the Freedom to Develop Individual Capability to Be Used for Functioning in Society
• The young adult enters the final phase of development — prepared with a good base of knowledge, helped to form an individual personality that knows how to contribute to society, having a good idea of what to contribute — and takes advantage of the university or apprenticeship to prepare for a life's work. The environment is life itself and any assistance is provided by teachers/mentors. The faith and hope previously utilized has been a good strategy for assisting the development of the human being.

Summary
In closing, may I make a plea for each of us to become a citizen of the world. Use your freedom to contribute to life, liberty, and the pursuit of happiness for all, even if it means that we don’t have everything we want. Remember that we live within a finite universe, and use only those resources that are needed.

If we are working within a Montessori framework, we have made a great stride forward because we have recognized the universal child. The child is the hope and promise of the future, and we need to serve this child wherever the child is found. To serve this child is to give the child freedom to develop as an individual who knows enough to appreciate rights and to acknowledge the rights of others. Unshackle the child from our meagre expectations. In the midst of bringing knowledge to the child, even highly suggesting that the child ‘must’ learn something, at least tell the child why.

If we are working as parents or relatives, we act as citizens of the world by offering the world to our children — the world with all its knowledge and possibility. We need, ourselves, to be excited by the simple and the complex. We need to sublimate our fears and present to the child the idea that there are many people working in our world so that we may enjoy the rights of citizens. If you voted on Tuesday, you showed the children the duties of a citizen seeking to preserve the rights of citizens of the world. If you didn’t vote on Tuesday [in the 2004 US presidential election], shame on you.

There is a story I encountered in which a person, struggling between genders, writes on the back of a photograph — ‘see me’.

This is the child, crying out to us — ‘see me’.

The child cannot tell us what to see because the child is simply living and not intending to show us the secret of human development. This is our challenge: to be among developing human beings and notice what is happening at all stages. See me and help me to become a citizen of the world.

References

The focus for section 3: to contrast Montessori legacy and academic discourse. A Montessori legacy captures a comprehensive whole of Montessori’s life, work, and spiritual exigencies as well as her personal vision. An academic study tends to be analytical and is valuable for higher education and teacher groups. It is the dual presence of academic and legacy that makes for a bond to the Montessori Method that lasts a lifetime.
What connection does Buddhism have with Montessori? When I read my uncle Dr Tan Kheng Khoo’s article “Ultimate State of Consciousness (Enlightenment)”, which mentions the Noble Eightfold Path leading to the cessation of suffering, I was struck by the parallels between the two.1

In recent years there has been much discussion about Montessori’s scientific approach and how her work is now being affirmed by studies on neurology, the central nervous system, and the brain more generally. Scientific backing for Montessori’s theories is important today as our work as professionals brings us into contact with academics, parents, and interested parties who often need to be convinced by the scientific support for Montessori education. Montessori education is indeed a scientific approach; however, it is deeply imbued with a basic spiritual ethos. I will attempt in this paper to examine the Buddhist principles set out in the Eightfold Path. I feel these tenets are relevant both in our spiritual preparation for guiding a child as well as for understanding the child’s natural potential for spiritual development as expressed by Maria Montessori.

Montessori was a scientist who began her work through observation. Recording what she saw helped her make deductions about the way in which children developed and the true potential and nature of the child. The ‘true’ psychological manifestations and personality characteristics of the children only revealed themselves when they were provided with the right environment and activities that met their developmental needs. Through her work with, and repeated observations of, children from all over the world, Montessori was shown these unsuspected ‘truths’. These children were from diverse social, economic, and cultural backgrounds. Though people had observed, dealt with, and had children since time immemorial, it was only through observation of children functioning freely in a specially prepared environment (where attitudes and activities met the developmental needs of the child) that these startling manifestations emerged. Therefore, Montessori’s educational principles are both scientific and philosophical. Her understanding of the potential and developmental needs of the child was inspired by her experience with children and supported by diligent observation and practical application of her theories, in which materials and activities were guided by the response of the children.
During the 1930s, as war threatened, Montessori became deeply concerned with the question of peace. She considered the problems of human and social development and began her search for wisdom about the behaviour, nature, causes, and values of all human beings. She concluded that lasting peace can only be established through education beginning from birth. In *The Absorbent Mind*, Montessori presents her cohesive philosophy and discusses the child’s immense potential and role in the future of mankind. At the end of her life, she set out a vision of cosmic education which assumes that all human beings are naturally on an ascending spiritual path.

Montessori’s vision of education and peace, a cosmic vision, promotes the inner spiritual evolution of the child and the adult in order to produce a society that lives in harmony and in which one works in the service for all: ‘mankind, which, abandoned during its formative period, grows up as the greatest menace to its own survival.’

**Buddhism: A Way of Life**

Buddhism can be viewed as a religion, a philosophy and a psychology. In his book *A Living Buddhism for the West*, Lama Anagarika Govinda expresses it as follows: ‘Thus we could say that the Buddha’s Dharma is, as experience and as a way to practical realisation, a religion; as the intellectual formulation of this experience, a philosophy; and as a result of self-observation and analysis, a psychology. Whoever treads this path acquires a norm of behaviour that is not dictated from without, but is the result of an inner process of maturation and that we — regarding it from without — can call morality.’ Buddhism or following the teachings of the Buddha is a way of life. The Buddha’s teachings have been defined as the path to eternal happiness, guiding the individual who wishes to follow it to automatically think, act, and speak in accordance with the highest moral principles of life. In the process the individual will not only obtain happiness for himself but will be able to spread happiness. Buddhism is a moral philosophy which points the way to an ethical way of life. It underlines the fact that we can conquer ourselves and change negative states of mind to positive ones. An individual who seeks to understand the true nature of the world and follows the Buddhist path...
teachings will find that anger, jealousy, and ignorance can be overcome leading to an emergence of love, compassion, wisdom, and the discovery of inner peace and happiness. Once this inner calm, peace, and happiness is experienced it can be spread by harmonious interaction with others and consideration for others before self.

Buddhism does not require belief or faith in anyone but the self. It is an individual’s own choice to follow the path to seek the truth, the exact nature of reality, and the Dharma [law of life] that will lead to enlightenment and realization of the truth. Every individual can choose to follow the teachings of the Buddha, to try and overcome his own imperfections, which will enrich his life and make life more meaningful. Buddhism holds as an ideal the sense that every soul, every human’s path to enlightenment, is important and possible.

The Buddha set out the Four Noble Truths, which are the foundations of Buddhism. These truths underlined the universal nature of suffering:

1. That suffering is part of our lives, whether physical, mental, or emotional.
2. That suffering stems from attachment to desires, our cravings.
3. That suffering can be overcome if we detach ourselves from these desires.
4. The way to cease suffering is to follow what is called the Eightfold Path.

The Eightfold Path

The Eightfold Path, which is the gradual path to self-improvement, is not a step-by-step process. It is a code of moral, mental, and physical conduct that will free the individual from attachments and delusions, leading to understanding the truth about all things and therefore to perfect peace and enlightenment. Only through practice can one attain a higher level of existence and finally reach Nirvana, which has been described as being like the extinguishing of greed, hatred, and delusion. It is a state without craving or suffering and is therefore a state of supreme peace and bliss.

The Eightfold Path consists of Right (correct) Understanding/View, Right Thought, Right Speech, Right Action, Right Livelihood, Right Effort, Right Mindfulness, and Right Concentration. These eight aspects of the path are interdependent. They are to be practised and developed together, as success in one leads to success in the others. Craving, ignorance, delusions, and their effects will disappear gradually, as progress is made on the path.

Right Understanding and Right Thought focus on the wisdom of the Path. Wisdom comes from the heart and Right Understanding is gaining a complete and perfect understanding of the Four Noble Truths because it will govern how we perceive things. Right Understanding simply means to see and understand things as they really are. It is not an intellectual capacity, just as wisdom is not a matter of intelligence. Instead, Right Understanding is arrived at, sustained, and enhanced through the capability of the mind. It results in a complete understanding of the true nature of all things, grasping the impermanent and imperfect nature of worldly objects and ideas. Since our understanding of the world forms our thoughts and our actions, it generates Right Thoughts and Right Actions. ‘If we understand and maintain a wholesome outlook, we’ll have a perfect view.’

Right Thought or Mindedness or Intention is an attitude. It can be explained as having a firm resolution to continue the inner disciplines toward attaining enlightenment and consistently making correct judgments in everyday matters. In other words, it is a commitment to ethical and mental self-improvement, having pity and compassion as well as a desire to help those who are suffering. It should be remembered that thoughts equal action whether they are acted on or not. Therefore, Right Thought includes not harbouring wrong, harmful, greedy, and prejudicial thoughts.

Right Speech is the control of the tongue by Right Thought. Words can make enemies or friends, start wars, or create peace. Right Speech means to speak truthfully, warmly, kindly, and only when necessary. In other words, to refrain from speaking hurtfully and in anyway which might cause suffering, including slander, gossip, and even self-exaltation. Right Speech is one of the principles of moral conduct in the Eightfold Path but cannot stand alone. It can only be achieved together with the other principles of the path through moral and spiritual development.

Right Action is another moral principle which involves the body as the means of expression. Like speech, no action should cause suffering to oneself or others, including animals. The idea of cause and effect (karma) is also at the core of this truth. What was done in the past affects the present and what is done in the present will affect the future.

Right Livelihood or Living means to live a fulfilled life every minute, hour, and day of our lives. Livelihoods, occupations, hobbies, and trades should be governed by the Buddhist principles in which wealth should be gained honestly, no harm or suffering should be brought on any living creature,
and work should be for the good and happiness of mankind.

**Right Effort** is the endeavour to control thoughts and feelings so that harmful ones do not arise, to eliminate those that do, and to cultivate the good ones that exist. Without effort, which is an act of will, nothing can be achieved. Mental energy is the force behind Right Effort but it can occur either positively or negatively. The same type of energy that drives desire, envy, aggression, and violence also drives self-discipline, honesty, benevolence, and kindness. Right Effort is necessary for maintaining good behaviour.

**Right Mindfulness** is being constantly vigilant over our thoughts, words, and deeds. Trying to be aware of the ‘here and now’, instead of dreaming in the ‘there and then’. ‘Right mindfulness enables us to be aware of the process of conceptualization in a way that we actively observe and control the way our thoughts go.’

**Right Concentration or Meditation** is the key to mind training and bringing the mind under control. Attention and awareness and a steady, calm, and attentive state of mind will lead to peace.

**Montessori: A Spiritual Path**

[Education] must be viewed first of all from the perspective of the development of human values in the individual, in particular his moral values, and second from the point of view of organising the individuals possessed of these enhanced values into a society consciously aware of its destiny. A new form of morality must accompany this new form of civilization. Order and discipline must be aimed at the attainment of human harmony, and any act that hinders the establishment of a genuine community of all mankind must be regarded as immoral and a threat to society.

Montessori saw humanity as the ‘most fundamental of our riches’, with energies, intelligence, creative spirit, and moral powers that must be cultivated and enhanced. The child has the natural potential to become an evolved human, but the conditions in the environment are critical in assisting
this spiritual development. She points out that it is through the adult’s lack of understanding of the developmental needs of the child, that an ‘awesome conflict, a ceaseless war’ confronts the child from the very day he is born and continues throughout his formative years. She says it is the child who has ‘real vision, a bright little flame of enlightenment that he brings to us as a gift’. 7

In Montessori education, the elements of an aid to life — the development of the body, mind, and spirit — are inseparable and interdependent, as in the aspects of the Eightfold Path. Spiritual development is regarded as the creation of a sound psyche, strong character, clear mind, and awareness of the individual’s responsibilities for the betterment of humanity and society. Montessori recognized the different spiritual needs of the child throughout his development to maturity and discussed the very differing prepared environments and experiences the child requires during each of the four periods, or planes, of development. In each, the underlying principle is that the spiritual values and way of living cannot simply be taught but can only be cultivated through experiences. The most important is, of course, the first plane, the first six years of life, during which the child is regarded by Montessori as a ‘spiritual embryo’. The child’s whole aim during this ‘gestation’ period is to incarnate ‘a spirit whose seeds are latent and unconscious within him’, creating his personality and building his character. 8 Montessori regarded character as those qualities such as moral awareness, intellectual capacity, and concentration that will lead to perseverance and strength of the will.

She observed that a child whose natural developmental needs were supported exhibited characteristics of what she called normalization. A normalized child exhibits a spontaneous, even passionate, love for order; work which leads to spontaneous concentration; helping and cooperating with other children and adults; obeying, not because he feels he has to or for any other reason except wanting to do whatever is asked with eagerness and joy; and a love of silence. The child is independent, self-disciplined, and happy, and is attached to reality as opposed to a world of fantasy. Montessori wrote, ‘Normalization comes about through “concentration” on a piece of work. For this we must provide “motives of activity” so well adapted to the child’s interests that they provoke his deep attention’. 9 She recognized that the ‘first essential for the child’s development is concentration. It lays the whole basis for his character and social behaviour’. 10

Montessori education provides the appropriate activities which are likely to attract the child’s interest and meet his developmental needs. They provide experiences a child needs in order to build a strong personality. A child is given the freedom to be active within limits, encouraged to choose his own ‘work’, and is protected from interruptions. This eventually leads to deep concentration. Work which has captured the child’s interest and is freely chosen leads to maximum effort, perseverance, the ability to complete tasks, strengthening of the will, self-discipline, and satisfaction. The opportunity to repeat and practise actions leads to thinking, behaving, and speaking correctly in an automatic, subconscious, and natural way. According to Montessori,

The essential thing is for the task to arouse such an interest that it engages the child’s whole personality. In our schools, this ‘moment of healing’ is not the point of arrival, […] but it is the point of departure, after which ‘freedom of action’ consolidates and develops the personality. Only ‘normalized’ children, aided by their environment, show in their subsequent development those wonderful powers that we describe: spontaneous discipline, continuous and happy work, social sentiments of help and sympathy for others. 11

On entering the Children’s House, activities grouped under what are called ‘practical life’ foster the development and refinement of the child’s coordination of movement. Through reality-based physical activities that engage and challenge the mind and body, the child not only acquires greater control of his movements, but deep concentration, the ability to work in an orderly way, independence, and social adaptation. Social awareness and behaviour are also cultivated through group activities called ‘grace and courtesy’. Within this area there are two special activities, Walking on the Line and the Silence Game that assist all these aspects of the child’s development but can also be regarded as spiritual exercises. Walking on the Line helps the child to control and become conscious of his whole body and can be likened to a walking meditation. Montessori wrote, ‘When the child is master of his feet in walking, his attention can be distributed on different movements […] his attention, little by little is carried to all of his body, to keeping his feet straight on the line and to holding the glass straight and he becomes conscious of his whole body’. 12 The Silence Game is the ultimate challenge for a child, who must inhibit all movement. In order to do so, the child needs to be conscious of all the parts of his body, be able to control them as well as have the social consciousness to want to, for the benefit of the group. The after-effect of this exercise is a calmer, happier, more satisfied child whose concentration and control increases with practice.

Experiences with sensorial activities help the child become aware and more appreciative of his environment whilst leading him to make abstractions. These activities and the
opportunity to experience freedom, order, and social life on a small scale enables the formation of a harmonious being on the right spiritual path. To follow the path requires making a choice, determination and persistence, and a strong will. The strengthening of the will, which governs all applications of spiritual life, is taken very much into account in the Montessori approach. Its importance in Montessori’s words:

There can be no manifestation of the will without completed action, he who thinks of performing a good action, but leaves it undone; he who desires to atone for an offense, but does not do so; he who proposes to go out, to pay a call or to write a letter, but goes no farther in the matter, does not accomplish an exercise of the will. To think and to wish is not enough. It is action which counts. ’The way to Hell is paved with good intentions.’

What the child achieves between three and six does not depend on doctrine but on a divine directive which guides his spirit to construction. These are the germinal origins of human behaviour and they can only be evolved in the right surroundings of freedom and order.

During the second plane of development (six to twelve years), Montessori observed a turning toward the intellectual and moral sides of life with the child asking more morally oriented questions. It is through constant questioning and reasoning that the child explores the moral values of society. One can see a preoccupation with what and who is good or bad, just or unjust. Children in this period are constantly commenting on or asking about the rights and wrongs of situations and actions so that they can learn from adult’s reactions.

This is therefore an important period for moral education, a time during which the ‘concept of justice is born, simultaneously with the understanding of the relationship between one’s acts and the needs of others’. This natural, inborn sense of justice needs to be nurtured and the child needs to be introduced to moral relationships which will awaken the conscience. The child is ‘beginning to become aware of the problem of cause and effect’ needs ‘to have the possibility of activities carried out by himself in order to preserve the equilibrium between acting and thinking’.

Morals have at the same time a practical side, which governs social relations, and a spiritual side, which presides over the awakening of conscience in the individual. It is difficult to make social relations real if one uses only the imagination; practical experience is necessary. One cannot awaken the conscience by talking about it. The child must exercise a constant watch over his own activities. Thus education can resolve its problems while realizing itself when it seeks to resolve them by means of acts.

Montessori recommended that the child of this period should participate in societies which emphasized and established sound moral values, i.e. to defend the weak, to use but to respect the environment, to keep himself at a certain moral level by not committing certain actions. Such societies, like scouts or guides, which the child may join voluntarily, are essential experiences because not only has the child to commit himself as an individual but he must make a commitment to the group which requires an exercise of the conscience. ’The role of education is to interest the child profoundly in an external activity to which he will give all his potential. We are concerned here with giving him liberty and independence while interesting him in an activity through which he will subsequently discover reality.’

The child of this period wants to know about everything — the world, the universe. His imaginative mind gives him the capacity to do so. It is on the use or harnessing of this imagination that Montessori based her education plan for the child in this period. She wanted not only to arouse the child’s curiosity, but to create in him admiration and wonder, presenting him with the whole universe or ‘cosmic education’ — the general vision of the world from which everything is derived. Only in this way, the ‘intimate relationship between thing, nature and Man’ would be better understood as would the ‘cosmic task’ of each element and of each force in the cosmos, including human society.’ Montessori wrote,

In its entirety, the world always repeats more or less the same elements. If we study, for example, the life of plants or insects in nature, we more or less get the idea of the life of all plants or insects in the world. When we have become familiarized with the characteristics of the life of the insects we see in the fields, we are able to form an idea of the life of all other insects. The world is acquired psychologically by means of the imagination. Reality is studied in detail, then the whole is imagined. The detail is able to grow in the imagination, and so total knowledge is attained.

Montessori saw the third plane (twelve to eighteen years), as the time for ‘a more dynamic training of character and the development of a clearer consciousness of social reality’. She pointed out that for success in life a person needed to know consciously how to be useful because ‘how to help mankind in many ways, fills the soul with noble confidence, with almost religious dignity’.

Montessori recognized the adolescent’s need for calm
surroundings with fresh air and silence for reflection and meditation on the wonders of nature, whilst exercising/ working, handling finances, and living with other people. ‘The observation of nature has not only a side that is philosophical and scientific, it has also a side of social experiences that leads on to the observations of civilization and the life of men.’ This will not only strengthen the individual’s personality but also will teach about society and make the adolescent aware of man’s origins and the importance of nature to man’s survival. Montessori felt that the adolescent should learn ‘about civilization through its origin in agriculture’. She stressed the importance of gaining ‘money by one’s own work’ for the development of self-respect and dealing with finances in order to learn its mechanism and its essential role in the organisation of society and in social morality. These principles form the foundation of her educational recommendations for the Erdkinder or land-children. The children would be given the opportunity to experience social life through living together whilst experiencing all aspects of cultivating the land.

Work on the land is an introduction both to nature and to civilization and gives a limitless field for scientific and historic studies. If the produce can be used commercially this brings in the fundamental mechanism of society, that of production and exchange, on which economic life is based. This means that there is an opportunity to learn both academically and through actual experience what are the elements of social life.

Between ages eighteen and twenty-four (fourth plane), the ‘child’ is now a formed person, the degree of which will of course be dependent on his experiences since birth. Montessori observed that what interests the person during this period is the ‘mission of humankind’. Therefore, education (which is normally at university) should not be limited to acquisition of knowledge alone but continue the spiritual development of the person. It should allow the individual to work for economic independence whilst studying. It should be a time to find out how to achieve his independence and reach a moral equilibrium.

In order to assist the child’s spiritual development the adult should also be prepared spiritually: ‘The educator must not imagine that he can prepare himself for his office merely by study, by becoming a man of culture. He must before all else cultivate in himself certain aptitudes of a moral order.’

Montessori’s vision for world peace lay in the spiritual preparation of the child: To build a strong, ‘good’ character and nurture a true understanding of himself and his place and contribution to his society and the world. To think, act, and speak with understanding and to have a strong will, powerful concentration, self-discipline, and independence to actuate them. To aid the formation of a truly harmonious, well-adapted human being who wished for the betterment of the world and mankind. Montessori stressed the importance of nurturing the child throughout the four planes of development, during which different aspects of spiritual development take place. Experiences of true relationships in different forms of society are, in Montessori’s view, an essential principle of education. She says, ‘to teach details is to bring confusion’ but ‘to establish relationship between things is to bring knowledge’.

If the natural needs for the child’s spiritual incarnation and development are met, the child will be well prepared to
follow the path to the ending of suffering and therefore foster peace within himself and mankind. In Montessori’s own words which reflect the wisdom of the Eightfold Path:

Each human being possesses the strength of becoming aware of, and of facing the dangers, the temptations of the world so as to become inured to them in order to overcome them. The temptations to be overcome are literally those illustrated in the Gospel: the temptation of possession (attachment) and temptation of power (craving, ignorance, delusions) [...] There is something in humankind that stands above them: it is able to understand what is required to create a very powerful, a very rich, and a purified world. There is only one way: that each individual know how to overcome the temptations of power and possession. 28

Notes

2 Montessori, Mario, “Introduction” (1949) to The Absorbent Mind by Maria Montessori (Chennai: Kalakshetra Publications, 2002), p. viii
3 Govinda, A., A Living Buddhism for the West (Boston: Shambhala, 1990)
5 Mestre, R. J., The Buddhism Primer: An Introduction to Buddhism (Robert John Mestre, 2004), p. 16
7 Montessori, Education and Peace, p. 14
8 Montessori, Education and Peace, p. 16
10 Montessori, Absorbent Mind, p. 202
11 Montessori, Absorbent Mind, p. 188
14 Montessori, Absorbent Mind, p. 222
16 Montessori, Childhood to Adolescence, p. 11
17 Montessori, Childhood to Adolescence, p. 14
18 Montessori, Childhood to Adolescence, p. 12
19 Montessori, Childhood to Adolescence, p. 19
20 Montessori, Childhood to Adolescence, p. 68
21 Montessori, Childhood to Adolescence, p. 70
22 Montessori, Childhood to Adolescence, p. 74
23 Montessori, Childhood to Adolescence, p. 74
24 Montessori, Childhood to Adolescence, p. 70
25 Montessori, Childhood to Adolescence, p. 74
27 Montessori, Childhood to Adolescence, p. 64
28 Montessori, Childhood to Adolescence, p. 99

Ruby Lau has been a 3–6 AMI trainer since 2006. She is now based in India and is closely associated with the Navadisha Montessori Institute in Chennai, where she brings her expertise to students as a trainer and to the mentoring of school staff. She is also associated with the Maria Montessori Institute, her alma mater in London, where she visits as a lecturer. She is an AMI Examiner and active in AMI’s work in China, where she is part of the group working on the Chinese Montessori language programme. After completing the AMI Course (3–6) in London in the 1980s, Lau worked in the Maria Montessori Children’s House run by the MMTO in London, and later assisted on the training course. In 1990 she established the Little Acorns, which she ran for sixteen years with her colleague Jean Nugent.
The Montessori Cosmic Vision and and the Judeo-Christian Tradition

Sofia Cavalletti

Montessori has a genre of history which goes beyond the fundamental belief system of the Montessori legacy. This comparative intellectual approach adds dimension to the history of Montessori thought that helps the outside world step into Montessori’s deeper connections about children. In this case, Cavalletti links her work in catechesis to Montessori’s vision of ‘expansive education’, which draws young children toward wide theological beliefs. This brief glimpse into Cavalletti’s work with children in the Catechesis of the Good Shepherd highlights the place of humans in history which reflects both the intellectual rigours of Montessori and the grassroots tenacity of Cavalletti’s methodology.

There is a well-known page in Maria Montessori’s book *The Formation of Man* where she speaks of ‘expansive education’ (p. 37). Montessori saw the necessity for an education which is not centred on ‘direct correction’ because correction is possible only by expansion, by giving “space”, by opening up the means for the expansion of the personality.

Dr Montessori speaks of the need to broaden the horizons so that the older child can be drawn towards high goals. ‘Only the poor quarrel over a piece of bread.’ The human creature is anything but ‘poor’. And the young and older child need to be helped to the journey in the spaciousness of vast horizons. Thus only an education which ‘amplifies’ will carry the individual beyond immediate interest and lead that person towards one’s true stature.

The expression ‘expansive education’ coined by Montessori has a particularly prophetic resonance for us today, living as we do in a time of the ‘expansion’ of the world. It is therefore even more urgent that Montessori’s concept be realized in our own age.

I would like to describe what we do with children between the ages of six and twelve in relation to Montessori’s vision, using instruments that Western tradition, contained in the Bible, offers us.

The Judeo-Christian world, as many know, has a fundamental book, the Bible, a book whose redaction has taken more than a thousand years, gathering together traditions dating back some four thousand years.

Obviously it is difficult, or rather impossible, to give a summary idea of the content of a book such as this. I will risk limiting what I say to a single theme: the Bible tells a history that originates in primordial times, includes the moment we are living, and is oriented toward a future conclusion, which we await. It is a history made of memory and hope; between these two poles is poised the now moment. It is a history which starts with the beginning of time and concludes — but does not end — when the plan which is being realized in it comes to completion. It is a history with a clear orientation whose single stages are linked together by a ‘golden thread’, the thought of God. God desires to lead men, women, and all created things to reach the fullness of life in a relationship with one another.
and himself, a relationship that the Book calls ‘covenant’. The biblical covenant is all-inclusive, a covenant that embraces both time and space, although time is the prevalent category in the biblical world.

The first page of the Bible tells of the creation of the world. The Creator places man who is his ‘image and likeness’ in the world in order to care for and work in the world, that is, so that man and woman may enjoy all the elements of creation, and preserve and develop them.

If we pass directly from the first to the final book of the Bible, called Revelation, we read about the renewal of creation described as ‘a new heaven and a new earth’; about a new presence of God in the world, and the victory of the negative forces of suffering and death.

Other biblical passages, written in highly poetic language, speak about the cessation of all war: people ‘will hammer their swords into plowshares, their spears into sickles; nation will not lift sword against nation, there will be no more training for war’ (Isaiah 2.4). They speak, moreover, of a time when harmony will reign between people and animals, a time when ‘the wolf lives with the lamb; the panther lies down with the kid; calf and lion cub feed together, with a little child to lead them’ (Isaiah 11.6). Though my brief sketch hardly does justice to it, this is the vision of reality the Bible presents.

How can we help children to enter into this vision and to enjoy its message? The elements are plentiful and immense in their scope. In presenting them to children, we have followed the Montessori principle of ‘isolating the difficulties’. In this instance, we could paraphrase it as ‘isolating the various aspects of the covenant’.

The first aspect is the unity and globality of the history the Bible narrates. It is a history that includes all time and all creation. When the Bible tells of adam, meaning the human being, it is speaking about the whole of humanity. When we turn again to the final book of the Bible, we read
that God will make ‘all things new’, that there will be a cosmic chorus of praise to God composed of ‘all the living things in creation — everything that lives in the air, and on the ground, and under the ground, and in the seas’ (Revelation 5.13).

Certainly it is not easy for children to embrace such a vast framework. They need, therefore, to be helped by means of tools which strike the imagination and provide incentives for activity so that gradually they will be able to absorb the message — the well-known function of the material.

La Fettuccia — The Timeline

To give an example, we will describe the first presentation we offer to children on this theme, one which is designed precisely to capture the child’s imagination. This material consists of a long grosgrain ribbon 50 meters in length; each rib represents a time span of one thousand years (obviously the proportions are approximate).

The ribbon is in four colours. The first part is blue, representing the period when the inorganic world was formed. This is followed by a beige section, representing the period which begins with the appearance of vegetation on the earth. Further along the beige part of the ribbon, there are figures to mark the appearance of man — hominid and homo sapiens. This latter figure is accompanied by the image of a hand to illustrate that we are referring to the human person who begins to transform the world by the work of his hands. The beige is followed by two ribs that are yellow — the colour of light — representing approximately two thousand years from the time of the coming of Jesus Christ to the present. The last segment of the ribbon is coloured white, indicating the time from tomorrow onwards, that is, the page of history that is still yet to be written. This white segment ends with a yellow fringe. The fringe is to illustrate that we do not know when history will be concluded with the full establishment of the kingdom of God. Yellow, the colour of light, is to illustrate that light will overpower darkness, the positive will overcome the negative.

What are we saying in this presentation? If it is permissible to express it this way, we are giving the “measure” of God and the human creature: since the beginning of history God is always present in this age-old process of development, a process in which we are immersed and whose fulfilment we await; the human creature is small and great at the same time. What does the life of a single person represent compared to the vast sea of history? What does it represent in the immensity of a plan that embraces all time and space? And yet the human person is an integral part of that sea, a crucial collaborator in that plan. The great history is also my history. It is the history of each one of us. Each one of us is present in it and in some way contributes to it.

A version of this kind corresponds, I believe, to a fundamental need in the child after six years of age because this is the age when the world begins to open up for the child. It is essential to help older children to orient themselves in this “ever expanding” horizon so that they know how to walk ahead, drawn forward by the grandeur of a reality in which they are conferred the dignity of a collaborator.

This presentation leads us to ask ourselves another question: what must each of us do in history? We remain faithful to the principle of isolating the points to be presented, and this question of ‘doing’ follows as a second moment. Furthermore, we are convinced that before any emphasis on the plane of ‘doing’, and thus of responsibility, first there is a time for enjoyment. The first plane — enjoyment — will later be expressed on the level of doing as well; the time for enjoyment must precede and accompany every action (and we shall return to this later).
We mentioned that the message of the Bible is made of memory and hope. This presentation recalls the mighty creative works God does for the human creature (a point emphasized in a subsequent presentation), and at the same time it offers a message of hope. The history we are living is not a succession of disconnected events; it is the realization of a plan which will have a positive conclusion. As we said earlier, we are awaiting a time of universal peace, a time when even death, the ‘last enemy’, will be vanquished (I Corinthians 15.26). This is the hope held by Jews and Christians alike, which is to say the hope of those who belong to two branches of the biblical tradition. This perspective of history certainly does not mean that we ignore the many contradictions encountered in life’s journey, but Jews and Christians hope and know that the outcome of history is positive.

I believe this is the biblical value most needed in our modern-day world. Theology speaks of three fundamental ‘virtues’: faith, hope and charity, which are the three modes of being, three ways of approaching and relating to reality. Today everyone talks about love (even if we are not always able to actualize it). Many speak about faith; witness the numerous spiritualistic movements making vigorous inroads in a materialistic world. Very few speak about hope.

In fact, most often we are presented with a rather pessimistic vision, where life is viewed in terms of its negative elements. The negative is surely present, but that is not all there is to reality.

Seeing the darkness in our history is a manifestation of a new sensibility, attentive to injustices, a ‘darkness’ to which the world that preceded us was blind. The error resides in focusing on the darkness and the pre-eminent and inevitable reality. Darkness itself can be blinding. To fix our gaze solely on it can prevent us from seeing the shafts of light reality reveals and thus prevents us from beholding life with eyes of hope.

We must educate children to open their eyes to the positive elements in reality, not to encourage illusions, but to enable them to see the whole of reality. Education is to help create persons who are capable of looking beyond the surface agitation of the waves, so as to catch sight of the current flowing deep beneath the movements of history.

It should be noted that we are not dealing with the progressive vision of modern thought, which post-modern thought rejects. We are speaking about the capacity of knowing how to catch hold of the positive, along with the
negative, in the certainty that the positive will prevail. In the Judaic tradition, this certainty is based on the Word of God that flows like a promise throughout the whole course of history. In the Christian tradition, this certainty is founded not only on the Word, but on the event as well: the event of the resurrection of Jesus Christ. Christians await the victory of light over darkness, of life over death, because this has already begun to happen in the person of Jesus Christ who, in his resurrection, has attained the fullness of life. In him this has already happened as the ‘first fruits’ (I Corinthians 15.20), that is, as the first step that others will follow.

After the presentation we have just described, we highlight another aspect of the biblical message: in this great adventure of history in which humanity is involved, it is God who takes the initiative. The covenant relationship presupposes two partners; however, one must take the first step. And in the Bible, the one who takes the first step is God.

‘God in search of man’, writes Abraham Heschel. The God of the Bible is a God who gives. The god of the Bible is a God who prepares an environment for human creatures, puts into our hands a world rich with everything necessary to live as well as beautiful things for us to enjoy, fills it with people to live and share our lives with, and even gives us his very self in the person of Jesus Christ, the gift that is meant to bring fullness of life to the entire cosmos.

The title of this material is ‘The History of the Gifts’. Once again this is designed to help children experience the moment when the message is enjoyed. The dimension of ‘gift’ stressed here is offered primarily to help children enjoy all that has been given and, in going beyond the gifts to enjoy the love of the Giver. Moreover, ‘gift’ is an eminently dynamic element: precisely because it is gratuitous, gift calls forth a response, but in an indirect way. Again, it is important to note the moral dimension is only approached in an indirect manner and at a later moment. Actually, the impact of this presentation — the message’s power to evoke the child’s personal response — is all the more valid and compelling to the degree that we do not spoil the time for enjoying the message by an untimely intrusion of the moral dimension.

Now we come to the third aspect of history we propose to older children. We mentioned early that biblical history has a clear orientation, a history within which a plan is being realized. What kind of plan? The material we will show indicates some of the acquisitions that humanity has brought about across centuries and millennia, which we still enjoy today. For this presentation, we have made use of one of Montessori’s historical materials, familiar to many; however, we emphasize a particular aspect. The message of this presentation is quite obvious, yet we will try to encapsulate it in a few points.

At various levels within the history we are living, there is a plan being actualized — with enormous difficulties, resistances, contradictions — a plan for communion that encompasses heaven and earth. This would seem to be the plan of God: this is what the Bible calls ‘covenant’. This plan meets with so many obstacles. Nevertheless, to return to our previous analogy, the development of history is like a river. There are ripples, whirlpools, and eddies, but there is a deep current underneath which — despite everything — flows slowly along its course until it reaches the sea.

The first and fundamental aim of this presentation is, yet again, to proclaim the message, to offer an orientation towards reality. All of us here recognize that the purpose of education is to make known the ‘workings’ of reality so that the person can enter into and live it. This is the principal aim of the human learning process and of every educational undertaking. Once we know the inner ‘workings’ — even if only approximately — we need to live in the light of that knowledge. How?
And this is the second aim of this presentation: if this is the movement of history, if this is the plan of God, if we are living in a reality whose most intimate meaning is the creation of a cosmic communion embracing the whole of humanity and creation in their entirety — how do I become a part of it? How can I align myself with this reality so as to be able to live it fully? How can I foster its growth so that it develops and comes to fulfilment?

Therefore we can see that human action is woven into the framework of a plan that enfolds heaven and earth together in a cosmic communion. In the context of this plan, I can offer my own support and contribution, but I can also hinder or delay its growth.

Anything that creates peace is according to the movement of history and the plan of God; anything that makes for division and generates war is contrary to the movement of history and the plan of God.

And so, this presentation contains a profoundly evocative moral dimension, although it is secondary with respect to the proclamation of the message itself. Its moral evocation is all the more powerful insofar as it sounds the depths of a plan of such grandeur, a plan that calls forth our own personal involvement.

References

Montessori, Maria, The Formation of Man
(Chennai: Kalakshetra Publications, 1975)
Maria Montessori’s Moral Epistemology
Solving the Problem of Moral Relativism

Patrick R. Frierson

Patrick Frierson has delved deeply into Montessori’s history to establish her rightful place among the pantheon of philosophers. He has achieved his aim ‘to provide Montessorians with a philosophically rigorous account of the basis for Montessori’s moral commitments’. He appreciates Montessori’s practical aims — that children reveal their true nature — including their moral sensibility — only in healthy prepared environments conducive to freely chosen activity. He writes, ‘For Montessori, moral theory [...] comes from observation of living and developing human beings and sensitivity to what is good and what is evil in their daily lives.’ The article is very comfortable for those who understand philosophical vocabulary like metaphysics, teleology, moral pluralism, moral relativism, epistemology, etc. But the intellectual roots are analytical. In contrast, Montessori’s legacy terms are emotional, social, and spiritual, focused on the development of children and geared to the practice of teaching children. Frierson’s article is sincere in trying to find Montessori’s real intellectual correlations. His excellent tools of ethics and moral training and his research validate Montessori’s philosophical assumptions. Montessori’s legacy is naturally connected to the discipline of ethics and Frierson seeks to prove it. Montessori’s proponents will appreciate the fine tuning of researchers and academicians that makes her writing more credible to the university. Her classical understanding of the child from birth to adulthood is paramount while her methods are aligned with contemporary practice.

Maria Montessori is not generally known as a philosopher. She is best known for the Montessori schools around the world that bear her name, and for her (oft-misunderstood) pedagogical ideas about children’s liberty. But after completing her medical degree and spending several years in professional medicine and psychiatry, including working with children, Montessori left most of her professional responsibilities to enrol in a PhD programme in philosophy at the University of Rome, in order, as she put it, to ‘undertake the study of [...] the principles on which [pedagogy] is based’ (MM 33; DC 2: 23). There she studied under philosophers such as Giacomo Barzelloti (for history of philosophy); Pietro Ragnisco (moral philosophy); and one of the most important Italian philosophers of the early twentieth century, Antonio Labriola; not to mention philosophically inclined psychologists and anthropologists (Trabalzini 2003, Foschi 2012). At the same time, her personal interest in psychology intersected with Italian interest in American pragmatism, particularly William James, whose philosophical-psychological writings she cites throughout her works. By the end of her life, Montessori had put her philosophical background to work; the Italian editors of her Education and Peace could rightly say, ‘Once a firm basis for her theories had been established through practical experience, her thoughts as [...] a philosopher ranged further and unveiled new perspectives that seem broader and broader as time goes by’ (EP 10: vii). Despite her background and sophistication, Montessori’s philosophical thought has not been taken seriously. At most, some have focused on her philosophy of education, and there has been some discussion of her feminism (Babini and Lama 2000, Babini 2000) and her place in the history of psychology (Babini, Foschi, Kramer, Trabalzini).

Through providing an overview of her moral epistemology, the present essay aims to show that Montessori is a philosopher worth taking seriously.

Moral epistemology refers to the theory of how one comes to know moral truths. Some philosophers (nihilists) have claimed that there are no moral truths to be known, others (relativists) that moral norms are wholly culturally determined. The predominant philosophical accounts of moral knowledge today appeal to rational argument or moral ‘intuitions’ or some sort of ‘moral sense’ that gives insight into moral aspects of the world. In this paper, I show how Montessori fits into this last group; she develops a moral sense theory that incorporates her insight that all
the senses — including the moral sense — are grounded in basic human capacities but dependent upon both specific interest in the objects of sensory attention and the cultivation of those senses through directed practice in a well-ordered environment.

I then raise the problem of moral relativism as an issue for moral sense theory in general and Montessori’s in particular. From nearly the start of her career, Montessori sought a global reach for her pedagogy. She developed her philosophy with the world as her audience, a legacy that continues in initiatives such as the Association Montessori Internationale’s Educateurs sans Frontières initiative (see https://montessori-esf.org/). While attuned to real cultural differences, she also claimed to find moral phenomena that transcended culture: ‘The “human personality” belongs to all human beings. Europeans, Indians, and Chinese, etc. are all men.’ If therefore certain vital conditions are found to be a help to the human personality, these concern and affect the inhabitants of all nations’ (FM 3: 6). Here I show how Montessori’s response to relativism involves a metaphysically rooted conception of moral perfection but ultimately leads her to the child as the one who can ‘reveal to us’ the essence of ‘morality as a fact of life’ (1938: 83).

Because her moral epistemology permeates her philosophy of (moral) education, the present paper often draws from pedagogical contexts to elaborate the underlying epistemology, and a better understanding of her epistemology can enrich the theory and practice of education. In that sense, this paper both uses Montessori’s pedagogy to better understand moral epistemology and uses the practices of philosophy to more clearly elucidate a central feature of Montessori’s pedagogy. I hope to thereby provide Montessorians with a philosophically rigorous account of the basis for Montessori’s moral commitments. My conclusion briefly highlights two important practical implications for Montessori educators.

1 Ethical Empiricism and the Moral Sense

Elsewhere, I have discussed Montessori’s ‘interested empiricist’ epistemology, according to which all knowledge begins from sense experience, but that experience requires taking an interest in the world (see Frierson 2014 and Frierson 2019). Knowledge depends upon experiencing aspects of the world that particularly interest one, and both interest and sensory acuity can be cultivated. For this reason,
Montessori prepared environments are filled with sensorial materials designed to foster children’s focused attention.

Consistent with this general emphasis on sensorial education, Montessori identifies the ultimate source of moral knowledge as a moral sense. Her fullest statement of this moral sense theory comes in early pedagogy lectures and is worth quoting at length:

> Education of the senses is the foundation of the entire intellectual organism and might be called the intellectual raw material [...] In [...] the moral realm, another form of sensitivity exists which I argue is fundamental, in an absolute sense, to moral education, just as the education of the senses is fundamental to the education of the intellect: we have a special inner sensitivity to something which we judge to be good, or bad. And this judgment, which is later made by reasoning, we have already made through an inner sensation or something which can be compared to sensation. We experienced a feeling of joy, of peace and tranquility, in certain moments, and at other times we felt remorse and realized the lack of peace and inner joy.

The word conscience is today used by psychologists in a broad manner when they speak of the mind. Moralists and theologians instead limit it to this sort of inner sensory organ, if we may call it thus, sine materia; which gives us these sensations of pleasure and pain, which are sensations of good and bad.

We can say that just as light and darkness, a harmonious note and strident sound affect, in opposite ways, are evident to our external organs of sense, so there are facts and reactions which affect conscience, this inner sensibility. This idea is certainly not mine; it is the oldest idea of moralists and theologians. I do, however, contend that this idea does not carry much weight in the field of pedagogy and child education.

To keep alive this power of feeling, to refine it, is the basis of moral education. In society we see people who speak of morality, but who may have lost their sensibility. Indeed we often look with amazement at human beings who are on a high intellectual plane and speak of morals and who yet have a certain lack of moral sensiveness [...].

(Rome 18: 260-6; see Adol 1: 5-6; London 17: 204)

While she claims no particular philosophical profundity in her view that moral discernment is due to an inner moral sense, Montessori’s parallel between this sense and the outer senses, combined with her particular brand of empiricism regarding the outer senses, provides her with a moral epistemology that is original, plausible, and well-integrated into her holistic pedagogical project. The aim of this paper is to elucidate that moral epistemology.

Montessori treats moral appraisal as continuous with perception, but she does more than simply assert a moral sense. Earlier moral sense philosophers, such as the eighteenth-century philosophers Francis Hutcheson and David Hume claimed that the perception of the ‘good’ is a kind of pleasure, and Montessori largely agrees with this assessment. Unlike those theorists, however, she identifies the distinctive feel of moral appraisal as essentially ‘joy, [...] peace and tranquillity’ rather than bare pleasure. Moreover, while these earlier theorists tended to explain this pleasure exclusively in terms of empathy with others’ pleasures and pains, Montessori allows that people can directly appraise situations in terms of their moral qualities.

Montessori’s broader epistemology is also unlike more traditional empiricists in seeing all senses as active rather than purely passive. Just as one must actively attend to sensorial materials in order to perceive distinctions between shades of colour or differences in texture, and one will only attend to those materials when one takes an interest in them, so too the perception of moral distinctions depends upon a particular interest in and thereby sensitivity to features of situations. No level of harmony in music can be perceived without attending to the music, and — as I have argued elsewhere (see Frierson 2014: 5-6, 22; Frierson 2019) — even differences between light and dark depend upon some interest in those features of one’s visual world.

Montessori extends this point to the moral sense; without an interest in the morally salient features of one’s situation, one will not immediately ‘sense’ good or bad.

Moreover, unlike traditional empiricists, Montessori shows how all senses are open to cultivation, particularly during special sensitive periods, and to degradation or loss, if not properly cultivated. Previous philosophers like David Hume erred by seeing the senses as basically fixed instruments for receiving impressions of the world, and they made a similar mistake in morals. They saw the fundamental mechanisms of the moral sense — sympathy for Hume, or the brute moral sense for Hutcheson — as fixed in human nature. For Montessori, the moral sense is, like other senses, something that must be exercised in the right context in order to cultivate, refine, and preserve it. ‘To know how to keep this inner sensibility alight and to refine it, this is our principal task’ (Rome 18: 263; cf. Adol 12: 13). Just as children must work with sensorial materials to preserve, cultivate, and foster their sight or smell or hearing, so too they must actively observe and engage in moral situations in order to preserve, cultivate, and foster their moral sense.

Thus Montessori asks, ‘How can we educate this sense?’ and, consistent with her pedagogical method in general, she insists that the view that ‘we can make people moral by talking of morality’ is an ‘illusion’ (Rome 18: 262): ‘it is not
by philosophizing or discussing metaphysical conceptions that the morals of mankind can be developed: it is by activity, by experience, and by action’ (Adol 12: 83; cf. 1938: 83–87). Moral education requires ‘auto-education’ (Rome 18: 262), albeit one within which (as in the case of sensory education) the teacher should carefully prepare an environment for activity in a social context and may appropriately teach the vocabulary associated with the child’s (inner) perceptions. Just as one cultivates children’s visual acuity by providing them with examples of different colours and words to associate with those colours — ‘This is blue; this is yellow’ — so too one cultivates moral acuity with carefully chosen examples of moral realities and appropriately simple terms to describe these examples: A teacher who says […] ‘this is good’ and ‘this is bad’ safeguards them in the most delicate way possible from evil, permitting them to develop freely in what is good without in any way placing obstacles. This teacher, if not giving moral education, at least begins to educate “moral sensory organs” and classify the facts of moral conscience’ (Rome 18: 263). Crucially, the teachers’ statement that ‘this is good’ is not instruction in what things are good, any more than her statement that ‘this is blue’ is an instruction in what things are blue. In both cases, the child must be presented with cases that stimulate his interest in the quality to be perceived — the moral goodness of the deed, or the colour of the material — and then he must recognize these traits himself. The teacher merely provides a word for what the child has already recognized. Thus we ‘need to be acutely aware to respect all the inner acts of children’s sentiment’ (Rome 18: 264), not seeking to project our concepts of good and bad but only to provide occasions for the exercise of his moral sense.

Fundamental to Montessori’s moral pedagogy, then, is the provision of well-ordered occasions for moral reflection, particularly through social interactions: ‘the growing sentiment of the conscience of the individual […] develops through and by means of social experiences’ (Adol 12: 84). Even when one helps children formulate moral principles, one should always only ‘giv[e] moral principles together with social experiences’ (1938: 87, emphasis added). Her classrooms are social spaces with opportunities for self-cultivation but also for conflict and cooperation, solidarity and social friction.

There is only one specimen of each object, and if a piece is in use when another child wants it, the latter—if he is normalized—will wait for it to be released. Important social qualities derive from this. The child comes to see that he must respect the work of others, not because someone has said that he must, but because this is a reality that he meets in his daily experience. There is only one between many children, so there is nothing for it but to wait. […] We cannot teach this kind of morality to children of three, but experience can.

(AbsMind 1: 202–03)

In these social relations [that regularly take place in the classroom], there are many moments in which children’s moral sensibility is put to the test. The teacher can direct, seeking to direct with the same purpose to keep on refining this inner sensitivity. You will say, ‘How can this sensibility be given and refined?’ That is impossible, it cannot be done, if it does not [already] exist. It would be like setting ourselves the problem, “what shall we do so that children should see the red [and] the green if children do not see it?” If children do not see it, you cannot make them see it. Children see—that is why they are capable of education. Do not preoccupy yourselves with children’s sight in this sense, for they have inherited it and it is because they do have it that you can educate it. And how to educate it? Make them see the red and the white. But do you create the red and the white? No, these colours are everywhere. There we call attention to the red and the white and we say, ‘This is the red and this is the white’ […] Moral life should be presented in the same way.


Just as Montessori teachers focus children’s attention on particular qualities of external senses, and their classrooms are filled with materials that cultivate the outer senses in deliberate, graded, and ordered ways; so too they focus on creating conditions for moral perception. Thus there are a limited number of materials of each type (typically only one) and a large number of students, so that students are faced with competing desires for materials and must learn to recognize appropriate and inappropriate ways of handling scarce resources in a carefully delimited context. They regularly face opportunities for cooperative work but also potential conflict, both of which prompt moral consciousness. Throughout daily life, children’s abilities to recognize morally salient features of situations and to appropriately sense good and bad responses to those situations depend upon capacities for moral perception, which capacities increase — like all senses — through ‘exercise’ (London 17: 237).

Crucially, for Montessori, the teacher’s ability to set up an environment that allows children to cultivate their own moral sense is essential if morally good actions are to also be autonomous expressions of agency. For Montessori, one reconciles freedom with morality when—and only when—one acts in the light of moral ideals that one sees for oneself.4 As in all cultivation of the senses, this depends upon having the right sorts of experiences during specific developmental ‘sensitive’ periods.
Maria Montessori’s Moral Epistemology

Powerful among [children’s] instincts is the social drive.

sense can and should be cultivated in the course of

It has been our experience that if the child and the

education. If different educations give rise to different

adolescent do not have a chance to engage in a true

moral senses, there seems no legitimate standard by which

social life, they do not develop a sense of discipline and

to define an ‘ideal’ for moral pedagogy. Thus Montessori

morality. These gifts in their case become end products

takes quite seriously the problem of an ethical relativism

of coercion rather than manifestations of freedom.

that considers ‘morality […] as something that varies

The human personality is shaped by continuous

according to the epochs of time and the conditions of life’

experiences; it is up to us to create for children, for

(1938: 81).

adolescents, for young people an environment, a world
that will readily permit such formative experiences. […]

To begin with, Montessori admits that humans’ moral

Thus from early childhood on, human beings must have

sensibilities are modified to considerable degrees by our

practical experience of what association is.

cultural contexts: ‘things are established by social groups.

(EP 10: 28–29)

For example, habits and customs which finally become
imbued with the force of morals […] Morals are a super-

After childhood, people can be brought to self-discipline

structure of social life, which fixes them in determinate

and ‘morality’ in the sense of respect for others. But they

form’ (AbsMind 1: 169). Moral pluralism — as a descriptive

will be brought to these through “coercion” of some sort.

claim about humans’ sensibilities — is simply a fact about

Most often, the relevant coercion will involve literal force

the world. Moreover, this fact is grounded in a psychological

or the threat of force (in the case of civil laws or divine

trait that lies at the very core of Montessori’s pedagogical

commands) or appeals to honour and vanity (as with

method: the absorbent mind.

social pressures and the allocation of esteem) or by
means of compromises made for the sake of self-interest

Nothing has more importance for us than this absor-

(anticipating reciprocation or operating within various

bent form of mind, which shapes the adult and adapts

implicit or explicit social contracts).5 As opposed to those

him to any kind of social order […] On this, the whole of

who ‘are always feeling tempted […], need moral support to

our study is based. […] We can therefore understand

protect them from temptation […][and so] impose rules

how the child, thanks to his particular psyche, absorbs

upon themselves to save them from falling’, those whose

the customs and habits of the land in which he lives

moral sense is well-cultivated are ‘stronger types’ for whom

until he has formed the typical individual of his place

‘Perfection attracts them because it is in their nature. Their

and time. […] Thus the respect for life in India is so great

search for it is not sacrificial, but is pursued as if it satisfied

that animals also are included in a veneration firmly

their deepest longings’ (AbsMind 1: 189–90).6 The most auto-

rooted in the hearts of the people. So deep a sentiment

nomous expressions of agency come from that wholehear-

can never be acquired by people already grown up.

ted (cf. Frankfurt 2004) commitment to the good that arises

Just to say: ‘Life is worthy of respect’, does not make this

when one sees what is good about self-discipline and

feeling ours. I might think the Indians were right; that

mutual respect and reflectively endorses (and even

I also should respect animals. But in me this would only

expands) that insight in the light of reason. Such a person is

be a piece of reasoning; it would not stir my emotions.

truly moral, and truly free.

That kind of veneration which Indians have for the cow,
for example, we Europeans can never experience. Nor

2 Value Pluralism and the Moral Sense

can the native Indian, reason as he may, ever rid himself
of it. […] Every personal trait absorbed by the child
becomes fixed forever, and even if reason later disclaims

Ethical pluralism poses an important challenge to moral

it, something of it remains in the subconscious mind.

sense theories. David Hume confronted this problem, and

(AbsMind 1: 56–57)

his friend and fellow moral sense theorist Adam Smith,
a philosopher most famous for his economic treatise The

Moral pluralism is deep, affecting the cores of people’s

Wealth of Nations, wrote a whole book on the Theory of

personalities. And pluralism is wide, affecting all people at

Moral Sentiments, Part V of which is wholly dedicated to

all times; being human depends upon absorbing culture

the problem of pluralism. For ethical theories grounded on

deeply. And absorbed cultural values are ineradicable, at

rational arguments of one sort or another, pluralism might

least at the level of moral perception. The adult Indian will

be easier to address, but if one bases ethical prescriptions

always feel that killing life is wrong, even if she comes to

on moral sense, and if people’s moral senses differ, then

reflectively reject that moral belief.

morality — at least of any universal kind — is seemingly
undermined at its root. The problem might seem

Nonetheless, and despite affirming that pluralism in some

particularly severe for Montessori, who argues that moral

respects can be better than ‘stupid […] uniform[ity]’ (SA 9: 109),

208

AMI Journal 2020


Montessori insists that avoiding the relativism towards which pluralism might seem to lead is both possible and important. The possibility is based in part on a teleological-normative metaphysics, within which human capacities exist for certain ends and can and should be cultivated towards those ends (see §3), and in part on optimism about ‘the child’ as ‘a great assistance in understanding this question of morality’ (1938: 81; see §4). The importance is based on two fundamental concerns, a practical politico-social concern for relations amongst diverse human beings and a properly philosophical concern with the moral relativism that can seem implied by pluralism. I start, in the rest of this section, by more carefully laying out the dangers of relativist pluralism before turning in §§3–4 to Montessori’s account of how to overcome them.

Montessori’s first concern with pluralism is practical and moral-political. Because moral sensibilities are so deeply rooted and important, cultural variability can set up intractable divisions between human beings.

The adaptation of man is not made by one fixed instinct, but by many guiding instincts. Each group varies in regard to the development of these instincts. [...] These adaptations detach and separate them from each other [...] If, by some chance, people go abroad and must adapt to the behaviour of another group, they either do so with difficulty or fail. They cannot [...] renounce their own habits, religion, or language. [...] The creative adaptation, once fixed, does not allow for understanding of the other groups of man, who, being adapted to something quite different, have another sentiment. [...] To us it may seem horrid to think that the body of a beloved will be taken to pieces by a bird of prey, but it is a sacred and beautiful idea to some people. (London 17: 96–97)

Montessori was acutely aware of processes of globalization that were making the world one in which all human beings are like a ‘single organism’ (EP 10: 22). But she also noted that this ‘unity’ exists alongside ‘enormous gaps in the realm of man’s psyche, errors that set man against man’ (EP 10: 60). Rather than the peaceful harmony that should come with unity, people’s radically different moral perceptions of the same situations — from ‘horrid’ to ‘sacred and beautiful’ — give rise to war and conflict instead of solidarity and mutual interest. And in a world where humans have the technological means for total destruction, the gap whereby pluralism gives rise to war can have devastating consequences (see EP 10: 39–40). Pluralism, in the absence of some way of promoting genuinely universal values, threatens to undo us.

This problem is practical and political, but there is also a more narrowly philosophical problem that arises from the conjunction of pluralism with a sense-based moral epistemology. If people ‘sense’ good and bad in different and incommensurable ways — seeing the same act as ‘horrid’ or ‘sacred’ — then it seems impossible to talk about the good or the right at all: ‘We ask ourselves if absolute good exists. And we are almost decided against it, because we see that in society the idea of good changes [...] And [...] many times we rely on society’s judgment on moral issues. If society says something is moral, then [we think that] certainly it must be [...] if the good of society is not the absolute good, it is not stable’ (Rome 18: 271). This philosophical problem not only exacerbates the practical-political one, but it is a central problem for moral theory itself. If there is no universal standard of ‘good’ and ‘right’, then any attempt to articulate a substantive moral theory will be at best only the local description of a particular point of view, what Friedrich Nietzsche called a ‘prejudice baptized as truth’ (Nietzsche 1966: 13). For a moral sense theory, moral pluralism (the incommensurable diversity of moral feelings) seems to imply moral relativism (the incommensurable diversity of genuine goods) or even moral nihilism (the absence of any ‘absolute good’).

Montessori’s response to these philosophical worries is that, despite all the apparent diversity and sociocultural relativity of ethics, there is a universal normative core: ‘There is a greater good and absolute, as the truth which has assured life. Life is one, and its laws are established and humankind tends with mysterious and supreme aspirations to obey them’ (Rome 18: 271). This universal core is evident even in those areas where human beings seem most divergent. Thus, leaving dead bodies to be eaten by birds of prey, which some find ‘horrid’ and others ‘sacred’, is an expression of a ‘fundamental moral instinct common to all’, a universal human recognition that it is important to ‘do something special’ for those who have died (Rome 18: 97). ‘Observing the [...] expression [of these universal moral instincts] in different groups, one can see how deeply the adaptation of one of these sentiments goes’ (Rome 18: 97), but one can also see shared moral values. In this potential variability, though, the moral sense is quite like other senses. We can cultivate hearing to the point that human beings are capable of literally hearing different things based on languages exposed to when young (cf. Bornstein 1989; Deutsch et. al. 2004), and we can also have different moral values. But the basic capabilities that develop in culturally specific ways are constrained by the biology of the ear and the sounds available to be heard in the world. Similarly, we form different moral sensitivities and vary moral principles based on cultural upbringing, but only in the context of biological and world-imposed constraints on what we can consider good and evil.
Moreover, Montessori’s moral sense theory is realist in a way that vindicates universal values over their particular manifestations. Realism is the view that there are real moral truths that exist in the world, independent of how one thinks or feels about them. Many moral sense theorists held the view that moral truths come to exist because we feel certain ways about moral situations. That would be like saying that colour tablets are yellow because they look yellow to us. For Montessori, however, senses might be selective based on our interests, but they are fundamentally ways in which we detect and adapt ourselves to a reality that exists whether we sense it or not. So, too, with the moral sense. This opens the possibility for culturally specific moral values to run into barriers of moral reality, a possibility particularly evident in cases of social change:

All social revolutions come from people’s aspirations to draw as close as possible to this absolute good. Just as children rebel when we do not want them to follow the road of their own salvation and judge them as naughty, so people at certain times rebel against a social condition because they have felt a higher plan and wish to make a further step towards the good. Such people must have a sensitivity to feel absolute good and evil and not only that transitory perception of good and evil in society. (Rome 18: 271)

The central moral-epistemological claim of this passage is that humans’ moral sensitivity, while it can be co-opted, refined and/or corrupted by the societies in which people find themselves, is prior to those cultural modifications in something like the way that the basic structure of our outer senses is prior to the culturally specific ways that our attention gets directed. Just as the view that one gets epistemic access to objects’ shapes through senses of sight and touch does not preclude (and is in fact conducive to) realism about shape, so too a moral sense theory does not preclude (and can be conducive to) realism about moral values. And just as we can remain ‘blind’ to what is present to the outer senses but can also — eventually and in the right conditions — come to see clearly, so too we can transcend transitory social concepts of good and evil in the light of innate moral sensibilities.

Given this absolute good at the heart of moral sensibility, the cultural adaptability of moral sense can be an advantage, if we make use of that adaptability properly. At present, we humans find ourselves in genuine moral crises, with moral values that seem to interfere with solving pressing global problems such as world peace and environmental sustainability. Our sensibility to an absolute good at the heart of moral sensibility provides means for overcoming those conflicts. Through environments that foster appreciation for absolute goods, including respect for diversity amongst particular ways of life, children’s moral senses can be cultivated to generate mutual love and support rather than conflict.

Montessori deepens her emphasis on the right kind of moral education by arguing that social relativism becomes a problem primarily through bad moral concepts rather than defects in the moral sense itself:

[insofar as it] is possible that good and evil may be distinguished by means of an ‘internal sense’, apart from cognitions of morality […], the good and evil in question would be absolute; that is to say, they would be bound up with life itself and not with acquired social habits. (SA 9: 250–51, emphasis added)

Moral cognitions (principles), rather than diversity of moral feelings, provide the primary impetus towards relativistic moral conflicts. Thus the primary role of education is less to shape the moral sense than to refrain from corrupting it.

To keep alive and to perfect psychical sensibility is the essence of moral education. Around it, as in the intellectual education which proceeds from the exercise of the senses, order establishes itself: the distinction between right and wrong is perceived. No one can
teach this distinction in all its details to one who cannot see it. (SA 9: 149–50)

Still, the right environment — and particularly avoiding the wrong environment — provides an essential means of ‘help’.

[In] order that ‘the child may be helped’ it is essential that the environment should be rightly organized, and that good and evil should be duly differentiated. An environment where the two things are confused, where good is confounded with apathy and evil with activity, good with prosperity and evil with misfortune, is not one adapted to assist the establishment of order in the moral consciousness, much less is one where acts of flagrant injustice and persecutions occur. (SA 9: 250)

By means of injustices of the kind typical in educational contexts (e.g. EP 10: 17), children’s natural feelings for the good can be corrupted and diverted. When corrupt moral concepts are applied in their environments, children cease to trust their natural moral sense and end up embracing social habits. But the very flexibility of disposition that makes these corruptions possible also provides the opportunity for perfecting the ‘psychical sensibility’ for good and evil ‘till it can recognize and at last enjoy “good” up the very limits of the absolute, and also […] become sensitive to the very slightest deviations towards evil’ (SA 9: 253). Montessori orients moral education towards this preserving and perfecting mission.

3 Metaphysics of Morals

Metaphysics is the philosophical study of the ultimate nature of reality, what the universe is made of and how it works. As I argued in Section 2, Montessori responds to the challenge of moral relativism largely by appealing to a genuinely universal, even if not always evident, moral sense. But she enriches this account with a metaphysics wherein moral virtues can be seen as excellences of human beings as living, teleologically ordered beings. Even her arguments for diagnosing social change in terms of responsiveness to absolute good or protecting children from corrupting moral concepts depend upon being able to distinguish social reforms that are fundamentally parochial and destructive from those that are primarily aspirations towards absolute good. Montessori’s moral sense theory is thus complemented by what we might call a metaphysics of moral sense, that is, an account of what it is that one senses when one senses that something is ‘good’.

Some previous philosophers have held that moral values exist in some eternal realm of values, or consist of some other sort of ‘very strange’ metaphysical entities ‘utterly different from anything else in the universe’ (Mackie 1977: 38). For Montessori, however, moral values are features of humans’ form of ‘life’. Montessori’s moral ideal is an ‘ideal of “life”’ that makes ‘life’ its fundamental value (SA 220; cf. SA 266). As she puts it in some of her earliest reflections, we may rise […] toward a positive philosophy of life […] We are immoral when we disobey the laws of life; for the triumphant rule of life throughout the universe is what constitutes our conception of beauty and goodness and truth. (PA 27; cf. PA 473, 475)

We should consider as good that which helps life and as bad that which hinders it. In this case we should have an absolute good and evil, namely, the good which causes life and the evil which leads to the road of death, the good which causes a maximum degree of development and the evil which — even in the smallest degree — hinders development. (Rome 18: 263)

As a medical doctor influenced by early evolutionary positivism,8 Montessori saw ‘life’ as an active and creative biological force, and in Scientific Pedagogy she explains and defends ‘theories of evolution’9 that ‘attribute the variability of species to internal rather than external causes — namely, to a spontaneous activity, implanted in life itself […]. The internal factor, namely life, is the primary cause of progress and the perfectionment of living creatures’ (PA 46–47). Later, she draws attention to various ‘guiding instincts’ conducive to the preservation and increasing perfection of ‘the individual and the species’, that, she says, are ‘bound up the very existence of life’, tied to ‘life in its great cosmic function’, and consist of ‘delicate inner sensibilities, intrinsic to life, just as pure thought is an entirely intrinsic quality of the mind’ (Secret 22: 178). A full explication of the metaphysics underlying Montessori’s claims here would take us too far afield, but the notion of life is a central metaphysical category for Montessori, one that she sought to articulate in various different ways over the course of her life.10 ‘Life’ is an active force in the universe, teleologically oriented towards increasing complexity and perfection, and manifested in the child’s striving for excellence.

This emphasis on life ascribes normative importance to impulses that proceed from one’s ‘guiding instincts’ or ‘vital force’, the striving for self-perfection implicit in our nature as living beings. This notion of finding moral value in biological teleology is an old one, going back at least to Aristotle’s Nicomachean Ethics, written in approximately 340 BC. And while this approach might seem contrary to post-Darwinian conceptions of biology, several recent philosophers have shown how the sort of end-directed conception of life that Montessori uses is plausible even today. The twentieth century Oxford philosopher Philippa...
Foot makes the point in a particularly Montessorian way, with a clear sense of medical analogy:

Evaluations of human will and action share a conceptual structure with evaluations of characteristics and operations of other living things, and can only be understood in these terms. [...] Life will be at the center of my discussion, and the fact that a human action or disposition is good of its kind will be taken to be simply a fact about a given feature of a certain kind of living thing. (Foot 2001: 5; see too M. Thompson 2009)¹¹

What it is to be excellent or perfect is tied to one's kind of life. And just as human bodies can be excellent (healthy) or not, so too human actions and dispositions (souls) can be excellent or not.

But here Montessori's emphasis on the moral sense adds an important element to life-based virtue ethical theories. While Montessori and Foot may both be correct to put life at the centre of moral theory, Montessori rightly points out that the fundamental means of access to moral truth is not by scientific study of life but through immediate perceptions of moral goods and ills, whether through feelings of peace or joy or through direct confrontation with facts of social life. The metaphysics of life, even if metaphysically fundamental, is epistemically secondary to concrete perceptions of good and evil in particular cases. Like other senses, of course, the moral sense is reliable only insofar as it is healthy; and as in the cases of other senses, its health in a particular instance can be assessed only on the basis of judgments rooted in other(s') healthy, uses of moral sense. And the ultimate standard of health is (partly) constitutive of the kinds of living beings that we — human beings — are.¹² Thus a moral sense theory and a life-based metaphysics of morals fit together into an integrated and coherent whole, with the latter providing the metaphysical basis for the epistemic legitimacy of the former.

### 4 Studying Children

For Montessori, human beings recognize moral truths by means of a moral sense, and these truths are normative facts about human life. But the fundamental way in which moral theorists can better understand moral ideals is through the study of children. Life is teleologically oriented in its unfolding, such that living things, when given freedom in a healthy environment, tend towards their good. But human adults have already absorbed culturally specific influences on both natural tendencies and the natural exercise of moral sense. Moreover, because most human adults were raised in conditions that did not grant them freedom in a healthy environment, the 'cultural influences' on their actions and sensibilities are more likely to corrupt than cultivate their natural tendencies (see FM and SA).

One who wants to develop a moral theory from reflection on natural human moral possibilities should study children, and particularly children left in freedom in an environment conducive to the exercise of freedom and the practice of moral sense. That is, the children must 'reveal to us the phases through which social life must pass in the course of its natural unfolding' (AbsMind 233–34; cf. 1938: 81–82).

Crucially, children reveal their true nature — including their moral sensibility — only in healthy conditions conducive to free activity: ‘the conditions of observation are made up of two elements: an environment which is conducive to the most perfect conditions of life, and the freedom which allows that life to develop’ (Rome 18: 54; cf. Frierson 2015).

Only in such contexts can the real nature of any biological being emerge (see MM 14; SA 9: 96). But in the case of children, their worlds tend to be constructed in ways that both limit their freedom directly — through discipline and coercive control — and deny them the environment they need. Studying the ‘good’ of children under such conditions, like studying adults with ill-formed characters, is like trying to study what is ‘healthy’ for one who has (and has had) access only to fast food and sedentary occupation (cf. EP 10: 7–11). In conditions conducive to liberty, however, children reveal their ‘normal’ nature. In this context, Montessori explains how careful observation of children in conditions conducive to life gave rise to her conception of human (moral) ideals:

> Directly these children found themselves under conditions of real life, with serious implements for their own use, of a size proportionate to theirs, unexpected activities seemed to awaken within them. These were as unmistakable as they were surprising and it was our effort to follow them and interpret their meaning, helping others like them to appear also, that brought this method of education into being. No educational method, in the accepted sense, had caused these
happenings. On the contrary, it was they — as they progressively unfolded — that became our guide and taught us how to treat the children. All began with our efforts to give satisfactory conditions of life, wherein the children should find no obstacles to their development, and in leaving them free to choose the various means of activity that we had provided. (AbsMind 1: 153)

According to Montessori, children in this condition reveal a nature that is quite unlike both ‘so-called bad qualities’ and so-called ‘good and superior’ ones (AbsMind 1: 181), a ‘new child’ with a quite different nature from what one might have expected. Montessori describes these children with the important concept of ‘normalization’, which describes ‘a psychological recovery, a return to normal conditions’ (Secret 22: 133–44) whereby ‘a unique type of child appears, a “new child”; but really […] the child’s true “personality” allowed to construct itself normally’ (AbsMind 1: 183):

Observing the features that disappear with normalization, we find to our surprise that these embrace nearly the whole of what are considered characteristics of childhood [...] Even the features that have been scientifically studied as proper to childhood, such as imitation, curiosity, inconstancy, instability of attention, disappear. And this means that the nature of the child, as hitherto known, is a mere semblance masking an original and normal nature. (Secret 22: 135)

Montessori bases her whole philosophy on these ‘revelations’ (SA 9: 53) from children, but in the moral realm in particular, they lead her to ‘consider morality as a fact of life, which can be studied in the developing child’ (1938: 83). This morality, as it unfolds, involves an emphasis on individual work, mutual respect, and solidarity. All of these at first appear as ‘extraordinary manifestation[s]’ in children (SA 9: 51) but eventually become the basis of an implicitly recognized moral ‘technique which allows [them] to live together harmoniously’ (1938: 82). Moreover, these basic moral values of normalized children show up in every cultural context in which children are given freedom in a healthy environment, ‘not only in almost every nation that shares our Western heritage, but also among many other widely divergent ethnic groups: American Indians, Africans, Siamese, Javanese, [and] Laplanders’ (EP 10: 15).

The role of children’s uncorrupted moral sense in Montessori’s moral epistemology has important implications for moral education in Montessori classrooms. There can be a temptation, even amongst Montessori teachers, to impose one’s adult values on the lives of young children, showing them the right and wrong ways to manage conflict, and so on. Lessons in grace and courtesy, for example, can become attempts at communicating one’s own moral insights to children. But Montessori’s central insight is that adults should ‘follow the child’ even in the realm of moral formation. The case here is similar to the case of Montessori’s materials for teaching reading, writing, math, and other academic subjects. Montessori did not develop materials for teaching those things and then find a way to get children interested in them. Rather, she looked for the sorts of materials that children found interesting, and filled her classrooms with those. Similarly, the goal of moral education in a Montessori classroom is not to find a way to get children to share our adult values, our adult ways of solving social problems. Rather, the goal is to create an environment within which children must live and work together, and then observe how they solve problems, what they find to be good and right and just. Teachers can then help crystallize these lessons for them through giving the relevant language or highlighting and isolating particular moral insights. But the focus should be on creating normalized children and learning from them.

Of course, creating the conditions for children’s ‘normal’ state to emerge and then observing moral development that occurs in that context depends upon recognizing some standard of normalcy. Montessori begins with a particular conception of what a normal or healthy psyche would be, but she modified and developed her moral theory in the context of actual observations of and work with children. The core of her moral philosophy — character as self-directed work towards perfection — emerged from her observations of children at work, not from prior conviction that such personal striving for excellence is a fundamental moral ideal. And her conception of moral virtue as holistic and internal, as opposed to ‘dutiful’ (in Kant’s sense) or derived fundamentally from external sources (e.g. God, society), was based on her observations of children’s agency rather than cultural norms of her Italian Catholic background (but cf. Babini and Lama 2000). Even while constructing environments with some prior conceptions of what counts as good, children revealed moral ideals she would not have constructed for herself.

For Montessori, moral theory does not emerge a priori from abstract reflection; rather, it comes from observation of living and developing human beings and sensitivity to what is good and what is ill in their forms of life. And children provide a particularly fertile field for such observation. A morally attuned teacher engaged in constructing a life together with children will find her prejudices about good and evil constantly challenged by her moral perceptions of the good and ill in children’s exercises of agency. The teacher who once assumed that children’s self-directed activity is a bad lack of discipline will see, in their concentrated attention to work, an excellence of human agency that requires rather than precludes movement. An attuned
teacher who assumed that children are distracted and flighty will recognize, perhaps for the first time, the evil involved in interrupting children's persistent work for the sake of new activities. And so on. All of these observations depend upon a certain kind of environment/classroom and a teacher-philosopher with a sensitive and attuned moral sense that sees not only what is but what nature is teleologically oriented towards.

5 Conclusion

I want to close by reiterating and highlighting three basic insights for educational practice that emerge from Montessori's moral epistemology. First, I find it inspiring to recognize that classroom situations that call for moral discernment are sensorial materials. Lessons in grace and courtesy are not merely lessons in what to do or how to act, but are also opportunities to help children exercise their capacities to see morally relevant features of the situations they encounter regularly in Montessori environments, situations of scarcity or personality clashes or possible cooperation or empathy. Recognizing social and moral formation as a kind of sensorial education can also help parents (and educators) who appreciate the carefully developed colour tablets or smelling boxes come to also appreciate the moments of conflict or moral inspiration as akin to these more obvious ways in which children exercise capacities for fine grained sensory discrimination.

Second, as noted in Section 4, Montessori's approach to moral philosophy is a helpful reminder that the task of Montessori guides is to 'follow the child', and that includes following children in their own moral insights. As adults, we can easily become rigid and stale in our sense of right and wrong, often adopting moral standards based on how to preserve order in a world of non-normalized adults. By contrast, Montessori discovered radically new ethical ideals, new forms of justice, compassion, and shared life together, through carefully observing how normalized children solve their own social problems. As educators, even as we continue to give the grace and courtesy lessons we have developed through wise and attentive observation of children in the past, we should let ourselves be open to new moral discoveries that will emerge in the children in our classrooms.

Finally, this emphasis on following — and learning from — the child is an important reminder that Montessori educators are to be teachers and scientists, and — I would add in a Montessori spirit — also moral philosophers. Adults generally do not understand children, and we do not understand what children understand about the world, and children understand a lot. Montessori educators can and must take on the task of observing children with the scientists’ eye of refining conceptions of human nature through careful attention to what capacities emerge in children given freedom in an environment conducive to their development. And such educators can and must also observe children with a philosopher’s eye, seeking to learn, from children given freedom in a social environment, what human societies are capable of and what moral virtues and norms allow them most to flourish. It is from such educators that the world can be transformed by the insights of children, from such that we can, as Montessori put it in Education and Peace, ‘recognize the way to salvation, the path that could lead us to true peace’ (EP 10: 5).

Patrick R. Frierson, PhD, is a professor of philosophy at Whitman College in Walla Walla, WA, where he lives with his three children. He is the author of three books on the philosopher Immanuel Kant and a book on Maria Montessori. Intellectual Agency and Virtue Epistemology: A Montessori Perspective. He is currently at work on a book on Montessori's moral philosophy. This article is a modified version of an article that first appeared in History of Philosophy Quarterly 32.3 (Champaign, IL: University of Illinois Press, 2015), pp. 271–92.
Notes

1 For texts by Maria Montessori, wherever possible, I use the latest (as of 2018) Montessori-Pierson Publishing editions of the works of Maria Montessori (2007–), giving volume and page number for each citation. The exceptions to this practice are for works that have not yet been printed by Montessori-Pierson: the original version of *The Montessori Method*, *Pedagogical Anthropology*, *The Child and the Church*, and the 1938 Edinburgh Congress. Abbreviations are as follows:


AbsMind *The Absorbent Mind.*

Adol *From Childhood to Adolescence.*


DC *The Discovery of the Child.*

EP *Education and Peace.*

FM *The Formation of Man.*

London *The 1946 London Lectures.*


Rome *The 1913 Rome Lectures: First International Training Course.*

SA *Spontaneous Activity in Education* (reprinted as *The Advanced Montessori Method I*).

Secret *The Secret of Childhood.*

2 Montessori uses the Italian *uomo* (human being) here. Nonetheless, I generally follow the approved translations of the Montessori-Pierson Publishing Company endorsed by the Association Montessori Internationale that Montessori established, unless there are significant reasons to highlight a variation with Italian editions.

3 A discussion of the substantive details of her moral theory — particularly her three-fold emphasis on character (normalization), mutual respect, and social solidarity — will be forthcoming in a future paper.

4 This approach, which allows for moral agency in very young children, differs from that of many contemporary moral philosophers, who connect agency and moral self-governance by appeal to the structure of reflection, deliberation, or rational self-legislation (cf. e.g. Korsgaard 1996, 2009; Reath 2006).

5 Even in the ideal (contemporary Kantian) case of recognizing, on reflection in the light of reason, that one’s basic impulses are inconsistent with universal standards of rightness, the endorsement of those standards — by one who does not ‘see’ their truth at the level of direct, felt experience of the world — will always feel coercive. Kantian duty is in these cases a coercive force, and because Montessori insists that we identify not merely with our reflective reason but with a broader conception of our agency, this force compromises our freedom.

6 As this passage indicates, Montessori is at least a moderate internalist about the moral sense (but not about abstract cognition of moral principles). Insofar as one senses the good by means of feelings of peace and joy, one is motivated to pursue or preserve it.

7 She is also making metaphysical, political-historical, and pedagogical points in this passage.

8 See Foschi 2012; Cimino and Foschi 2012; Frierson 2018.

9 The theorists to whom she appeals for these accounts of evolution are Carl Wilhelm von Nageli and Hugo Marie de Vries, both important figures in the development of genetics and the eventual Darwinian synthesis, as well
as Léon Laloy (a Belgian biologist), whose *Evolution de la vie* (Laloy 1902), she cites as particularly helpful for understanding the fundamental principles of biology to which she adheres (see PA 40).

10 For more details, see Frierson 2018.

11 For a more metaphysically loaded conception of life and its normative importance, see Evan Thompson 2007. On Thompson’s account, ‘life’ is not an irreducible category with normative implications but an isolation of certain kinds of systems in the world — those with what he calls an ‘autopoeitic’ structure — where autoepoiesis itself involves the two-fold purposes of identity (self-production) and sense-making (adaptivity and cognition)’ (E. Thompson 2007: 153). For Evan Thompson, as for Michael Thompson and Philippa Foot, ‘vital structures have to be comprehended in relation to norms’ (Thompson 2007: 74) according to which they seek to conform to ‘optimal conditions of activity’ (Thompson 2007: 147, quoting Merleau-Ponty 1962: 148).

12 The naturalist and relatively metaphysically thin reading of teleology in this section might seem to be at odds with other of Montessori’s writings that suggest a more theologically loaded metaphysics of morals. While her moral sense theory is compatible with theological accounts of moral values, it does not require any such account. Even where she appeals to the importance of religion for moral life (e.g. CC 14–15) or promotes what might seem to be a divine command theory of morals (CC 14, CSW 97–99, EP 30–31), the function of her invocation of God is to shift attention from one’s own sense of what is right for the child to what children themselves reveal. Thus ‘To discover the laws of the child’s development would be the same thing as to discover the Spirit and Wisdom of God operating in the child’ (CC 14). The point is not that one should look to any specifically religious source for ethics. Rather, the appeal to ‘God’ should orient us towards children themselves. Montessori likely did ascribe a theological origin and focus to the moral sense, but such a focus is not essential to her moral epistemology or pedagogy as such.

13 The details of this substantive account of morals are beyond the scope of this essay.

### Bibliography


———, 2018. “Maria Montessori’s Metaphysics of Life.”


Montessori Adolescents and Community-Engaged Work

Inherited Projects at Colegio Montessori de Tepoztlán

Guadalupe Borbolla

Guadalupe Borbolla, over the course of thirty years, has developed Colegio Montessori de Tepoztlán, an authentic and organic Montessori school serving children from the Infant Community through high school. These children come from varied socioeconomic backgrounds. The school includes a small holding of animals, habitats, and gardens on campus as well as a free-standing farm in the country, which the children maintain and visit weekly. Borbolla describes two community work projects for the older adolescents which include visiting the indigenous community of Cuentepec and the orphanage Casa Eugenia. These initiatives are committed to establishing successful relationships and are characterized by creating collaborative energy. To guarantee fully independent collaboration, no economic exchange of any kind is involved. In this way all are seen as collaborators, willing to work and help in any way. This rule was never broken, and adolescents learned to value all the new experiences that Cuentepec culture had to offer. The practical nature of working in these villages is contrasted with the advanced adolescent studies (high school) of the formal disciplines of sociology, anthropology, and psychology. A strong intellectual component of the academics is rooted in interdisciplinary cooperative work.

At Colegio Montessori de Tepoztlán we consider that education must be extensive and complete, that it must provide the adolescents with life experiences that give meaning and reason to the information they receive, which places them into this process of profound discoveries that they are making about themselves and about society. Experiences that challenge them, lead them to research for themselves, and help them gain security and respond to their vital needs.

The older adolescent is independent in many ways. He is an anxious humanist interested in humanity’s great problems, sensitive to them, and ready to help always. It was from the characteristics of the adolescent period that the idea of creating a community work project sprouted. For high school-age adolescents, it is essential that community work provides them with spaces and experiences that allow them to appreciate and understand the concurrent unity and diversity of mankind. We consider that community work is of great value for the personal development of the older adolescent, insofar as they can be oriented towards society based on knowledge and management of themselves and their relationships; this external experience brings them closer to the social reality of their country and awakens their social awareness by focusing on others.

Community work provides challenges that strengthen the adolescent’s personality. These challenges foster respect and tolerance for what is different from their current life experience that strengthen and promote the development of social skills, self-respect, and self-knowledge. Community work is also a bridge between the academic and the social reality, giving meaning to information that would otherwise remain in the classroom as purely an academic understanding of life.

Currently, there are two community work places of service and learning: the indigenous community of Cuentepec and the orphanage Casa Eugenia. First-year students are assigned to Cuentepec. At this age, the adolescent is discovering the social world and is eager for experiences (this does not mean that they are no longer interested a year later). Academically, they are being introduced to the social, cultural, and economic aspects of human societies. Second-year adolescents are working on themselves and their humanity. Working at the orphanage gives them a context to look at each other more closely. Being close
to children is at once a challenge and a stimulus to delve into their own stories. We previously worked with Tashirat, an orphanage in the municipality of Tepoztlán, but due to changes in its structure and internal organization (the establishment of a school within the orphanage with a morning schedule), the second-year adolescents are now invited to visit Casa Eugenia, an orphanage in the municipality of Yautepec, where they have been able to share and support children in distress over the last two years.

The Initiative in Cuentepec

The experience in the Indigenous community of Cuentepec (municipality of Temixco, Morelos) encourages the adolescents to reflect on their place in society and introduces them to other forms of organization of social life. It makes them take an ideological reflection with regard to their life and their environment and prompts them to answer two key questions: Who am I in my inner self and who are the others?

Community work allows the adolescents to establish human ties to ‘different life and cultural experiences’ in an exercise in understanding themselves and the world beyond. Community work in Cuentepec means for our young adults knowing, relating, and participating — as far as possible — in a social environment in which they would not usually be able to participate, but which is part of the broader society to which they belong, because at some point they will participate as thoughtful, critical, honest, coherent, free, and responsible citizens, and even as decision makers who will affect the lives of other human beings.

The project begins with a first visit to the Indigenous community; it is a collaborative group project, and each generation passes the project to the next one in such a way that it has become a heritable project.

Each adolescent has a personal and also a group experience; stories or anecdotes to tell, reflections that have developed along the way, a personal vision that they may or may not keep for themselves. As a group they represent the school in the community. The work and attitude that each group has during their stay in Cuentepec is essential and it is inherited by the next one.
When the academic year begins a small ceremony is held at Xochicalco’s archaeological site in which the group that passes to the second year of high school bequeaths the Cuentepes initiative to freshmen. From that moment onward, every Friday of the school calendar is designated for Cuentepes (eight AM to two-thirty PM), with the exception of teacher training days and non-working days designated by the SEP (Public Education Secretariat). In total, around thirty visits are made in an academic year.

In collaboration with the Cuentepes community, the objectives of this experience for the adolescent are:
1. To establish human ties with people from a different social reality and that these links lead the adolescent to recognize himself in terms of his values, needs, and expectations.
2. To perceive and connect culturally with 'lives lived differently', to grow in respect and tolerance, and to understand that behind this cultural, social, historical, and economic difference there is the unity of humanity.
3. To face the challenges that exist in this environment and community work. To understand that by using their creativity, mind, and time wholeheartedly they can support the other members of the human community.
4. To develop a historical awareness through the observation of the uses and customs of the community in relation to its historical past.
5. To recognize the relationship between the natural resources of the Indigenous community, their traditions, and productive activities.
6. To face significant challenges; challenges that involve reflection on their place within the social tissue of the country and the world and that develop their cognitive and social skills and abilities.
7. The development of their analytical mind and critical sense through participant observation and social interaction with the population.

The year includes the following elements:
- **Pedagogy of the place**, which in this case means taking the adolescents to the place (Cuentepes) and leaving them to observe without prior induction. The adolescent is a great observer and listener and gradually infers and establishes relationships with the residents and lines for community work
- A brief period of **awareness-raising** on the Indigenous and rural reality in Mexico
- Training in **anthropological work tools** in the field through living experiences, especially geared towards conducting open interviews with residents and how to keep and work with a field diary, and participant observation
- Preparation of a **field diary** that is intertwined with photographic and drawing activities
- **Reflection and analysis sessions** to prepare the necessary materials for presentation to the community

The activities that the adolescent has been developing in the community stem from the requests of its leaders, but also from their own concern to know. In five years, they have done things like:
- Researching the history and traditions of the town
- Researching the gastronomy of Cuentepes
- Designing and construction of a composting toilet
- Researching traditional medicine and creating a video
- Designing a photographic exhibition of Cuentepes, from photographs of places, people, and their activities
- Reconstructing a fence in the kindergarten
- Organising talks about recycling garbage in the local Telesecundaria (distance education)
- Beginning of the foundation for the construction of a classroom in the kindergarten
- Assisting with materials for the Josefa Ortiz de Dominguez school in the community
- Creating a Cuentepes pottery directory and marketing of their work
- Drawing workshops in the local library
At the end of each semester at Cuentepec, the adolescents write a personal assessment and comment about their experience.

**Tashirat and Casa Eugenia**

Tashirat is a community that houses orphans and children who are experiencing extreme poverty. It is in Santo Domingo Ocotitlán's town in the municipality of Tepoztlán. Tashirat was the first community workplace for second-year adolescents in 2006 and 2007. In Tashirat the adolescents gave advice to the children of the orphanage and played with them. They also helped in the construction of a greenhouse that provides food for the small community of Tashiratians (five adults who live there and provide homes for children, through something they call ‘social mothering’, and the children who live with them).

At the beginning of the 2007-08 cycle, each Friday the Montessori second-year adolescents visit a boys’ orphanage known as Casa Eugenia (Municipality of Yautepec, Morelos). For the adolescents, Casa Eugenia becomes a new social experience in which they care for the children for a few hours, either to help them with tasks, play with them, or simply be with them.

Casa Eugenia provides an individualized experience with children ranging in age from one to ten; it is a much more intimate and personal experience than working at Cuentepec. At Casa Eugenia the children go to school in the afternoon and the adolescents who visit them are previously trained to give them support with their tasks and establish play dynamics. They also learn techniques to work with those who have learning problems and are sensitized to the emotional situation of fragile or vulnerable children. The children of the orphanage are the ones who choose the adolescents, and they work making a schedule: an hour and a half of psycho-pedagogical support, another hour and a half doing art and recess, with free and organized games.

Like community work in Cuentepec, work at Casa Eugenia is inherited generation after generation. At the end of their year at Casa Eugenia the adolescents write a personal assessment and comment about their experience.
It feels weird to say ‘I’m an ex-student’ — as in a former student — only three years after attending school. When adding the prefix ex- to the words with which we identify, something happens: it makes us think about a past that, unlike the one that is exhibited at museums and described to tourists by an employee with an outstanding memory, a withered past taken out of context, forgotten as soon as we pass from one room of the building to the other, from a vessel to the sculpture of the dead god, belongs to us and makes us who we are, either because of direct influence or rejection of it.

In the case of my past as a Montessori student, I must say that I do not consider myself someone who sees things in black and white: there are nuances, while there are many things that I disallow, there are experiences and memories that I keep as gratifying, and then there are others, which I remember more as emotions than for their peculiar details, the feeling and the good taste has remained in my mouth. Memory indeed is very selective.

One of the countless experiences that, honestly, I did not like, was the joint project on Fridays, of going to Cuentepec. Let’s face it, how could anyone really like going to a town that is colourless, dirty, filthy, and full of decay — I could use other adjectives to describe experiences that I want to quickly forget, such as the confrontational seeing of a homeless man or beggar kids on the street? It fitted me, a middle-class white teenager immersed in a world of publicity and stereotypes, superficiality and stupid ambitions, with the sole concern of liking that girl or getting my mother’s permission to come home late Friday night or to buy Apple’s newest unnecessary junk? Would I like to be in contact with that world, which Manuel Castells calls the ‘Fourth World’, which is the only reality for more than half of the Mexican population? On the other hand, how could anyone destined to have power and money (and I say ‘destined’ because of the socioeconomic position of their parents), destined not to starve, to achieve their goals in life, to have the car of the year? And when my bachelor’s degree is “in the pocket”, how could I ever turn my face to look back, get busy, and actually get my hands dirty (in the right sense of the word), and change something in the world, without knowing that other reality in need of change? How can we aim for the top, and yet be aware that there is someone besides me, there is an other who exists too, living on the outskirts of the cities and on the edge of our thoughts, just to appear for two minutes in the news or in two pages in the newspaper? Moreover, how can we become people who are interested enough in this ‘other’ to want to change their reality?

Despite the resemblance between the feelings I experience when I see a boy in the subway leaving his bag full of broken glass on the floor as he wallows in physical pain to get some alms — ‘whatever your will is, that God will multiply it to you’ — and when I find myself facing a cliff full of garbage, dogs eating pigs and the misery of Cuentepec — a feeling that leaves a bad taste in my mouth of frustration, anguish, repugnance, and disgust — there is a difference. The essential difference is that one I can ignore: when I turn up the volume of my music player, or when I turn to the other side of the subway car, the world is again mine, a world in which I do not have to deal with anyone but myself, a world which I have to flee only with my gaze, and where I can even turn like a jerk pretending that I do not have any extra change in my pockets when the guy walks through with his cap. But in Cuentepec I could not
do that. We did not run away from it like when one sees a homeless in the street. I mean, when the day was over (and it was only) four ridiculous hours that we spent there, imagine what a whole life is!), each of us, as if nothing happened, climbed in the bus, going back to the old odd mood: it is already Friday and we were to meet at five at Galerías — the biggest shopping mall — because here in Cuernavaca we cannot do anything more than that: to go to Galerías. But these four hours were invaluable: they set me in front of a horrible reality, really unknown to us, the middle-class city dwellers, so that we lived it in our own flesh (although of course, always with the full awareness that it was temporary), we were all miserable for four hours, we were all part of the real Mexico, or at least that of the Mexico’s majority. The Mexico given to political populism because it represents a minimal hope for change, the one given to religiosity for the same reason, closed to the practices of upstarts and foreigners, the one of the thousand-year-old traditions and forgotten languages. A reality that endures, for all those immersed in it, not just for four hours on a given Friday, but for the rest of Friday, and the weekend, and the next week, and the summer holidays, because that’s the way things are, and be careful of wanting too much for yourself, do not let happen to you the same what happened to Icarus. We plunged into this reality with the slightest hope of being able to change something (well, that was why we were going, wasn’t it? To help those ‘poor’ people) as long as the townspeople allowed it, and us to do our part. And I got to this reality armed to the teeth with all my bad attitude, without understanding why I had to do this or that, and not what I wanted to do, on top of walking through destitution and poverty.

In reality, those who came out really helped were us — or at least me, as I cannot speak for the other members of my cohort. Because without that true community service, today I would not be aware of what constitutes true material poverty, that which overwhels and kills millions of people, that which invades from outside and from an unjust economic structure, that which the politicians do not know, ignore, or perhaps refuse to recognize (because if they themselves come out of the hole, why would they want to be reminded of their origin?). Nor would I be frustrated every time I see a couple of children, starvation in their eyes, hopelessness in the stomach, and parasites inflating their bellies, asking for some cash that I don’t need, or equally frustrated to hear my itamitas classmates (at ITAM: Instituto Tecnológico Autónomo de México) speak about how they plan to go abroad, to pursue their masters and doctorates, or to get the ‘dream job’, and to let daddy pay for everything. And Mexico, they say? It will be fine, thank you very much, but I will not return until they offer me a job with a wage of two-hundred thousand pesos.

I would not think now that the only world worth living in is one you want to change. Nowadays in the ITAM there is not much variety of people. Although there is sexual diversity, the ambitions of almost all students are the same as those expected of the upper middle class: status, power, money. And then, what? Because all of these are resources which are supposed to have a goal, to be aimed at some kind of purpose: you cannot just want money to get more money and then to make more money, right? What goal do we expect from ourselves who have the opportunity to obtain an excellent education, using the most productive years of our youth studying? What contribution do we plan to make to society for giving us the opportunity to come out so well prepared and to open the doors for us to eat the world with a golden spoon? Do we have the awareness that not only me and my best buddies and maybe my family should be well and have a decent (not to say ‘good’) life? How does the misery of Cuentepec affect us, the misery of all the Cuentepecs of the country and of the world, and of the times to come? If I should not starve or feel the loss of my culture, or not smell the dog shit, even when I walk mine — because it has a pedigree and shits very fine? Does this society, this group of individual and collective realities that overlap with each other, but which we see and know very little about, deserve something from me?

I do not know about you, but I think yes; if the world has been delivered to us on a silver platter, so much so that we have never struggled to survive and can even afford the luxury of travelling and knowing other worlds, then the least we would expect of ourselves, our minimum social duty, would consist of not forgetting that marginalized world, the ‘other who lives on the edge of our civilization, at the limit of their capacities. And we could go even further: to try to change it, but not only on Fridays when we have to go to Cuentepec or with the two-peso coin that I found in my pocket on a day I felt generous, but every single day. So, I am grateful to have had this experience that, despite its limited time, will teach me how great the world is and how much there is to change.
Our goal in a Montessori school is a child who is educated for life. We want to help the child to become a fully functioning human being adapted to his time and place, to become a mature, confident adult, free from anxiety and fear.

As Montessorians, we know that education is the child’s work — an active work necessitating movement, especially the manipulation of materials with the hands. We know that it is through the activity of the child that the will of the child is developed. Our interest in a Montessori classroom is not to fill the child with information and facts but rather to allow this development of the child’s will and intellect. Cosmic education not only allows the child to see the interaction of all the life forms of the world but also to see his or her place in relationship to others. We want the child to be prepared intellectually, economically, and socially for community life where there is equality, tolerance, and peace.

Technology has always been a part of the educational environment. Prevailing technologies not only support education but also help define education. There is almost a chicken and egg relationship between technology and education. Technology affects every aspect of our life and simply cannot be ignored. In one way or another, new technologies will find their way into Montessori environments. It is our responsibility to screen what comes in according to Montessori principles.

If we were to survey the many ways evolving technology is changing the world, we would come up with a long list. Even at this point, we still have only glimpses of how life will eventually be different because of technology. As a Montessorian, I am trying to grasp how this revolution affects Montessori students. For younger students, what is the difference developmentally between handwritten thoughts and word-processed thoughts? Is bypassing handwriting like walking without creeping and crawling first? What about the value of spellcheck versus learning to spell through reading? Will research using a search engine developmentally accomplish the same thing as library research?
Our students play online, chat online, and get their music online. Technological tools are an important part of their lives. We cannot just ignore them.

The challenge of technological change is often portrayed as the need to keep abreast of technology itself. Science and math classes need access to sophisticated equipment. Many people today seem to believe that any technology is better than no technology. Nevertheless, we know that is simply not true. Internet access by itself will not create students who learn better. Working with a computer screen, a mouse, a keyboard, and all the latest software will not create a better thinker. Too much of the focus of technology in education has been on adding more and more technology to the educational environment. However, more time and thought has to be given to the other side of the equation. How technology can aid in the child’s total development is the question we must ask. How we use technology in the classroom is more important than the technology itself. As Montessorians, we must start from the child and consider his or her characteristics and needs at each stage of development.

Technology’s ability to reduce the levels of time and human effort needed to perform tasks, both menial and highly complex, is a big source of its appeal. Who can argue with the marvellous advancements in science and medicine expedited by technology? However, we know a main reason Montessori children perform many tasks is to develop themselves, not to finish the task. Is it possible that technology, by reducing the amounts of time, effort, and energy needed to perform tasks, also threatens to diminish qualities such as self-discipline, sustained concentration, and in-depth deliberation? Critical thinking, thoughtful writing, reasoned discourse, and so forth do not come easily; they can be learned, but only to those motivated to learn.

Even with all the advances in technology, I believe that my role and my students’ roles have not changed.

1  **I still try to help student’s passage to abstraction.**

Even with adolescents, we must provide concrete materials and manipulative tasks. Many students cannot master certain ideas without them. We must continue to acknowledge the superiority of learning actively by means of several senses as opposed to learning by means of just one.
The ability to think in abstract terms, form generalizations, and conceptualize does not develop quickly but rather over a long period of time. We must continue to provide opportunities to feel, touch, smell, and lift as well as to read, write, calculate, and listen.

Sian Beilock, president of Barnard College (formerly a psychology professor at the University of Chicago), reinforces Montessori’s emphasis on movement and the mind-body connection when it comes to the education of young children. Beilock explains that to ‘practice printing letters turns out to be imperative to reading success. When the body figures out how to write letters, the mind follows suit in terms of being able to recognize them’. She also references neuroscientist Karen James who discovered that ‘preschool children who took part in a one-month long reading programme where they practised printing words improved more in their letter recognition than kids who did the same reading programme but practised naming (rather than writing) the words instead’. Thus, ‘letter recognition isn’t enhanced as much by reading letters as it is by printing them.’

In the spirit of Montessori’s ‘sensitive learning periods’, Beilock concludes that ‘the brain area involved in recognizing letters didn’t seem to come alive until kids learned to produce the letters themselves’. Such a Montessorian mind-body connection has great potential for other areas of education. As Beilock states, ‘if printing practice helps jump start areas of the brain needed for letter identification, it is not hard to imagine all sorts of ways in which motor experience might change the brain and help kids learn.’

Gwendolyn Bounds explains that brain images have shown that the act of handwriting ‘activated massive regions involved in thinking, language, and working memory’. She also refers to a study by Virginia Beringer, a professor of educational psychology, who found that in grades two, four, and six, ‘children wrote more words, faster, and expressed more ideas when writing essays by hand versus with a keyboard.’

2 I still try to stimulate students’ interest.

Camillo Grazzini wrote: ‘The question of what is relevant to the children, what engages the children and keeps them interested, must be asked.’ He went on to say: ‘It is the philosophy behind subjects that makes for a cohesive Montessori statement, not facts by themselves.’

3 I still try to capture my students’ imagination leading to creativity in the child.

The older child of the second stage of development uses a creative imagination, which is based on reality, in order to psychologically conquer the world.

Maria Montessori in *From Childhood to Adolescence* wrote, ‘Imagination does not become great until man, given the courage and strength, uses it to create. If this does not occur, the imagination addresses itself only to a spirit wandering in emptiness.’

Mario Montessori in “The Human Tendencies and Montessori Education” asked, ‘Did man, seeing a bird flapping its wings and flying from one tree to another, go up the tree, flap his arms — and break his neck. No! What he did was to use imagination, not fantastically, but creatively, so as to bring out from the non-existence, something that could exist and might be of practical advantage to him.’

Camillo Grazzini wrote, ‘Creative imagination enables all of us, adults and children, to produce or create something new, something which has never existed before, out of pre-existing elements, which are identified by Maria Montessori as the alphabet of any aspect of reality. This creation may ultimately take a physical form, or it may simply be a sentence never heard before, or it may be the discovery of a theorem or a law of science. Einstein always said that the most important factor in scientific discovery is the imagination: everyone saw apples falling, but only Newton saw it in terms of the law of gravity.’

This creative imagination must be allowed to develop. A happy dog wags his tail. However, we cannot make a dog happy by wagging his tail for him. It is the same with imagination.

4 I still try to meet students’ need for group work.

In the elementary years, there is a special interest in the peer group. It becomes a microcosm of society with its own language, rules, and commitment of the individual to the group. Interactions within the peer group prepare the child for adult life in society.

5 I still try to respect students’ growing moral awareness.

Maria Montessori in *From Childhood to Adolescence* wrote: ‘The great problem of Good and Evil now confronts him. This preoccupation belongs to a very special interior sensitivity, the conscience. Moreover, this sensitivity is a very natural characteristic.’ In fact Maria Montessori identified the second plane of development as a sensitive period for morality and consequently as of great importance for social relationships.

6 I still try to give precise keys so children can proceed on their own in discovery of the whys and wherefores of the world.

For me to continue to meet these goals I have to expand my understanding of how, why, and when to use technology and combine it with Montessori philosophy.
Technology and Its Use in a Montessori Environment

Decisions regarding what we do must be based on what we believe (and know), to be our Montessori principles.

Maria Montessori did not start from a theory or an idea of her own but from the child. She was a scientist, an observer, and her subject was the child from his or her earliest moments. She first observed the child and then saw how she could meet his or her needs at each stage of development. That is why, at birth, Montessori describes the child as a spiritual embryo. Just as the child in the womb develops from a single cell into a completely formed and functioning physical body, the child, at birth, must develop into a functioning human being, that is, the child must develop his or her powers of intellect, will, imagination, and so forth. This is a gradual process. Because the child is in the process of developing these powers the child acts in a way different from an adult. The adult acts in a reasoning way while the adult mind cannot always see reasons for a child's behaviour. The child acts from an inner need. Our duty is to respect the needs of the child, to constantly try to understand his or her ways, not to interfere, criticize, condemn.

Technology becomes a means, not an end. A real key is balance. We would be foolish to ignore existing and developing technologies and we would be just as foolish to abandon all that we are doing now. In working with middle school students, I believe that part of my responsibility is not only to decide if a certain technology is appropriate, when it is appropriate, and how it is appropriate, but also to help the student be able to also ask and answer these questions.

This is not easy. Using math as an example, I want students to be able to (1) do a variety of things without calculators and computers, some mentally and some with pencil and paper, and (2) do a variety of things with the tools of technology. What are the ‘necessary things’ that students should master without technology? What should I be doing differently with technology? In math my students and I have to use the Montessori math curriculum and:

1. Its need for experience. Students need to see links between the material they are studying and the real world, and to make connections with their own experiences.
2. Its need for repetition. The beauty of the Montessori approach is that it allows each child to repeat an activity as many times as needed, with the teacher giving as many presentations as are necessary. Then through the child's work, the child's mathematical mind develops.
3. Its need for various levels of concreteness.
4. Its need to go from concrete to symbol to abstraction. The ability to think in abstract terms, form generalizations, and conceptualize does not develop quickly but rather over a great period of time. Children learn best through practical experiences with concrete materials from which they derive comprehension. From comprehension, abstract rules may be intuited and generalized.
5. And its need for verbalization.

All of this is motivated from within the child. Students learn through their own efforts and arrive at their own internalization of abstract concepts through active involvement with the materials. It is not knowledge but the act of learning, not possession but the act of getting there, which grants the greatest enjoyment. This is especially true of the Montessori math material:

1. The exploratory aspects of much of the material (e.g. constructive triangles). The materials provide students with opportunities for testing ideas and for exploration and discovery. Students cannot tell you when they are going to make the discoveries that will propel them to new and more exciting discoveries. Every day the students are absorbing the whole world around them trying to make sense of it, trying to master the parts they can. It is in the Montessori environment that this world is made tangible and accessible.
2. The formula derivation aspects (yellow area material). Montessori materials that emphasize exploring mathematical relationships and making connections are far more likely to help students come to their own conclusions and understandings than a lesson or a programme. A formula is only a short method of stating a rule. It should only be obtained after the rule has been carefully developed and understood.
3. Rules and formulas as a point of arrival and discovery, not point of departure. When shortcuts are taught or formulas given, students are robbed of the opportunity to make sense of the problem themselves. The Montessori purpose is to get the students to operationalize the ideas themselves.
4. Materials of development (not teaching aids). Students are actively engaged in exploring, conjecturing, verifying, generating, proving, and communicating mathematical ideas. The materials are not designed to help the teacher make a particular point but are designed so that the students can develop themselves through their own work with the materials. This is an important distinction. We must always keep in mind that learning is the student’s work, not ours.
5. Students arrive at conclusions through their own work with the materials. The Montessori materials are open-ended. The guide introduces them, then the students explore. They control their own learning through ‘control of error’, which allows them to discover their own mistakes and then to correct them. Errors, they learn, are an important part of the learning process. Complex tasks are made not simple but (with application and effort) doable. Montessori’s
principle of isolation of difficulty breaks complex tasks down into a series of simpler tasks so that problems do not become insurmountable obstacles. Students learn both that there are challenges to be met and that there are challenges they can meet.

The Montessori math curriculum and the Montessori math material serve as the frame of reference and guide for when and if to use technology. Students do work that stimulates their curiosity, permits them to express their creativity, and fosters a positive relationship with others. The technology is not the guide. The manner in which students encounter mathematical ideas can contribute significantly to the quality of their learning and depth of understanding. This is true for all subject areas.

To quote Maria Montessori, ‘To teach details is to bring confusion; to establish relationships between things is to bring knowledge.’ 8 Also, ‘The role of education is to interest the child profoundly in an external activity to which he will give all his potential.’ 9

It is difficult to retain the balance between what we do with and without technology. There is just as great a danger of using technology too much as there is using it too little, and, of course, the greatest danger of all, using it inappropriately. Even with the best of intentions, we can use technology inappropriately. An example from a number of years ago can help convey what I mean. I was very impressed with how well my students were doing with obtaining information from experts online. I soon realized that before discovering the ease of questioning experts online, my students spent a great deal more time and enjoyed very much preparing for and going out and questioning experts in person. Without my realizing it, much of this had disappeared from my class.

My students and I are constantly using technology. At the same time, I am constantly warning my students not to become too dependent on technology, that there is much that they should be able to do without it. The key has to be to integrate technology into the curriculum so that the new technologies are a means. Technology must not take over the curriculum.

Technology also affects content. What do we leave in the curriculum, what do we take out, what do we add? What should we emphasize, what should we de-emphasize? What do we do differently? The use of technology must be determined in light of Montessori philosophy and the universal needs of the child.

One of my students, after spending a lot of time researching a topic online mumbled something to the effect that she appreciated books more than ever. They are actually organized, she said. Her comment reminded me that, as Montessorians, we need to be giving our students just the ‘keys’ for learning about life and the world.

We must continue to remember that learning is the child’s work. All we can do is put the child in a position to understand something he or she was not able to understand previously. Maria Montessori compared it to planting a seed to grow a tree. We can only help the seed, for all that is needed (the secret of life) is enclosed within the seed. We can prepare the soil, water the plant, but then we can only wait for the seed to produce a tree. It is the same with the child. Montessori said that the child at birth carried within him- or herself the secret of development. He or she does not learn to walk and talk because we teach him or her but because he or she has potentialities so strong that they push him or her into developing spontaneously despite obstacles. Some children walk at nine months, some at thirteen months but each must pass through certain stages before he or she does. We cannot make a child walk; he or she walks when he or she is ready. This is easy to see for walking and talking but it is just as true in all areas of learning.
I have never heard a parent say that she taught her child to talk, but over the years I have heard many teachers say that they teach children to read, to do math, and so forth. Now we have people believing that technology can teach students to read, to do math, etc. If a student cannot spell or read well the solution may not be to look to technology or didactic programmes but to go back over Montessori principles of how a child learns to read and spell and determine what was missed, to as what went wrong.

Maria Montessori also pointed out that our human tendencies are with us at every stage of development. She said that it is a mistake to think of movement by itself as something apart from the higher functions. The true purpose of movement is more than to produce an appetite or strengthen the lungs. A human being’s movement must be coordinated with the brain. So when speaking of the developing child to consider movement merely from a physical point of view is an injustice. Movement is intricately connected with the still developing mind. Mental development is connected with movement and is dependent on it.

We must find ways to use technology to support active participation of the students within the context of how they develop. For example, one role students have always had is as publisher or presenter of their work. Students have always researched subjects and presented these subjects to their peers in either a group or individualized form. With technology, students can not only present their report to the class but also to other interested parties such as parents and friends at home or students in other parts of the country. With technology, the information no longer has to be presented in a conventional format; online multimedia projects can also be created. The temperature probes, light probes, motion detectors, and other devices that can be connected to computers allow students to be scientists. I tell my students to ‘Be Galileo’.

Our role is to ensure that technology is used appropriately to support students’ learning, not as a crutch or a replacement for the mastery or understanding of important concepts and skills. We must answer the question, How does the use of the technology of today fit with the special sensitivities of the child? As Montessorians, this is our job — to explore educational options available to us in our quickly changing world while remaining faithful to the Montessori philosophy. It is always helpful in doing this to remind ourselves of the unchanging basic needs of the child throughout time and space.

Notes
4 Montessori, Maria, From Childhood to Adolescence (New York: Schocken Books, 1957), p. 37
5 Montessori, Mario, “The Human Tendencies and Montessori Education” (Amsterdam: Association Montessori Internationale, 1966), p. 20
7 Montessori, Maria, From Childhood to Adolescence, p. 10
8 Montessori, Maria, From Childhood to Adolescence, p. 94
9 Montessori, Maria, From Childhood to Adolescence, p. 24

John McNamara is head of school and founding director of the adolescent programme at Ruffing Montessori School in Rocky River, Ohio. He holds the AMI elementary diploma from Bergamo, Italy. He received his bachelor’s degree from the University of Windsor, Canada, and his master’s degree from the University of Toronto. He is part of the faculty of the Montessori Orientation to Adolescent Studies in the United States, Sweden, and Mexico. McNamara is taking on Montessori adolescent policy and practical compilation of practitioner guidelines.
SECTION 4
Montessori Evolving

Glimpses of the Fourth Plane: Montessori Evolving

Youth Impact Forum
Adolescents Have the Capacity to Change Their World
Judith Cunningham

From Infancy to Graduate School
A Sustainability Institute for All Seasons in South Africa
Murray Williams

Adolescents, Educateurs sans Frontières (EsF), and Selfless Adult Service
The Magic of Side-by-Side Collaborative Work
Lesley Ann Patrick

Architecture: Montessori Evolving

Designing Environments that Support the Developing Child
Gerard Leonard

Montessori Architectural Patterns
Benjamin Stæhli and Steve Lawrence

Inclusive Education: Montessori Evolution

Inclusive Education in the Age of COVID-19
Silvia C. Dubovoy

The Special Needs Child from the Montessori Perspective
Nimal Vaz

Montessori for All at Cornerstone
 Liesl Taylor

Montessori Developmental Principles to Support the Needs of the Elderly
Jennifer Brush and Michelle Bourgeois

Lockdown learning highlights how schools fail to build on children’s natural ways of learning; through their independent curiosity and learning approaches
Angeline Lillard

Through the Darkness to the Light
Hope for the World’s Children
Paula Lillard
Taking care of the earth
Glimpses of the Fourth Plane: Montessori Evolving

The opening of the Montessori mind is all about activity, or more precisely activism, that connects with the meaningful output of the selfless human mission. The work is not an abstraction, not a school project but real work in relationship with real people, often from cultures other than their own. People’s differences inspire advanced social skills, a universal civility, and the nature of helping people to find commitment, belonging, and sharing, with the integrity of doing the right thing — for your local community and for the world community writ large, which is both eco-centred and human centred. What we want from Educateurs sans Frontières, and the Montessori adolescent, is the concept of ‘little architects’, where adult architects observe and take inputs from their real clients, the children. Collaboration with adults who want to help as adolescents get to grow into adulthood, who nurture their moral richness by being with adult communities. Since the fourth plane looks for these kinds of advanced realities in connection with Montessori, young adults and adults become connected. The world as a whole benefits from collaboration with each individual as a working part.

D.K.
As Judith Cunningham writes, ‘today’s adolescents have grown up in a globalized society’ in which they are very aware of global problems: climate change, agribusiness, overpopulation, and the lack of land conservation. They feel keenly the urgency of ‘a sustainable ecological world’. Research has demonstrated that engaging youth in ‘activities which are positive, adaptive, and whole’ supports ‘their mental health and promotes higher levels of wellbeing’. The Youth Impact Forum was created from members of the MMUN Youth Advisory Board, MMUN staff and Montessori practitioners. The YIF provides the scaffolding for older adolescents to ‘create, manage, and succeed at building their own social action projects. The design of YIF linked the student projects to UN Sustainable Development Goals. Thus students can see their part in a long-term plan for bringing the world together. Their local efforts were an essential component to the goal of experiencing tenderness towards nature and empathy for the planet and all of its inhabitants.

The fast-changing world, due to globalization and technologies, has influenced all aspects of life and brings with it both challenges and hope. Existing forms of knowledge are challenged, certainties are replaced with ambiguities, and meaningful action is hampered by anxieties and, maybe, even fear. Our future world is at stake. Literature and research, however, affirm Maria Montessori’s theories and point us to find hope and solace in a very important group — the adolescents. Collaborating with adolescents enables us to see the future now, to hear the future in their words. It is indeed a privilege to work with them as they envision and shape mankind’s future through their social action projects. This article provides the Montessori philosophical and developmental underpinnings of adolescents as agents of social change and a brief review of contemporary developmental theories and research. Following that, I will share what adolescents have taught me over the past fifteen years and conclude with the words of these young change makers.

The steady metamorphosis into adolescence begins in upper elementary as students continue their interest in the needs of individuals and society but with new emotional, social, and intellectual capacities. Montessori writes, ‘What interests him now is the mission of mankind’ (p. 90). Adolescents are in search of a mission that will help them understand their vocation and create their life’s path. According to Elizabeth Henke,

The developmental needs of the adolescent, particularly as they relate to the academic disciplines, revolve around deeply understanding the times in which they live and discovering how they are capable of positive action within the world. I have come to believe the older adolescent in search of a role to play in society, seeks, at an even deeper level, to understand the universe and his place within it. Adolescents are constantly asking the internal questions, ‘Who am I in relation to human society? Where do I fit into this society? and How can I serve others within society?’ (Davis, 2008, p. 149)

Adolescents are in a critical sensitive period for making an impact on the world, which requires both knowledge and collaboration. What is also interesting about this 12–18 period is the adolescent’s social need for relationships around a meaningful point of engagement for humanity and the environment. ‘The adolescent becomes de facto a Montessori agent of change or of peace — knowing how
to be useful, how to help mankind, developing a social reality through building a responsibility to his or her own farm community, and then the village, and on to the world' (Kahn).

An important feature of adolescent development is the formation of identity. The exploration of identity is often associated with singularity; the individual, alone. However, Montessori emphasized the importance of the need of adolescents to understand their identities in relation to their contexts — their social relations, immediate communities, and the world. The adolescent’s development of identity runs parallel with their development of ideology and worldview. This process involves the creation of shared ideals, giving adolescents the needed orientation to their context, their own space and time. Forming those ideologies also involves making judgments about values that run parallel with moral development. Moral development happens when a child’s ethical sphere widens as moral perspective progresses (Crain, pp. 160–66).

Maria Montessori delivered a series of lectures in 1949 at the Eighth International Montessori Congress in San Remo where she emphasized, ‘This is the great task of education: to make the child conscious of the reality and depth of human unity. […] Above all, we must make the children understand how extraordinarily moving it is that men are not united by their interests alone, but that a deeper bond exists at the very root of their brotherhood. […] I cannot insist enough, therefore, on the importance of history, in any and all its details, if we are to educate the children to an awareness of universal solidarity’ (p. 87).

The process of identity development for the adolescent has become tied to developing a sense of solidarity with universal, global values. Navigating their current community and global contexts involves finding meaning in all the tensions that they are experiencing. Such tensions, according to Viktor Frankl are ‘normal’ and necessary. A proper amount of tension arises in the adolescent knowing they have a sense of having a purpose to fulfil and that with the right platform, coupled with knowledge of their strengths, they can bypass apathy and indifference and be spurred towards action.

Today’s adolescents have grown up in a globalized society and they are deeply cognizant of the interconnectedness of global problems such as, climate change, agrobusiness,
over population, lack of land conservation, and (at the time of writing) the COVID-19 pandemic. They understand the anthropocentric origins of these global/local problems and the impact on people globally. For some people, especially adults, it can create a culture of anxiety and fear (Beck, Giddens, and Lash).

Globalization has changed traditions, identity development, and moral views. Adolescents, in their search for identity, now find themselves at the crossroads of being in the context of their closest environments, their country, and at the same time within a larger global context. In this search for identity, they are faced with questions about how global issues affect them and how they, in turn can influence the trajectory of the outcomes through their own behaviours and choices.

Globalization has also demonstrated the interdependency of life and the earth that has led to the growing awareness and understanding of the urgency of a sustainable ecological world. Certainly, the United Nations since 2000 has focused on sustainable development goals that benefit the continuation of life and the earth. UN Secretary General António Guterres stated, ‘Sustainable development, human rights, and peace and security can only be achieved if we empower these young people as leaders and enable them to unleash their full potential’ ("UN SG").

In The Lancet, Kleinert and Horton argue that ‘adolescents should be actively involved in working towards the Sustainable Development Goals at all levels — as agents for change at the school, community, societal, national, and international levels. Adolescents and young people are our best chance to achieve radical change for a prosperous, healthy, and sustainable world. The adolescents of today will be the policy makers of 2030’ (pp. 2355–56).

They echo Maria Montessori who told UNESCO, ‘If one day UNESCO resolved to involve children in building peace, if it chose to call on them, to discuss with them, and to recognize the value of all the revelations they have for us, it would find them of immense help in infusing new life into this society’ (Barrès).

The world needs the adolescent’s idealism, energy, and capacity to create a better world. This is the moment when adolescent developmental interests and the needs of the world intersect. ‘Their knowledge, reach, and innovative solutions are essential if sustainable development is to be realized.’ (United Nations Development Programme).

Furthermore, research has demonstrated that engaging the youth in endeavours that promote and encourage optimal functioning through activities which are positive, adaptive, and whole can further support their mental health and promote higher levels of well-being (Seligman and Csikszentmihalyi; Peterson and Seligman). By engaging in community level activities and creating supports through tie-ups with existing institutions, engagement in prosocial activities, including acts of kindness, can prevent disruptive and problem-behaviours. Altruistic behaviours help build resilience, self-respect, and hopefulness (Cuse).

Inspired by adolescents, Montessori Model United Nations (MMUN) senior staff worked with a team that included members of the MMUN Youth Advisory Board, Montessori practitioners, young social entrepreneurs, and youth organizations to create the Youth Impact Forum (YIF). YIF was designed to provide older adolescents the expertise they need to successfully create, manage, and succeed at building their own social action projects by working with their teachers and other experts to learn the skills needed for project identification and development and then execute their projects with professional mentors. Our goal is to not only inspire but empower youth to create a better world. More than being informed, adolescents are ready to be empowered to create the world they want and can have real impact in their larger local community (not just in their school). We recognize that adolescence is a time of maturation of cognitive capacities and is an opportunity to introduce tools and exercises that emphasize their strengths and enhance their well-being. YIF was envisioned to support and promote positive growth and empower the youth. For us empowerment is the process by which adolescents develop both consciousness and skills necessary to envision the world/future they want and understand their role in it.

At the programme level, YIF reflects key components of empowerment applied in the process, as recommended by research (Wagaman) and which includes a structured curriculum around topics and identification of issues that are of interest to the adolescent and lessons that support skill building, information gathering, critical reflection, planning, and action.

YIF places importance on the role of the adult through its Teacher Workshop component and Mentor Programme and the continued support of these adults in the adolescents’ process. The adolescents need significant adults that see the value of their opinions and contributions. This relationship can only enhance their sense of self and value. This feature of YIF is supported by research when it suggests that the relational component represents a shift in power from the adult to the youth, and when the youth is allowed to identify and define the issues they want to address (Search Institute). This shift in power
has been pointed to as reflective of an egalitarian process that strengthens their sense of agency (Cargo et al.).

While we had the vision of working towards youth empowerment, designing a programme that emphasizes empowerment both as a process and as an outcome was greatly informed by our actual work with the adolescents. It was important for us to keep the operationalization of empowerment even at the process level, and not just as an outcome.

In earlier iterations of YIF we learned that working directly and solely with adolescents was effective only in the short term. We learned that adolescents could easily identify a problem that broke their hearts and design a project. But to successfully move from a community service activity to a social impact project they needed supportive scaffolding from adults. With these inputs, we redesigned the programme so that we could work directly with teachers who could provide the tools and support. There have also been a few students who joined the programme without a teacher but had local support. YIF was also designed to link student projects to the UN Sustainable Development Goals so that students see that they are part of a unified, long-term agenda for bringing the world together. They see their local efforts as an integral component of improving the world, as positive agents of social change.

With these understandings, YIF was developed as a three-stage process:

1. **The Teacher Workshop**: Teachers learn how to engage students to identify a problem that deeply concerns them and are provided with the project development tools to help the adolescent fully implement their projects.

2. **YIF Hothouse and Showcase**: Students come together to refine their project ideas collectively with the guidance of young social entrepreneurs and learn how to network to create potential synergies with peers, NGOs, and foundations. At the Showcase, they present their projects to potential partners, NGOs, mentors, and members of the United Nations community.

3. **Mentor Programme**: Students are paired with young professionals working in the field of their project to receive support, encouragement, and guidance and to experience the valorization of their work from young experts already making a difference in the world.
Network: A global peer network of students provides the adolescents the inspiration to continue on. It fosters a sense of community across this generation of young leaders. The SDG Bridge App provides networking support, with access to project support tools, peers and potential mentors, partners, and investors. As Montessorians, we believe that globally conscious, active students are the key to constructing greener communities and a more sustainable, equitable planet. We are excited to report that we have empowered youth that have built successful projects in their local communities, supporting global UN goals and, yes, changing the world!

Some Examples of Student Projects

Showcase 2019

Girls Here and There seeks to bridge the educational gap and support women by forming a widespread mentoring/tutoring programme for Hispanic females and young women in grades nine to twelve (ages fourteen to eighteen) in Florida and the Dominican Republic. Pilot programme started in both locations.

Pink ME is developing an app exclusively designed for women and girls to verify drivers and support safe local travel in the community.

Have Hope, Give Hope has a mission to assist child refugees by giving them the same opportunities as Americans. They are working to partner with two organizations equipped to assist refugees in their area, the US Committee for Refugees and Immigrants and Dawn Creations, to provide refugee children with backpacks full of educational, recreational, and health supplies.

Eliminate Plastic Straws is a public awareness campaign that encourages consumers to use environmentally friendly straws instead of single use plastic straws.

Eliminate Plastic Straws is also in the process of creating an environmentally friendly straw made of seaweed for consumer use.

Aquaponics for My Community contributes to the food and economic security of vulnerable families of Cozumel, Mexico, and the sustainable management of water.

Showcase 2020, Ready to Execute

Hokey Pokey Hugs: Deep Touch Therapy for Immigrant Children will create awareness of the lack of emotional support being provided for refugee children, and work to bring refugee children more opportunities for healthy psychological development through upcycling old articles of clothing.

ReVLA (Relocation and Evacuation of Large Animals) in the California wildfire crisis seeks to assist in the reduction of casualties and the safe temporary relocation of large animals (horses, livestock) and to protect residents of farming and ranching communities as they also relocate by creating a network to manage fire evacuations. They are working with a developer on an app.

Storage for the Homeless seeks to reduce crime, especially theft, among the homeless in Houston by providing personal storage units at homeless shelters. They are initiating a pilot programme and are in discussion with the mayor of Houston to permit the storage units in a few homeless shelters. They have made a request to Amazon for a donation of storage lockers.

Teens Against Human Trafficking is an awareness campaign to reduce teen sex trafficking and help teens be careful with their social media activity. They are working with the Social Impact Coordinator of the Marriott Hotels Houston which will lead to a meeting with the mayor of Houston.

Showcasing Girls Here and There
In Their Own Words

Teachers

We discovered the hidden strengths of each of our students, even those that who are usually less engaged. One student especially was transformed by leading his project collectively to an act of change. (teacher participant)

The students who willingly accepted to be part of this challenge were those who were openly invested in making a significant change in their immediate environment, in the communities they grew up in. To this extent, they found the Youth Impact Forum to be an experience where they could explore new possibilities, embrace new challenges, and adapt to new roles. Although the youngest students were in middle school, they seemed to understand that being member of a local community automatically made them citizens of the world and that their simplest gestures could have a global impact. This is why the Sustainable Development Goals appealed to them, and after thorough research and fruitful discussion, they realized that not money, but empathy, not power, but awareness can change the world. (Alexandra Petrescu, Mark Twain International School, Romania)

Parent

The Youth Impact Forum presented my daughter with experiences and important skills for life beyond the classroom and school. She discovered that the YIF could provide her with the ability to make her grade 10 Personal Project for the International Baccalaureate Middle Years programme become a reality. We found the YIF to be a motivational, comprehensive, and actionable programme. My daughter developed so many new skills, including project development and management, identification of key influencers and potential mentors, and how to communicate effectively in a variety of situations. These skills are not taught in classrooms but learned over time through life experiences. We are so grateful that she now feels equipped to launch her project in our local community and recruit fellow students to get involved as well. Students who have compassion, the courage to face obstacles with poise and maturity, an intellectual curiosity and optimism for the future may have good ideas but they do not know how to turn these ideas into reality. The Youth Impact Forum provided my daughter with the critical foundation she needs to take her ideas and make the impact she wants to make on the world. (MaryBeth, Copenhagen, Denmark)

Students

YIF made me more conscious by pushing me into countless unfamiliar, challenging, and professional situations. I grew in flexibility by learning how to adapt to changes and I learned the importance of preparation and contingency plans. I learned about concepts I had never heard of, like stakeholders and SMART goal setting, and I was trusted and enabled to absorb those and use them to better my project and self. This was one of the most enriching experiences I have ever had because I was constantly learning engaging materials through diverse and shifting methods and contexts. The biggest obstacle preventing me from establishing an organization was my fear that I would not do it ‘correctly’, that I did not have the resources I needed, and that my impact would not be enough. YIF added structure to my passion and helped me build a tangible, realistic impact plan.
Furthermore, I got to meet like-minded students from across the world who were excited to support me in my project and share their ideas for change. Jumping into an environment full of young strangers was intimidating, yet it allowed me to grow in my professional and social interactions. It was one of the many ways YIF helped me face a fear and overcome it. The other students shared my enthusiasm and developed a support network which I feel that I can always return to. Beyond learning basic social and professional skills, I grew immensely as a public speaker. For the first time, I suppressed my anxiety to put my voice out there. And I felt deeply heard.

The Youth Impact Forum changed my view of the world and my own power in it. Although I already abstractly knew I could change the world, YIF solidified my belief in my ability to make an impact. Being in an environment where my opinion and ideas as a young person were valued allowed me to become more deeply confident in my importance and purpose.

YIF made me think about the whole world and my role in it in a completely new light. It has been one of the most formative experiences I have ever had. I know it will always be an essential and fulfilling part of my life, not only because of the amazing, insightful, creative, and supportive network of people who run the show, but because of the young people like me who have been allowed to run it right alongside them and are forever empowered by that experience. (Sophia della Cruz, United States)

MMUN conference has provided us a platform that allows adolescents to work together and find a solution to the problems we are facing through discussions and negotiations. Youth Impact Forum is an opportunity for empirical solutions. We get to cooperate with peers and make up solutions with our own hands, which is absolutely a wonderful experience. While students make up their own plan for a project, the project management and presentation pitch at the forum is really challenging. It requires a variety of skills including research, leadership, and articulation. (Sean Zhu, China)

References


Crain, W., Theories of Development: Concepts and Applications (New York: Routledge, 2016)


Search Institute “40 Developmental Assets for Adolescents” <http://www.search-institute.org/content/40-developmental-assets-adolescents-ages-12-18> [accessed 14 May 2020]


Judith Cunningham, MEd, is the founder and chief strategy officer of Montessori Model United Nations (MMUN). As a Montessori educator and former head of school, Cunningham’s experience enabled her to design MMUN to align with the developmental interests of students from ages nine to eighteen, moving from awareness of the global-local nature of problems, to a sense of responsibility to take action, to the implementation of student action projects. She holds an AMI 6–12 diploma and an MEd and has conducted postgraduate work in alternative dispute and conflict management. She has worked with students and teachers from more than thirty countries since founding MMUN in 2006.
Do you remember the smell of the African veld, after the rain?

In one of Africa’s most loved, bruised, tempestuous nations — where a young Mahatma Gandhi first rose to his feet as a global peace activist and where Nelson Mandela stood tall and inspired the world to demand human dignity — the current president said: ‘We gather here at an extremely difficult and challenging time in the life of our young democracy. Yet, we are also at a moment in our history that holds great hope and promise’ (“President”). South African President Cyril Ramaphosa, in his State of the Nation Address on 20 June 2019 said that this would be a time of ‘growth and renewal’, addressing South Africa’s ‘fundamental challenges’ through the National Development Plan — ‘to guide our national effort to defeat poverty, unemployment and inequality’. He urged, ‘[… We] need to prioritise […] focus on those actions that will have the greatest impact, actions that will catalyse faster movement forward, both in the immediate term and over the next 10 years […] Let us agree, as a nation and as a people, united in our aspirations’. A primary Presidential priority is ‘mobilising the entire nation’ to invest in our children’s education.

Already answering this call are exemplars in South Africa — bold, courageous institutions leading this national imperative. Like this budding shoot of green on the outskirts of Cape Town. As the dense metropolis eases into the historic Cape Winelands: welcome to an incredible community, where children come first.

The Indaba Institute

Welcome to the Indaba Institute, a pioneering education centre, and its guiding partner, the Indaba Foundation. In the passionate words of Andre Shearer, the Foundation’s chairman, ‘There is no more heart-felt space deserving of our energy, passion and love.’ The Indaba Institute believes that investing deeply in early childhood development (ECD) is one of the most meaningful ways we can overcome systemic poverty and inequality.

The learning environments are carefully designed and prepared to be truly child-centric, cultivating a deep level of respect and courtesy, for the environment, each other and themselves. Every child is recognized as unique, early independence is deeply encouraged, whilst respect for
others is taught. Through trained observation, the teacher is able to follow the child’s individual needs, encouraging self-reliance. Their work is scalable and cost-effective, and today graduates from the early learning programmes are assuming critical roles in society, generating meaningful incomes for their families, while providing key skills to the local economy. In the famous words of Maria Montessori, ‘Within the child lies the fate of the future’ (Montessori).

The Indaba Institute is the only training centre offering Association Montessori Internationale (AMI) accredited training in Southern Africa — and represents the first few steps of a Montessori journey together. AMI teacher training is offered to students wishing to work with children from birth to eighteen years of age. The Indaba Institute also works with schools in the Cape Winelands area wishing to implement strong Montessori practice. This, through mentorship and coaching to teachers and staff. But this is not a one-off engagement. Indaba Institute’s training leads educators on a path of lifelong learning, as Montessori ‘Community Shapers’ in community collectives. Their role: to support children as they form their character, becoming mindful members of their society.

Asked why it is important we invest in Community Shapers in communities, Jasmine Jacob, the programme’s lead, explains:

Society is in need of role-models, teachers who understand themselves and the needs of their communities, who are not satisfied with the status quo and who have the passion and courage to help shape a better future for the children they serve. We are already seeing these changes taking place within the individuals themselves which is incredibly inspiring. The intention of the programme is to holistically empower teachers with the knowledge and skills to help meet the needs of the children they serve as well as drive change in their communities.

The Sustainability Institute

If the Indaba Institute is a seed of Montessori life in the Cape Winelands, then the Sustainability Institute is the mother plant that helps nurture it. The Sustainability Institute was established as a non-profit trust in Lynedoch Ecovillage in 1999 to provide a space for a diverse range of
partners to explore an approach to creating a more equitable society. At the core of the institute’s work has been finding ways of living that sustain rather than destroy the ecosystem within which all society is embedded. Especially sustainable African futures. A determined focus on children led to the founding of the Creche, now called the Lynedoch Children’s House, and After-Care programmes.

Through a variety of research and learning programmes, the institute acts as an African thought leadership institute, researching, teaching, and practising social innovation for the transition to just and generative futures. In partnership with the School of Public Leadership at the University of Stellenbosch Lynedoch has built robust and relevant masters and PhD programmes in sustainable development. The programmes are explained thus:

As the various global social and environmental crises deepen, a new generation is rising up into leadership positions in the public, private and non-profit sectors that are required to possess a broad trans-disciplinary understanding of the various dimensions of these crises and related solutions.

This integrated master’s programme aims to equip people with the knowledge, experience and skills they will need if they are to grow and develop to be ready for a different future. Delivered by Stellenbosch University’s School of Public Leadership in partnership with the Sustainability Institute, the master’s programme in Sustainable Development is a multi-disciplinary global programme in the planning, management and practice of sustainable development. [Participants] meet and build a life-long network with a diverse group of like-minded, South African and international graduate students and working professionals, who are seeking to gain practical insights and deepen their understanding of what sustainability and just futures means.

The Sustainability Institute can be described as a living and learning centre for studies and experience in ecology, community, and spirit.

**Lynedoch Eco-Village**

This pioneering precinct is the first mixed-income, ecological housing development in South Africa and home to indigenous biodiversity gardens and vegetable gardens for farm-to-fork eating.

This small community can be found about twelve kilometres outside Stellenbosch, the second oldest town in South Africa, and ten kilometres outside Khayelitsha, the fastest growing suburb in the country. Midway between two of the most different environments imaginable, navigating a progressive approach to socially, racially, and economically integrated, inclusive community living.

The collective prides itself as a learning community — both literally and figuratively. In addition to the Indaba Institute and Sustainability Institute, the village is home to the SPARK Lynedoch primary school, a Montessori Children’s House, and the Lynedoch Community School. The village is also a site of scientific and cultural interest, for the research generated by environmental interventions and the daily
practice of a village of neighbours finding ways to live
together across a range of real and imagined differences.

All the homes in the village are built from alternative
materials, including adobe brick, second-hand brick,
hay bales, and sandbags. The village has its own waste
management systems, with a sewerage system and a water
treatment system that sees 100 percent of grey water
returned for village use. It also has a recycling depot.
All homes have solar water geysers and some have photo-
voltaic solar and biodigesters.

The sustainable approach of the village is born out of an
understanding that sustainable living is only fully possible
when social justice issues are adequately addressed. In
other words, there is no sustainable living, no matter how
good your energy usage and waste management systems,
if society remains unequal and unjust. To this end,
the village attempts to grapple with social justice and
inclusivity at every level, while implementing feasible
ecological interventions, often small scale. It is not a case
study for photovoltaic success, rather it is a case study for
an approach to sustainability that begins with people.

Understanding Trauma, a Future Focus
of the Indaba Foundation

Context is everything, in how we engage in the world
around us, and the Indaba imperative is located in a
context of a violent society.

A recent visitor was a senior fellow from Harvard
University’s Center on the Developing Child, Philip Fisher
— a professor of psychology and global expert on the effects
of early stress on neurobiological systems. His expertise
extends to designing early childhood interventions in
socially and economically marginalized communities. The

Indaba Institute is strongly aligned with the urgent need to
mitigate widespread trauma, today, as potentially the most
significant determinant of our societal realities in twenty,
thirty, and forty years’ time. Shearer has said simply: ‘Our
children are being imprisoned by trauma. Let’s lead a
radical team effort: To set them free.’

The Indaba Institute recognizes that children’s needs are
not only physical but also emotional. As writer Philip
Pullman has said:

If you don’t give a child food, the damage quickly
becomes visible. If you don’t let a child have fresh air
and play, the damage is also visible, but not so quickly.
If you don’t give a child love, the damage might not be
seen for some years, but it’s permanent. But if you don’t
give a child art and stories and poems and music, the
damage is not so easy to see. It’s there, though. [...] But
one day they [encounter art] and it strikes them a blow
so hard and yet so gentle that they feel dizzy. [...] They
suddenly realise that they’re filled with a hunger [...] They
wanted this, they needed this as a starving person
needs food, and they never knew. [...] Many children in
every part of the world are starved for something that
feeds and nourishes their soul in a way that nothing
else ever could or ever would. (Pullman)

And the Indaba Institute designs so much of its offerings
aligned with these words, by Nicolette Gowder:

Don’t rush the little wild ramblers, wanderers, dawdlers
and dreamers.
Don’t push or compare the child who tarries and turns
over every pebble — who stops to fill overflowing
pockets, talk to trees [...] who listens to the wind, current
& message of each spiralled shell.
They will grow up to be the noticers, the connectors and
the guardians. Their pace will carry a certain peace back
to the rest of the world.
A doctor in the Cape Winelands area who faced the daily impact of our violence-ravaged society said quietly, powerfully, ‘If we want to change what our casualty unit looks like 20 years from now, the single most important action we must take is: If we can improve children’s “First 1000 Days” and then run further “Early Childhood Development” properly, that’ll have more impact than anything else we could ever do’ (Williams).

The Indaba Institute believes, essentially: the challenges in our society are too intractable to ‘fix’. We need to start at the beginning.

Nobel Laureate Professor James Heckman is one of many influential thinkers who have demonstrated that every dollar invested in early childhood development ‘may garner up to seven times that amount in social returns’ (Heckman). He argues that, ‘All families are under increasing strain; disadvantaged families are strained to the limit’. We need to do three things, he advises: One, invest in educational and developmental resources for disadvantaged families to provide equal access to successful early human development. Two, nurture early development of cognitive and social skills in children from birth to age five. And three, sustain early development with effective education through to adulthood.

**A Vision for the Future**

Every once in a while, the stars align. Line up. Shine brightly, together. And light a clear path into the future.

For the children of our next generations this seems to be one such occasion. Early childhood development means many different things to different people. But there is now consensus on how extraordinarily crucial the first half-dozen years are in every human being’s life. Not just the favoured or fortunate few. Every single child.

In the Cape Winelands, this is being led by a contingent of courageous pioneers and change-agents. Shearer has an audacious dream: A Cape Winelands–based African ECD Campus dedicated to enabling high-quality early childhood education and the healthy development of the children of South Africa.

This child-centred campus would comprise a world-class teacher training institute, accommodation, art, culture and music centres, food gardens anchoring the edible and organic curriculums, and healing centre, focusing on addressing trauma, from which children learn to heal.

At the heart of this vision, are several core aims:

- **ECD Advocacy:** advancing and advocating high-quality early childhood development in the Western Cape winelands
- **Social Investment:** to implement positive changes in society by starting at the beginning — identifying and fostering untapped potential in children at an early, receptive and influential age in hopes of encouraging brighter futures
- **Socio-Economic Context:** to lead an entire wine-farming region towards a caring, sustainable future for communities facing significant social challenges
- **Sustainability:** rooted in the Western Cape’s Floral Kingdom, to pioneer the first formal Montessori Earth Stewardship Program for Early Childhood Education. Using the AMI 0–6 Training Curriculum as the core, to weave key and relevant elements of permaculture,
climate change solutions, edible landscaping, wellness, and nutrition into a user-friendly, academically inspiring curriculum and handbook/e-book that can be applied to ECD programs everywhere, rural or urban.

- Vision: the educational vision is underpinned by principles of:
  - Equity: ensuring that local crèches from the winelands community benefit from the Academy
  - Pedagogy of place: celebrating and sharing a uniquely African contribution to Montessori-informed learning
  - Standards: the highest standards of quality and professionalism
  - Research: The Foundation plans to become a globally respected research centre to track the societal impact of Montessori on a society with the world’s largest Gini coefficient (a measure of income or wealth inequality).

Conclusion


If children live with hostility, they learn to fight. […] If children live with fairness, they learn justice.

Indeed.

Shearer, and the Indaba Institute and Foundation he leads, believes passionately: ‘There is no more heart-felt space deserving of our energy, passion and love — than the emotional foundations on which our children build their lives.’

Our best tomorrow must start today. And here in Africa, it already has.

References


Murray Williams is a father, journalist, strategist and mobilizer, who began playing outdoors in the magical Cape Winelands at the age of four. He has not stopped since.
Adolescents, Educateurs sans Frontières (EsF), and Selfless Adult Service

The Magic of Side-by-Side Collaborative Work

Lesley Ann Patrick

Lesley Ann Patrick takes the reader from the infant class to Erdkinder to demonstrate that selfless service which is service without praise or reward, is evident in every level of Montessori education. It begins with the little ones who unconsciously work for others, followed by the Casa children who clean and care for their environment, especially loving the ‘big work’ to which they seem to belong. The elementary age child grows in moral independence and serves not only their peers, but the wider community. They seek out the opportunity for acts of kindness (visiting the elderly, cleaning […]). The adolescent ‘works side by side with adults […] who are able to support and validate their developing conscience’. Patrick reminds us that Montessori understood education to be ‘non-attachment to possessions, power, or an easy life’ but instead ‘a need to serve our fellow human beings’. This is further enhanced through ‘a willingness to serve humanity’, a prerequisite to Educateurs sans Frontières.

We must make the children understand how extraordinarily moving it is that men are not united by their interests alone, but that a deeper bond exists at the very root of their humanity— I have experienced the effectiveness of this teaching, especially in India.
—Maria Montessori, “Human Solidarity in Time and Space”

This bond emanates throughout the Montessori pedagogy, a pedagogy which is not secular, but deeply spiritual. As we examine Montessori’s philosophy, we discover that it is always underpinned by the need for selfless service, by which we mean service without praise or reward. Vedic philosophy teaches us that we are faced at birth with an ocean to cross in order to attain unity with divinity. We are shown that the way to cross this ocean is to take a path of selfless service.

Our Montessori prepared environments offer the developing human the opportunity to build upon this innate capacity for service. From the youngest children in the infant community, already unconsciously endeavouring to work for the care of others and their environment, through to the conscious acts of service manifested in the Children’s House, as the children beaver away in their work of cleaning, cooking, and taking care of all and everything, we see that these young souls are in active service whilst in the process of their own self-construction and pursuit of functional independence.

As the children in the elementary encounter the concepts contained within Cosmic education, their imagination is fired to conceptualize the understanding of the interdependencies of all life forms and interconnectedness of all humans. A sense of deep gratitude for all is aroused within them. Experiencing a development in moral independence during these years, the children begin to demonstrate a need to serve, not only within their own social group, but also in the wider community. They seek out the opportunity for acts of kindness (visiting the elderly, cleaning the beach, and so forth). Through Cosmic education they begin to feel a deep sense of gratitude for life, to see the ‘other’ as a mirror of themselves, to understand the need to put a ceiling on worldly desires. We can support them as they unite in diversity from a place of heart rather than intellect.
It is, however, with the advent of adolescence that the cultivation of selfless service takes on a new dimension. No longer a child, the adolescent is already beginning to look to society as he begins the construction of the adult he is to become. He embarks on a journey of self-discovery finding his strengths and ways in which he will be able to make his own personal contribution in the adult world. This embryonic adult, vulnerable yet dynamic, is offered the prepared environment of the third plane in which he can take on various roles and practice what he might become. With a sensitivity for the development of personal dignity and of justice he is able to take the opportunities offered in the adolescent community to carry out the essential concrete tasks required by the community. With a division of labour and the personal responsibilities needed for the community to function successfully, each student is able to strengthen his sense of self-worth, knowing that his efforts are truly needed for the benefit of all. These valuable concrete experiences, from which the consequences of one’s own actions can be felt, serve as the foundation from which an ability to serve on a larger scale are laid. The need to serve for the benefit of the whole community resounds clearly, not merely by performing assigned tasks but by learning to respond to what is needed. Adolescents continue to seek out opportunities for community service in their neighbourhood, and they are keen to actively respond to urgent situations in which they can play a part. In early adolescence the notion of justice is still somewhat theoretical as the adolescents do not have the power in society to activate real change. However, this does not prevent them from feeling and reflecting deeply about what they see in the world around them. They are touched by the notions of planetary destruction, by the lack of inclusion and equity for all in society. They are equipped with a deep sense of questioning as to how they might become able to effect change.

For this reason it is vital that they work side by side with adults who recognize this and who are able to support and validate their developing conscience. Adults need to continually sow seeds as to how adolescents may emerge into adult life rooted in service. As adolescent guides we must offer multiple opportunities for self-expression and material that will give rise to discussion and debate. We can here benefit from the variety of workshops based on Montessori’s Educational Syllabus and

Rusa, a Montessori graduate, spent one year working with an orphanage in Ghana. She supported their learning using improvised Montessori materials.
designed by the Montessori Institute for the Science of Peace. We have a duty to support the moral development of these young souls, and the culture which is created in our adolescent communities is vital to this end. We need to make ourselves worthy of modelling to adolescents as we work side by side. As adults we need to discover a sense of contentment, a clarity of personal vision, and a system of human values by which we live.

From experiencing usefulness and a sense of mission in one’s own community, the adolescents progress as they grow older to a more abstract understanding of global realities and the part that they can play. As they experience the latter part of the third plane, the adolescents are understanding clearly the role of the various disciplines. This is approached with a questioning as to how the knowledge acquired in each discipline can be relevant in preparation for adult life. It is especially pertinent that they explore the disciplines through a lens reflecting how they can be used in a life of service.

Montessori tells us that our graduates are destined to enter a further period of discovery as they enter the wilderness of the fourth plane, no longer a prepared environment but one of open exploration as they pursue their path to independence. Now they are in society, now is the time to make choices — what to study? what profession to pursue? Whatever choices they make these Montessori young adults approach life with experiences which formed their personality. They know how to be useful, to take responsibility, to understand social reality. This enables them to serve society in myriad ways. Selfless service is a natural outcome of Montessori methodology, its very essence forming part of what they have become through their third-plane experiences.

If we take Montessori’s understanding of the purpose of education as non-attachment to possessions, power, or an easy life, but rather a need to serve our fellow human beings, then we see our young adults as key to both the future of humanity and the planet on which humanity lives. Within society they will encounter many adults volunteering in many capacities, an assurance of the innate goodwill of humans. However, we can offer our graduates a further opportunity through developing an interaction with Educateurs sans Frontières, created by Renilde Montessori; she likened the role of the Educatrice to a wandering minstrel who goes where needed, shares a gift, and supports, leaving at a timely moment: ‘able and willing to go where their presence is required, never to intrude, not to indoctrinate, but to help and encourage others to learn to discover the wise and ancient plan for wholesome growth with which all humans are endowed’ (Renilde Montessori). EsF initiatives can be found on every continent.

To inspire adolescents, adults need to develop the qualities of Renilde’s wandering minstrel — It is not about me! I am not in control! I am here to support you to a place of independence! These aspects of preparing to work with adolescents should be the same as preparation for working as an Educatrice. Perhaps all adolescent guides should attend EsF Assemblies in order to deepen their understanding of Montessori’s true vision for their students: ‘He is truly a newborn ready to begin to live mysteriously, yet positively for other people, to dedicate his life to others, to make sacrifices, to give his life to protect. That is the meaning and importance of this period, the man who lives for others is fundamentally a social being’ (“A Social Newborn”).

The question remains as to how we can build a connection of value between the swelling ranks of Montessori graduates and the work of EsF. What can our young adults learn from EsF that will enable them to either create initiatives of their own or develop the level of service necessary in their chosen work?
I was fortunate to attend EsF assemblies in Hyderabad, India, and Stellenbosch, South Africa, with graduating Montessori students, and the potential connection began to feel very tangible. At the most recent EsF Assembly, in Tepoztlán, Mexico, we explored in a working group how to build a connection which would be meaningful for Montessori young adults. The decision was taken to form a steering group of Montessori adolescent guides and graduates with two tasks. The first is to create a website on which service contributions, both environmental and humanitarian, can be shared by all adolescent communities. The second is to hold an EsF-inspired assembly for older adolescents and young adults in which core Montessori principles and their implementation in service can be explored. We see this as a broad reform which will maintain the Montessori connection for graduates and support them side by side as they pursue their own initiatives. Together with the AMI community in Greece, the first Assembly is scheduled for 2022, and will incorporate community work which will enable us to leave a parting gift. We welcome you to join us!

Montessori advised that peace, not merely being the absence of war, should be studied as a science. If we consider her own pedagogy, we see that the natural outcome is a willingness to serve humanity, a precursor to peace. If we support natural human development in our prepared environments from birth to adulthood, we see a natural blossoming of the essential human values which bring us to a place of peace. Discovering who we are and our own truth, developing a capacity for loving unconditionally, practising an attitude of non-violence in our communities, fulfilling our responsibilities — the outcome for Montessori graduates is one of personal peace. This cannot be taught or even cultivated but is the natural culmination of meeting the needs of the child in each plane of development. These young adults emerge as true potential agents of change, and this is the intersection at which point the knowledge and experience inherent in EsF becomes of such vital importance to them.

We are all a single organism, one nation. Becoming a single nation we have finally realised the unconscious spiritual and religious aspirations of the human soul, and this we can proclaim to every corner of the earth. (Maria Montessori, *Education and Peace*)

References


Lesley Ann Patrick holds a bachelor’s degree in French literature and theatre (University of London) and a post-graduate certificate in education (University of Cambridge). She has been a Montessori guide since 1988, working with children from three to sixteen years of age in schools affiliated to the Association Montessori Internationale in the UK, Sweden, India, and France. Since 2010 Patrick has focused on working with students from twelve to eighteen, first in Scotland and then in Sweden, as adolescent coordinator. She also works as an advisor at the AMI/NAMTA Montessori Orientation to Adolescent Studies in Sweden. She is currently a mentor for students and adults in establishing Montessori Centres for Study and Work, most recently in France, India, and Morocco. Patrick is also involved in coordinating Montessori outreach initiatives in Andhra Pradesh and Tamil Nadu, India, initiatives which regularly bring her to the Assemblies of AMI Educateurs sans Frontières.
Architecture: Montessori Evolving
Designing Environments that Support the Developing Child

Gerard Leonard

Over the past one hundred years, evolution in the field of the design of classrooms and of schools has been propelled by the intersection of two major cultural movements. One is the field of progressive (constructivist) education and the other is the school of architecture usually termed modernism. Maria Montessori’s contribution to this area has been of pivotal influence.

In the early twentieth century the powerful voices of theorists such as John Dewey, Carleton Washburne, and Helen Parkhurst in the United States and Maria Montessori, Roger Cousinet, and Ovide Decroly in Europe formed a collective voice that came to be known as the New Education Fellowship. These men and women played a major role in the pre-war years (1920s and 1930s) in calling for the reform of traditional schooling.

A significant part of this reformation was the necessity of redesigning classroom spaces, children’s furniture, access to adjacent and proximal learning spaces, and access to the outdoors. Maria Montessori was a pioneer in all of these areas; she lay particular emphasis on the need for new kinds of environments specially prepared for young children. She wrote of the importance of natural light, of colour, of proportional furniture, and of integrating outdoor and indoor environments. This radical concept of environments designed around the needs of developing children is well summarized in this early statement of Maria Montessori:

The ‘Children’s Home’ is the environment that is created for the child to enable him to develop his abilities. This kind of school is not of any fixed type, but can be adapted to the means available and the prevailing external circumstances. It should be a real home, i.e. a house, viz. a group of connected rooms with a garden where the children are in control. A garden with some means of protection against the weather is ideal, because the children can play or sleep beneath the porches, as well as taking out their tables and working or eating outside. (Basic Ideas, p. 75)
Indeed, it increasingly became necessary to question the overall architecture of schools. By the 1930s, the new pedagogy became the major influence on school architecture.

The modernist architects, many of whom emerged from the Bauhaus school and the influence of Walter Gropius and his associates, were interested in social reform through the medium of a new kind of architecture which opened up space in innovative ways and used modern materials such as steel and plate glass to provide natural light and better ventilation. All of this was done to create activity-based learning environments that were both child-centred and flexible in terms of use. Gropius was majorly influenced by the theories of Friedrich Froebel, Johann Heinrich Pestalozzi, and Maria Montessori. According to Whitehouse, ‘Significantly, these reforming pedagogical theories underpinned the formation of the Bauhaus and the development of Modernist architecture and design education’ (p. 98).

The progressive pedagogues also inspired Richard Neutra, Eliel and Eero Saarinen, Marcel Breuer, and other modernist émigrés from Europe to the United States whose school designs have been very influential in the USA. Recent studies into the historical evolution of architecture in schools note that times of social reform or of social revolution such as the 1920s/1930s and the 1960s/1970s are periods when progressive reformist pedagogies and school design innovations are closely linked (Dudek; Grosvenor and Burke). The revolution in the relationship of teacher and child, and the centrality of learning by means of independent and meaningful activities rather than through rote instruction, demanded new kinds of spaces.
The ‘tectonic shift among architects’ (Gislason, p. 240) in the United States came as a direct result of classrooms evolving from the ideas of Dewey, Montessori, and others about school and classroom design. Richard Neutra’s 1935 book, *New Schools for America*, and the January 1935 issue of *Architectural Forum* stated the vision. From this time on innovative schools were built in the United States. The elements of the new design were:

- Designing from the inside out (i.e. looking at the community needs and working outwards towards the actual form of design and architecture that would be used)
- The removal of walls and doors (use of sliding doors). This concept was meant to be taken both literally and metaphorically.
- Environment as central to the child’s development and education (i.e. both the designed and the natural environments)
- The child needs to be interactive with nature and the landscape (e.g. more use of glass to bring the outdoor in and the indoor out)
- The importance of sunshine, daylight, and fresh air for health and development
- Places for rest and recreation in addition to varied places for optimal academic learning

In the post–World War II era, the Reggio Emilia approach brought fresh attention to the key role of environment in a child’s development. Loris Malaguzzi, the principle Reggio theorist, famously called the environment ‘the third teacher’. The Reggio movement in collaboration with designers and architects has focused on classroom spaces, shared spaces (e.g. the atelier, the entrance to the school), and on light, colour, and acoustics as actual materials to be seriously planned for, but also made available to the child to creatively manipulate (Ceppi and Zini).

Over the past decade a number of architects have been experimenting with deep involvement of the community of users in the design process. This includes teachers, students, parents, and other community members. Mary Featherston, an Australian architect, has taken as the point of departure for her school designs the needs of the whole community. She begins with one central question: What do the children need, what do the parents need? The answers come not only from educational theory and international design innovations but also from the fields of sociology, anthropology, psychology, and physiology. Mary Featherston has also pioneered involving children in the research and design process.²
Recent scientific research into the environment as teacher has added compelling data on the influence of natural light and artificial lighting, of noise, of the ergonomic design of desks and tables and chairs, of air quality, of being outdoors and engaging with nature. All of these affect children’s health, the ability to concentrate and remember, and general development (Cheryan, et al.).

One of the major contemporary design companies researching and innovating in this field is the VS Furniture Company. The CEO, Dr Thomas Müller is the grandson of P. Johannes Müller whose company had been given the exclusive German rights by Maria Montessori to manufacture and sell her materials. This company, which enjoyed direct advice from Montessori on the specifications for materials and children’s furniture, was to have a major part in the design revolution regarding children’s furniture that was taking place in central Europe at the time.

VS Furniture continues to play a central role in the area of design for children today. In 2002 they created an important exhibit at the Bauhaus-Archiv in Berlin and published Montessori: Teaching Materials, Furniture, and Architecture, 1913–1935. This book is an important source on the history of Montessori and environmental design for children.

Flexible Use of Learning Spaces

The idea of a more flexible use of space in schools has had a long history, dating back to Dewey’s laboratory school and Maria Montessori’s Casa dei Bambini. ‘Certain design features followed from the [Dewey] Laboratory school’s pedagogic programme. First, the laboratory school used light and transportable furniture to allow for irregular spatial arrangements so that students could engage in guided observation, play, storytelling, and handwork’ (Gislason, p. 239). Maria Montessori wrote: ‘It is necessary to create surroundings for the child that answers his needs not only from the point of view of his physical health but also from the point of view of his spiritual needs. The child must be able to act freely in such an environment. There he must find motives for constructive activity that corresponds to his developmental needs’ (Education and Peace, p. 91).

The concept of spatial flexibility has continued to evolve in recent decades as our understanding of different learning styles, of multiple intelligences, and of special needs requiring particular adaptations has grown. New technologies have rapidly entered the classroom. The interface of virtual space and real space in school programmes is a growing fact of life. For example, when deciding at what age to introduce virtual reality and then how to use laptops or iPads as materials in the environment, questions of the ergonomics of seating and desks, of types of screens, of lighting, and of particular sounds on the health and developing growth of focused attention in children become very important considerations. The American Pediatric Association has recommended avoiding screen time for children under two years of age because of research indicating the detrimental effect on learning and language development of this exposure during these critical years.

Montessori and other constructivist pedagogies require that spaces can be used for a variety of individual and group activities. This necessitates light, movable furniture
and easy access to adjoining or proximal spaces for specialized activities. These include environments for crafts and handwork, woodworking rooms and art studios, gardens and outdoor play areas. Children need open doorways or easily opened sliding doors or screens with ground-floor access to the outdoors. Second-floor classrooms are seen as less than ideal. They ought to have access to verandas or roof gardens in order to satisfy developmental needs. According to Lili Peller, director of the Haus der Kinder, a pioneering Montessori school in Vienna in the 1920s and 1930s designed by Bauhaus architect Franz Schuster, ‘It should be possible to move almost everything outdoors — chairs, tables, shelves, screens, easels. Often the children are glad to do most of the moving, after acquiring a certain amount of experience, the planning can be theirs too’ (p. 38). Richard Neutra wrote in 1935, ‘School buildings, planned as places to acquire facts through motionless receptivity, defy every effort of administrators and teachers to meet the present demands of progressive educational practices. The redesigning of the individual classroom unit as the basic element of the school plant thus becomes a primary necessity’ (Gislason, p. 241). Recent research indicates that three aspects of the design of physical environments influence learning the most (Moore and Sugiyama). The first is that the space needs to foster exploration, independence, and development. The second is that the quality of learning spaces — the lighting, the colour, the acoustics, and the materials available — all have an impact on learning. The third aspect is the integration of the indoor and outdoor environments (Berris and Miller, p. 103).

The research of Curtis and Carter has confirmed that child development is fostered when spaces are flexible, that is the furniture is movable and play and activity areas are available at various levels and angles. There need to be both active and quiet spaces available. These factors, because they provide needed places for exploration, were found to offer the child security, comfort, and a sense of place and also to develop competence and self-worth (Berris & Miller).

We now are very aware that movement is necessary to counter the increase in childhood obesity and sedentary lifestyles. Additionally, research indicates that ‘all learning engages the physiology’. This is in fact the first principle of the twelve principles of brain/mind learning. These principles bring together research on learning from clinical and cognitive psychology, biology, and neuroscience (Cannon Design, VS Furniture, and Bruce Mau Design, p. 94). It is increasingly clear that movement and mental processes are intimately connected. Children must be free to move around and configure themselves in different ways and in different places depending on their activity or need for a change or a rest. The child is in this way an empowered user of his space.

In addition to insisting on the child’s freedom to move, Maria Montessori was one of the early pioneers of child-sized furniture. As a medical doctor and pedagogical anthropologist, she recognized the detrimental effects of the desks children used in schools during their long periods of sitting. She called for the abolishment of desks and even published a design for a child’s table in her first
book, Il Metodo, in 1909. She also gave descriptions for other furniture for a Children’s House.

Recent research tells us that ergonomic furniture plays a very important role in learning spaces designed to support child development. With more adjustable furniture, children vary their posture and the results are astounding. Significantly above-average attentiveness and ability to concentrate during test taking was observed when children could move while seated. A recent study described the following as ideal ergonomic standards:

- Inclinable table tops
- Rolling/swivel chairs with rocking mechanisms
- Continuously height-adjustable chair-desk combinations

These results are from a pilot study conducted by VS Furniture at Perspectives Charter School in Chicago. (Cannon Design, VS Furniture, and Bruce Mau Design, p. 87) A flexible environment is therefore an environment where not only the materials used by the children but the space itself and the furniture can be manipulated and used by the children in their self-construction. It is a child-centred environment offering appropriate independence for the developmental stage the child is passing through. It is also a space that is flexible enough to be adaptable when there are rapidly changing developmental needs.

Maria Montessori was a promoter of ‘non-prismatic spaces’. She recommended elliptical, triangular, and circular shapes in order to ‘give rest and pleasure’ to the children. Her observations led her to believe that rooms needed to be of varied shapes and sizes in order for children to both work with concentration and rest when rest was required. ‘To be condemned to reside in a prismatic space is depressing to the spirit’ (Montessori, “House of Children”, p. 12).

The Importance of Natural Light and Natural Views

There are several qualities of the spaces that children use for learning that research indicates need to be seriously considered. These include, air quality, lighting, colour, views of the outdoor environment, windows/glass, acoustics, and materials. I will mainly focus on lighting and views.

Maria Montessori stressed the importance of line and colour in the environment. Montessori’s famous glass classroom at the 1915 Panama-Pacific Exposition surprised many with its lavender walls and pearl grey furniture.⁵ Natural lighting, colour, and the general beauty and order of the prepared environment were all understood as key aids to concentration:

It is almost possible to say that there is a mathematical relationship between the beauty of his surroundings and the activity of the child: he will for instance be much keener to sweep with a nice broom than with an ugly one. (Montessori, Basic Ideas, p. 78)

There should be glass walls allowing plenty of natural light into the room, as well as communicating with the outer garden. (Montessori, “House of Children”, p. 14)
In the Reggio approach, lighting and colour are also considered particularly important in their capacities as ‘third teacher’. For example, in relation to the use of light the architects and pedagogues for the children, spaces, relations publication of Reggio Children and the Domus Academy organizations wrote:

In the school environment, it should be possible and easy to obtain different gradations and intensities of light and screening, up to total darkness. There should be multiple artificial light points, enabling various types of light and partial lighting contemporaneously in the same environment […] the light, both artificial and natural becomes a visible material when it is recognized, manipulated, screened, eliminated, and so on. (Ceppi and Zini, p. 55)

In a recent study of 71 schools, the effects of daylight and of ‘views’ was studied (Tanner). The following findings are significant in their implications for classroom design:

- Light is the most important environmental input after food and water in controlling bodily functions.
- Natural and artificial lighting from two sides of the room is ideal for learning and for comfort.
- Full spectrum lighting impacts serotonin, critical for a child’s health and development.
- In poorly lit classrooms students can experience a form of fatigue similar to jet lag.
- Light of different colours effects pulse, respiration rates, brain activity, biorhythms, and blood pressure.
- Certain forms of fluorescent lighting may cause mild seizures.
- Daylight significantly affected the variance in science and reading vocabulary scores.
- Windows with views external to the classroom positively affect learning.
- Living views are most beneficial (e.g. of gardens, fountains, mountains in the distance, and not of outside walls and parking lots).
- Unrestricted views to the outdoors of at least fifty feet significantly affected the variance of reading vocabulary, language arts, and mathematics scores. It appears that such views offer rest to the students’ eyes.

In *Building Better Learning and Learning Better Building, with Learners Rather than for Learners*, the authors note that learners typically know the qualities of spaces that do not facilitate their learning (Farid, et al.). They indicate ‘universal agreement’ on what distracts learners and that the research validates the users’ experiences. Two of the most prominent factors are lighting and noise: ‘Exposure to uncontrollable noise has a negative impact on children’s cognitive development, reducing memory, language, and reading skills’ (Evans cited in Berris and Miller). Based on the research currently available, Farid, et al. recommend ‘designing out these distracting elements’ in order to ‘open fronts for better learning’ (Farid, et al., p. 143).

Other visual factors are also influential. Recent research at Carnegie Mellon has found that heavily decorated classroom walls disrupt attention and learning in young children (Fisher, et al.).

In fact, Maria Montessori draws our attention to the great importance of flooring. She recommends shining tiles of different colours arranged as a mosaic, or waxed wooden floors: ‘The importance of flooring is very great […] when we walk about the room, or when one is seated, we are conscious of the floor […] as far as beauty is concerned the flooring is more important than the walls’ (“House of Children”, p. 14).

Maria Montessori wrote that she ‘came to realize’ after some time ‘that everything in the child’s environment not only requires order, but *must also be carefully measured*, and that interest and concentration increase as confusion and superfluity are eliminated’ (*Basic Ideas*, p. 88). Montessori designed every aspect of the prepared environment to support concentration. She regarded concentration as ‘the key to all pedagogy’ (*Child in the Family*, p. 74). She found through experimentation that environments that were both beautiful and ordered were places where not only could children ‘live’ happily but could also develop deep attention/concentration: ‘No ornament can distract a child really absorbed in his task, on the contrary, beauty both promotes concentration of thought and offers refreshment to the tired spirit’ (*Spontaneous Activity in Education*, p. 146).

Recent research has found that objects portraying stereotypes conveying positive or negative messages about certain groups including banners, photographs, and art and nature pictures have been found to affect learning: ‘Objects can also hinder (or improve) the achievement of students of color and females of all backgrounds when they allow for (or remove) uncertainty about whether one’s social identity will be accepted’ (Cheryan, et al.).

The choice of colours used in environments can also affect performance and influence the general atmosphere of classrooms. This was also found to apply to connecting spaces such as stairways and corridors (Cannon Design, VS Furniture, and Bruce Mau Design, p.180). H. Hirsh Spense, educational consultant to OR Furniture explains,
When we did our design workshop for this book with students in Berlin, the kids said one of the things they really wanted in their learning environment was color — they absolutely craved it. But they didn’t want just any colors, they wanted natural colors; the greens of grass and trees, and the blues of the ocean and the sky. If there was one consistent idea that came out with all four classes we worked with, it was this need for natural colors — and for natural light. (p. 181)

The Indoor–Outdoor Continuum and the Need for Access to Gardens and Play Spaces

Discussing the well-known Crow Island model school of the pioneering architects the Saarinens, designer Bruce Mau describes the sense of ‘the outside pushing in, and when you’re outside, you’re in a class. That’s the idea we should shoot for. How can we dissolve the opposition between the man-made and the natural, so that both feel comfortable?’ (Cannon Design, VS Furniture, and Bruce Mau Design, p. 75).

Likewise, Maria Montessori considered the garden so important that she wrote: ‘plans for a garden run parallel with those for the building of a Children’s House’ (Discovery of the Child, p. 78). Working in the open air was considered essential for health in Montessori schools in the 1920s and 1930s. If there was no garden, then the roof terrace was used so lessons could be given in the open air (Müller and Schneider, p. 30; see 1927 photo from Berlin).
Maria Montessori described what prepared environments integrating indoor and outdoor spaces would look like in order to satisfy the child’s sensory and motor needs for a variety of places to explore with all the senses and in which to move and be more active or gregarious, or inhibit movement and practice being quiet and alone:

There should be glass walls allowing plenty of natural light into the room, as well as communicating with the outer garden. Before we actually step into the garden from the Children’s House, there should be a raised verandah all around. It should be closed and sheltered. In the garden there should be ‘kiosks’ or bowers to go into […] The garden should be the result of the collaboration of all the children. There should always be collaboration in protection (weeding), collection of fruits, harvesting and so on. The garden should be, psychologically, a place that allows each one to do what he feels like doing. (‘The House of Children’, p. 14)

When children are asked their opinions, they invariably express a great need for the natural world. Designers and researchers have discovered by questioning them that ‘Children want areas filled with nature, from plants, trees, flowers, and water, to animals and insects’ (Cannon Design, VS Furniture, and Bruce Mau Design, p. 98).

A recent study that analysed hundreds of neighbourhood maps from children in the United States, England, and the Caribbean found that four- to seven-year-olds desired ‘home and garden’; eight- to eleven-year-olds wanted ‘explorable landscapes’; and twelve- to fifteen-year-olds wanted ‘woods and social gathering places’ (Cannon Design, VS Furniture, and Bruce Mau Design, The Third Teacher, p. 182). These findings correlate well with the types of prepared environments for these ages described by Maria Montessori. They write, ‘We should be attempting to engage children more deeply in knowing the flora, fauna, and character of their own local places’ (p.182).

Research indicates that:

- Natural play environments appear to aid children’s cognitive and physical development better than built play areas (Berris and Miller).
- Children attending more natural day-care centres demonstrated ‘better motor skills, increased attention spans, and fewer sick days’ (Berris and Miller, p. 103).
- ‘Outdoor capital’, or accumulated time spent playing in natural areas, and an ‘environmental socialization’ role model have positive long-term effects (Bixler, cited by ecologist Louise Chawla, p. 45)
It appears that gardening has very direct physiological health benefits for children. It has recently been discovered that the Mycobacterium vaccae bacterium found in soil may stimulate serotonin production, which makes us relaxed and happier; lack of serotonin has been linked to depression, anxiety, obsessive compulsive disorder, and bipolar problems. This bacterium appears to be a natural antidepressant in soil and has no adverse health effects (Lowry, et al.).

The fact that designers and architects are turning more and more to users and in particular to children for ideas is a significant evolutionary step in the design of school and classroom spaces. Dr Thomas Müllner of VS Furniture called the children’s ideas ‘an immense treasure’ when urban students in Berlin communicated their ‘tremendous longing for peace, because it is too noisy in the city’, their need for flowers and plants inside because there is too little green outside, and their tremendous desire for a sense of community. Designers and architects are now listening to these voices (Cannon Design, VS Furniture, and Bruce Mau Design, p. 242).

Bruce Mau and Elva Rubio of Bruce Mau Design believe that children are really gifted when it comes to design.

We created design concepts, and then we interviewed 150 children — we asked them to critique and analyze the concepts, and they got to debate and then vote. These kids — and most of them underprivileged — are really savvy. They know design; they understand plans and spatial relationships. And they have opinions. They have a huge aesthetic ability to select things. These kids basically created their learning environment and the way they used it. (Cannon Design, VS Furniture, and Bruce Mau Design, p. 225)

Hollis and Miller, and other architects in the United States are currently building more open, flexible, and innovative learning environments in close collaboration with teachers, students, parents and local communities. Smith Edwards McCoy Architects in Hartford, Connecticut, designed the CREC Montessori Magnet School, a public school, as part of an inner-city revitalization project. The architects worked with a local neighbourhood alliance, an adjacent university, and the city of Hartford to integrate the school as part of a new Learning Corridor. They explain, ‘The design of the school [...] is based on the principles and philosophy of Montessori education: two stories of classrooms designed as “houses for learning” are arrayed around an outdoor learning space. All classrooms have easy and direct access to the Learning Center off of an “interior street”’.  

Mary Featherston’s Inside-Out Project in Australia also works with different constituencies, including children, to design learning environments that truly support child development (Whitehouse p. 96). The custom designed Montessori secondary school (Montessori College Oost [now Montessori Lyceum Oostpoort], Amsterdam) created by Hermann Hertzberger in 2000 takes the idea of a Children’s House and expands it to an ‘internal layout modelled on a small “town”, consisting of flights of stairs, ramps, “streets”, and “squares” (Kahn (ed.), p. 128).
Conclusion

We now have what has been called ‘a plethora of scientific evidence’ that children’s healthy development, including their learning and achievement, is affected by the physical spaces they inhabit (Cheryan, et al., p. 10). One of our great challenges is bringing this information to administrators and to school districts, and to architects, construction companies, and designers. Additionally, we ought to consider how more of this new research can be included in our teacher training courses. We must continue to blend this research with the legacy of experience in the design of spaces for children that has come from progressive educators such as Maria Montessori, and from architects and designers who have focused on creating better learning environments for children.

The research clearly indicates that children can provide a wealth of insight when it comes to design. Both classroom teachers on a smaller scale and architects/designers on a larger scale should interview and involve children in the design of the spaces they use.

Another recent aspect of design that we need to consider is the move towards ‘green’ schools and towards ‘ecological design’ (Orr). Ecological design is a recent movement that looks at school/classroom architecture and design from a perspective that accounts for natural systems as fundamental in the design of human spaces. The core concept is that of sustainability/education for sustainable living. The local ecosystems and the bioregion are taken carefully into account. Leadership in Energy and Environmental Design (LEED)–certified building is now becoming more well-known and communities are working more and more towards the ‘greening’ of their schools. These are all very encouraging developments. They must be pursued, however, in an integrated fashion because there are, as we have seen, multiple factors to consider regarding the children who will use the indoor and outdoor living/learning spaces. Even an eco-friendly/sustainable environment or an aesthetic design may, for example, create lighting or acoustical conditions that do not aid concentration. All factors must be considered together (Berris and Miller, p. 103; Farid, et al., p. 143).

The great legacy of over one hundred years of Montessori prepared environments worldwide is that all factors are considered together. The multiple aspects of the environment supporting children’s self-construction mentioned in this paper are considered as a whole and adjusted according to the plane (stage) of development and according to place and culture. Montessori pedagogy has much to contribute to the field as our understanding of designing learning and living environments for children advances. Modern research also offers us fresh guidance in improving lighting, acoustics, integrating the outdoors, and many other essential factors needed in our prepared environments.

Notes

1 Marcel Breuer designed the Whitby School in Greenwich, Connecticut, the first Montessori school custom designed after the return of Montessori pedagogy to the United States in 1958. This return of Montessori education to the United States occurred after an absence of almost forty years; there was a burst of interest from 1911 through approximately 1920, but very little remained until a resurgence of interest in the 1960s.

2 See “Mary Featherston talks about spaces for learning”: https://www.youtube.com/watch?v=MyA xoAnzIPw

3 See the Third Teacher Collaborative Project by Cannon Design, VS Furniture, and Bruce Mau Design


6 See https://www.qamarch.com/montessori-magnet-school, Smith Edwards McCoy is now part of QA+M Architecture

7 LEED is a rating system for ‘green’ buildings. Supported by the United States Green Building Council (USGBC). LEED certification recognizes a subset of buildings that are designed, built, and/or maintained with sustainability in mind.

References


Burke, C., “Play in Focus: Children Researching Their Own Spaces and Places for Play” in Children, Youth and Environments 15.1 (Cincinnati: University of Cincinnati, 2005), pp. 27–53


Ceppi, G., and M. Zini, Children, Spaces, Relations: Metaproject for an Environment for Young Children (Modena: Reggio Children, 1998)


Gerard Leonard is a director of training at the 6–12 level for the Association Montessori Internationale (AMI) at the Montessori Training Center Northeast in Hartford, Connecticut. He is also codirector of the Maria Montessori Institute’s 6–12 course in Dublin, Ireland, and has lectured on the new AMI Core Principles Course. He has AMI 3–6 and 6–12 diplomas from Dublin, and a master’s degree in early childhood education from the University of Hartford. Leonard taught for over thirty years in 3–6, 6–12, and 12–15 Montessori programmes. He has lectured on AMI courses in Europe and has consulted for elementary Montessori programmes in North America. Leonard has given keynote addresses and workshops for the North American Montessori Teachers’ Association (NAMTA), AMI/USA, the Maria Montessori Institute, London, and Montessori Aotearoa New Zealand (MANZ). He was a codeveloper with David Kahn of the NAMTA Centenary Exhibit, A Montessori Journey: 1907–2007.
Designing Environments that Support the Developing Child


Hutchinson, D., A Natural History of Place in Education (Teachers College, New York, 2010)


———, Basic Ideas of Montessori’s Educational Theory (Oxford: Clio, 1997)


———, The Discovery of the Child (Adyar, India: Theosophical Society, 1948)

———, Education and Peace (Chicago: Henry Regnery, 1972), p. 91


———, Spontaneous Activity in Education (New York: Frederick Stokes, 1917)


Montessori Architectural Patterns

Benjamin Stæhli and Steve Lawrence

Benjamin Stæhli and Steve Lawrence offer a description of an ideal educational space. The authors share detailed examples of schools throughout the world built with an exacting knowledge of the ideal Montessori environment. Stæhli and Lawrence are not only architects, but architects with a comprehensive understanding of Montessori precepts and pedagogy from infancy to adulthood. The level of detail is all-encompassing from the use of local material to the orientation of the main entrance to the east.

This article is a resource for any school regardless of educational approach. Inspired by pertinent questions on the subject by Hilla Patell, Director of Training Emerita of the Maria Montessori Institute, London, they embarked on a book on Montessori Architecture that sets out to incorporate Montessori legacy criteria. The project is carried out in close collaboration with AMI and is funded by the Arthur Waser Foundation.

General Design Principles

1 A Hierarchy of Interconnected Spaces

Our foundational pattern derives from the child’s psychological needs. In order to feel secure, the child must be surrounded by ‘knowable space’. The exploration of the space must be at the child’s own volition. The child must be free to move in and around the space; the environment must be adapted to the child’s needs because in turn the child will adapt to the environment. The ‘prepared environment’ is a key concept in Montessori pedagogy and so it is our foundation.

At its simplest our concern is with the environment, the child within the environment and the relationship of the child with the trained Montessori teacher in the environment.

To create a knowable space we must have in mind the articulation of that space and the elements which foster a sense of secure orientation within it [7]. We can do this by creating a hierarchy of interconnected spaces. Orientation can be achieved in different ways with directional spaces or centralized spaces, tall spaces or low spaces, small spaces or big spaces; we are confined only be the parameters of the location and any existing structure. From the child’s perspective we are thinking of how the disposition of space creates ‘knowability’ and our ambition is a hierarchy of interconnected spaces that fulfill the formal use requirements and allow an orientating understanding to develop in the child’s mind. It is also our obligation to introduce sufficient complexity to meet the child’s curiosity and to design a space that meets the child’s needs for gross motor activity [23].

The Montessori architectural patterns provide a starting point for the design exercise of creating the hierarchy of interconnected spaces. A front entrance to the east [0–4], a greeting space [5], a garden to the west [26], differing floor and ceiling levels [2], daylight and skylight [16], sufficient floor space for working on the floor [8]. All these individual patterns contribute to achieving a successful hierarchy of interconnected spaces.
2 Different Heights for Floors and Ceilings

From the very beginning in the design process, the Children’s House or school should be seen as a three-dimensional object. In Montessori Architecture, interconnected spaces represent a landscape providing a topographical experience. Sectional sketches emerge side by side with the floor plan [1].

Space can be articulated by raising or lowering sections of floor and ceiling. It is important to give particular thought to the transitions between different levels, designing these wherever possible as tiers of seating with intervening steps in places where stairs are required. Steps can both open up views and provide protection. Therefore, they satisfy the condition for places that not only attract people but manage to keep them there [7].

In all the visited Children’s Houses or schools, steps between different floor heights had been occupied by children of all ages and in all circumstances as favoured hangout areas and worktops. Wherever sitting-steps had been installed to bridge the differences in height of an entire storey or half-storey, like in the Apollo schools in Amsterdam, emerged a kind of theatre that encourages spontaneous activity as well as providing seats for presentations without the need to drag chairs around.

3 Use of Indigenous Materials

As a next point of order, a decision on the type of building materials is made in the early stage of the layout also. This happens because the choice of materials and subsequent building elements determines, to a large degree, the possible shape and dimensions of the design [1, 2].

One of the essential elements in Montessori education is ‘learning by doing’, where students learn concepts from working with materials, rather than by direct instruction, in order to develop their cognitive powers. On this account, the haptic quality of the building surfaces is of paramount importance. There is an inherent beauty in the roughness, simplicity, modesty, and intimacy of natural substances such as wood or stone. Because of this, Montessori sensorial learning tools, which are used in the classroom to help a child develop and refine his or her five senses, are made of such materials.
On the other hand, there is an appreciation of the indigenous integrity of natural objects. Self-reliance of a community is an indisputable demonstration of its strengths and, for the child, invaluable for the development of his or her own self-esteem. [1] Therefore, all the reference institutions have been constructed with the human and natural resources of their environment such as bamboo in Bangladesh, soil in Burkina Faso, stone in Belgium, or wood in South England.

### Foreground

#### 4 Orientation of the Entrance to the East to Catch the Morning Sun

Irrespective of culture, religion, ethnicity, geographical location, or Zeitgeist, for every human being on this planet the sun rises in the east. The orientation of the entrance so it catches the first rays of the day is an example of the universality of the Montessori architectural approach. A door, passage, or gate can be done in a multitude of fashions and materials; with the right orientation, however, students will approach a school or Children’s House lit in sunlight, entering the building with a positive energy.

At first sight, this may not always be possible, because the vicinity only provides access from other directions, for instance. Nonetheless, this problem often presents the chance to be creative and to produce something interesting, such as introducing special angles or shapes of the facades. The building does not necessarily have to be aligned with the site’s boundaries, nor does the entrance to the building have to be in the prolongation of the entrance to the property. There can be a path around the building, providing a sort of dramaturgical experience and making the way to the school even more interesting [1].

The orientation of the entrances to the morning sun is true for all the referenced institutions. In the case of the Apollo schools in Amsterdam one of the two buildings is facing north but its outside staircase is turned to the east. (The Apollo schools were built as twin schools; only one is a Montessori school, the one mainly referenced in this article (ed.))

The access to the property of the METI School in Rudrapur is located in the north (to the only road of the village), but, hidden by trees, children walk around the building before ending up in front of the east facade. Some schools, such as the International Montessori School in Tervuren, Belgium, even have dedicated exits to the west of the buildings to achieve the same result in the evening when children leave the school.

#### 5 Connecting Function of the Greeting Space

After placement of the entrance [4], the adjacent greeting space can be shaped. It is important to understand that this is not a corridor for just passing through. In Montessori Architecture, the greeting space is the mainstay of the Nido, Infant Community, Children’s House or School and it may be compared with the lobby of a hotel — an open intermediate space, which not only connects all the rooms (sometimes even on several floors), but welcomes guests and, by itself, provides a pleasant room to linger.

Learning is not confined to the classrooms and there are as many activities outside as inside or in between [20]. So it is vital to design the greeting space to encourage the greatest number and variety of places where students can work alone, in pairs or in a larger group, attentively and without being unduly distracted [13]. These workplaces should enjoy a degree of protection and cover, but at the same time be open enough to see and be seen by others. Often, the greeting space also comprises corners or niches for the cloakroom with hooks and hangers reserved for a particular pupil. To achieve this balance between different spatial conditions is the most important task of the architect. If the Children’s House or School contains only a single room, it is the greeting space.

Typical for buildings by Herman Hertzberger, the Apollo schools combine the greeting spaces (Hertzberger calls them Streets of Learning) with indoor amphitheatres [22]. Sometimes, as in the Gando Primary and Secondary School, this space is located outside protected by an array of air-cooling trees or, in the case of the International Montessori School in Tervuren, it is a courtyard surrounded by all the classrooms.

#### 6 Avoidance of Doors where Possible

In combination with the principle of interconnected space [1] and the function of the greeting space [5], the avoidance of physical barriers such as doors is essential in Montessori Architecture. There is always an atmospheric connection between different areas, while still defending divergent territorial claims [7].

Instead of doors, the architect works with room shapes to create a degree of seclusion and, at the same time, provide interesting views and insides. Between different rooms, the idea is to create threshold zones, which are more articulations than closures, to guarantee smooth transitions between, for instance, the greeting space and classroom. With the classroom opening up and the pupils spilling out, the learning space as a whole becomes bigger. If, because of official rules and regulations, doors are required, sliding
doors can be installed, which, hidden in the walls, can be left open without being noticed. For toilet cubicles, or whenever additional privacy is desired, half doors can be provided for the younger children.

Most of the surveyed reference institutions successfully avoid internal doors. In Gando and Rudrapur, where classrooms have their own access from the outside, doors are kept open during lessons. The same is true for the Apollo schools in the Netherlands and in the International Montessori School in Belgium, where fire regulations forced the institutions to include internal doors. In Montessori Lyceum Oostpoort, Herman Hertzberger ‘did not win the fight’ (as he expressed it in an interview) and doors between the greeting space and the classroom had to be installed, although porthole shaped openings provide a certain transparency.

Learning Space Configuration

7 Articulation of Place

Creating interconnected spaces by omitting partitions and barriers between classrooms may impact the social pattern but is not enough to produce a satisfying learning environment. To meet with what is needed to give groups and individuals working alongside each other the required privacy, Montessori Architecture puts a distinct emphasis on the articulation of places. The aim is to create islands of concentration.

Articulation means fragmentation into smaller units which are able to take on their own distinguishable properties and qualities — using wall shapes, different floor heights [2], built-in shelves, areal lighting [17, 18], or a change of building materials [15]. This results in an increase of complexity, and what architecture has to do is to secure a visual unity that manages to draw together spatially the many parts from which the whole is assembled. The more children work individually and the more the space they work in is tailored to these conditions by being articulated, the greater the need to retain a clear overview of the whole.

Many of the visited Montessori schools deal with the concept of open rectangular plans, such as the St. Bridget’s Montessori School in Colombo or the International Montessori School in Tervuren. They create enclosures by deploying low shelves. Anna Heringer and Herman Hertzberger work with different room shapes to provide nooks, niches, and caves where one or more pupils can concentrate on their own activity. On the other side of the spectrum, the Primary and Secondary School in Gando comprises only small connected rooms so each can be given to another group.
8  The Use of the Floor as a Workplace

Visually the most apparent difference from traditional western education is that Montessori children use the floor surface as the primary worktop. They can claim a temporary place of their own for a particular self-chosen activity by rolling out pieces of carpet or rug on an open patch of floor. Observations indicate that there are many activities children prefer doing on the floor. In Montessori Architecture the school design has to provide ample space and the appropriate conditions to work on the floor — with regard to the choice of material [3], cleanliness, and temperature.

Steps and sunken spots are particularly helpful to activate the floor as work area [2]. The generally awkward space under the bottom of most stairs also can be accessed and used when the floor area is made deeper there. This gives a sheltered nook away from the toing and froing and with an element of intimacy. In the Apollo schools in Amsterdam, the place under the stair is a desired spot for pupils to withdraw for a while and to read a book.

Most remarkable is the METI School in Rudrapur, where students perform all activities on the floor. Except chart boards and chairs for the teachers, there are no other pieces of furniture. In the METI schools, the floor surface is covered with carpets and bamboo mats. All other reference Montessori Children’s Houses and schools follow the idea of the rugs within an articulated place [7]. In addition, the European institutions have floor heating installed to enhance comfortability during the cold months.

9  Accessibility for Children of Different Ages

As part of education, Montessori children enjoy doing ‘practical life’ activities such as preparation of food, baking, cleaning, washing hands, doing the dishes, laundry, or gardening. These tasks provide a daily routine and the ideal possibility for children to learn uncomplicated but important tasks for the community. The aim behind this is: ‘To form life and activities of the child in such a way, that motivation — originated from the inner, natural pleasure and profound desire — will be appreciated by the social environment in which it lives.’ [3] Without judgment or rating by an adult, practical life activities are also helpful for the realization of the connection between own effort and result and subsequently the development of self-reliance.

In Montessori Architecture the immediate contact between children and the learning materials as well as the independent manipulation of furniture, kitchens, and other building elements are important indications for the design, materialization, colouring, the ergonomics of furniture and equipment, or the positioning of door handles and windows for instance. There is a distinct difference between ‘making everything accessible to children’ and ‘everything child-sized’. According to Herman Hertzberger, children strongly desire to become part of the adult-world. He therefore prefers making adult-sized elements accessible to children. This can be done by introducing a step in front of the window for instance.

The building designs of all reference institutions allow the independent manipulation by the pupils, including the utilization of toilets, water taps or pumps, and kitchens. While the surveyed Montessori Children’s Houses follow the principle of ‘everything child-sized’ with tiny tables and stools, the design of Montessori schools satisfies the urge of adolescent children to be acknowledged as young adults and designed accordingly.
10 Consider the Acoustical Environment

The concept of interconnected spaces [1] and articulation rather than providing separated rooms [7] requires close attention to acoustics. In Montessori Architecture, the aim is not to generate a soundless environment but to create a euphonic atmosphere. In sketching plans, architects consider the flow of sound and the reverberation time of materials to determine the acoustic quality of a place.

In a cathedral, visitors tend to whisper because the shape and material of the nave cause echoes of even the gentlest noise. As a consequence it is usually quiet, despite the immensity of the room, allowing people a moment of contemplation and self-communion. On the other hand, when music is played or believers are engaged in chanting, the same room produces a powerful sound. In the same way, architects can use materials, textures, thickness, and shape to create different types of acoustic environments. Deliberate opening, for instance, to the garden, allows pleasing sounds of birds or a fountain to penetrate, while only less pleasing noises such as motor traffic are kept outside.

The central greeting spaces of the Apollo Schools and the Montessori College Oost in Amsterdam work very similar to the nave of a cathedral and children tend to be amicable. The thick soil walls of the METI School in Rudrapur easily absorb the exuberant voices of the small children, while small openings allow the chirp and twitter of the birds to enter the rooms for the moment of meditation. In the St. Bridget’s School, Colombo, students on the upper floor are beautifully embedded in the soundscape of the town’s neighbourhood, while still finding enough quietness to concentrate.

Learning Space Elements

11 Use the Depth of Walls and the Building Fabric for Storage

A speciality in Montessori education is the use of so-called developmental manipulative materials, which help children to develop and refine their conceptual understanding of the world through direct experience. Use of these materials constitutes an exploration of interconnected experiences that provide frameworks for thinking and exploration across many areas of subject matter and can be visited and revisited by children of all ages. [9]. A child not only works with these materials but has a way to check their work, rather than seeking out the teacher, if they have a question as to whether or not they did it right. This again is done to help promote independence and problem-solving on the part of the child.

In a Montessori Children’s House environment children are surrounded by materials such as Cylinder Blocks, Pink Tower, Brown Stair, Red Rods, Colour Tablets, Binomial Cubes, et al. The aim in Montessori Architecture is to provide sufficient storage room for all these sensorial materials as well as other materials while maintaining a clear overview of the whole [7] and without giving away valuable floor space [8]. On this account it makes sense to proportion walls sufficiently thick to integrate storage room. In addition, thicker walls have the advantage of providing better thermal and acoustic protection and, because of increased capacity to absorb moisture, to produce a more comfortable room climate.
The Children’s House of the Maria Montessori School in London was designed with the exact lengths of all the necessary shelves in mind and to integrate them entirely into the meandering walls. In this way the architect was able to create a spacious Children’s House on a relatively small footprint area. Due to thick earth walls, the METI School in Rudrapur as well as the Gando Primary and Secondary school satisfy the need for pleasantly cool learning environments despite the enormous heat outside the buildings. Without being dependent on air conditioning, these thick walls are also a means to save running cost.

12 Organization of Open Storage Space

‘Only freely chosen activities are done with a sense of delight and passion.’[4] In Montessori pedagogy the teacher introduces a variety of subjects to the child, who adds them to his or her catalogue of activities. This enables the child to eventually ‘choose’ activities based on interest. Consequently, the variety of learning material is as important as its careful selection by the pedagogues. In Montessori Architecture particular attention is paid to the storage as a room characterizing element and the ways this storage is organized. Simplicity, lack of clutter and only what is essential are the hallmarks of the aesthetic alongside culturally relevant utensils and artefacts.

Any sort of storage should be freely accessible and open, even for supplies such as paper, so not only the teacher but also children can easily control the stock. Learning Materials need to be arranged in an ordered and inviting manner. This allows the child to choose freely and independently without the adult’s help. Since the child is urged to put back the material in its right place, an understandable spatial order facilitates this task and enhances the self-confidence of the child. On occasion low shelves or open cupboards can be used for the articulation of places and to provide screens of privacy [13].

Most referenced Children’s Houses or schools integrate storage space into the walls and use open shelves to create small enclosures inside the rooms. Starting from the perimeter, the St. Bridget Montessori School in Colombo, is divided into bays by low, broad, built-in cupboards that are accessible from both sides and can be used to store equipment and crockery. The sensorial materials are kept in these room dividers. The ends of the cupboards are fitted with drawers in which the children can keep their personal belongings.

13 Observation Without Intrusion

‘Free work’ is [...] characteristic of the Montessori school, although teacher led lessons do take place. The pupils select from a range of possibilities which activity they would like to direct their attention to; they also set their own goals and choose the form of working and the time they would like to spend on it. 5 In contrast to the traditional education paradigm with its firmest focus on instruction, Montessori Architecture means the absence of any association with obligation and restraint on freedom.

The more emphasis shifts from instructions to learning the more need there is for the opportunity for children to work either alone or with others in a group without the intrusion by the teacher. This requires spatial conditions which actually permits students to hide (the opposite idea of a Panopticon), while still feeling protected by the guardian if necessary and inspired by other classmates. This can be resolved by spatial means such as the purposeful addition of building elements to create the feeling of privacy for the children within the same room. Interestingly, this does not only allow children to feel trusted but also helps teachers to devote themselves more intensively to those pupils who need it.

The pattern of ‘observation without intrusion’ is especially crucial when designing the lavatories [19]. In the Apollo schools in Amsterdam for instance, half doors and semi-transparent glass bricks between the toilets and the adjacent classrooms allow a certain control by the pedagogues while satisfying the children’s need for privacy.

14 Offer of Seclusion

The amount of concentration needed to accomplish tasks differs with each type of work. On the other hand, the capacity for concentration in one child is not the same as that in another. An environment that is to create the best conditions for learning has to be able to accept the most varied degree of intimacy. In addition to pattern 13, there also should be places where children can find supplementary seclusion and security such as niches, nooks, or caves.

The Apollo Montessori school in Amsterdam provide special study niches including cosy bunkbeds. In the International Montessori School in Tervuren, upset children find a special compartment with a door so low that no adult can pass through. The earth walls of the METI School in Rudrapur are deep enough to integrate an organically shaped system of ‘caves’. There are also ‘secret’ places inside the walls of the St. Bridget’s Montessori School in Colombo.
15 Importance of Window Seats

One of the very few indications for the design of educational spaces by Maria Montessori herself is to have an interaction with the nature outside.[6] This plays an important role for several of the patterns in Montessori Architecture; one of them is the placement of window seats and respectively window worktops.

Herman Hertzberger choses the snail’s shell with its encasing protection inwards and increasing openness outwards as a theoretical model for the Montessori classroom.[7] If the niche [14] represents the most introvert place, the window seats is the most extroverted. There is a special appeal to work almost outside, only protected by a thin layer of glass, membrane, or lattice, while still experiencing the comfortable climate of the room. From observation these workplaces are especially popular during times when it rains or snows.

Dedicated window seats or worktops can be found in all of the surveyed Children’s Houses and schools. In the METI School in Rudrapur, pupils can sit on the parapet while gazing through a bamboo lattice. In the St. Bridget’s Montessori School in Colombo children experience the environment while working only protected by the roof and a low wall. The Gando Secondary School provides special seats on the outside extension of the windowsill. In this way, students can enjoy sitting in the shade of the trees even when the shutter of the window needs to be closed.

Adjacencies

16 Importance of Daylight

In Montessori Architecture, there are many Montessori analogies between the natural as well as social environment of a child and its prepared educational space, though without lapsing into too literal resemblances. According to Herman Hertzberger, ‘once this connection has been made, a train of further associations is released, […] Corridors become “streets” interior lighting becomes “street lighting” and so on.’[8] One of the patterns connected to this analogy is that light enters the rooms from above as well as from the sides.

During the day, skylights provide a more natural direction from its source than usual windows built into vertical walls. At this stage in the design process, daylighting is used to bring sunlight to places without or with reduced visual connection to the perimeter, which is especially true for the central greeting space [5]. The arrangement of skylights
may also play an important role in the articulation of places [7] and go hand in hand with activity-based lighting [17]. The new rooms of the Gando Primary and Secondary School contain only of a number of small round openings in the ceiling, (which had been casted with traditional jars) and no other windows. In this way the walls can keep the immense heat of Burkina Faso outside.

In the St. Bridget’s Montessori School in Colombo, transparent roof sheets are used to highlight places for learning in an otherwise dim room. Because of an elongated skylight window, the classrooms in the Apollo Schools in Amsterdam are provided with a constant stream of daylight through the central greeting space.

17 Activity Based Lighting

In Montessori Architecture, there is no such thing as ‘general illumination’ (sometimes referred to as general lighting). The idea of the articulation of places for different conditions [7] requires an activity-based lighting. Reading a book by the window, for instance, demands a different type of light than being engaged in a mathematical exercise on the floor. Once the measurements in using natural light are exhausted, different types of electrical light sources need to be provided to enhance or substitute the natural conditions.

The central meeting spaces of the Apollo schools in Amsterdam contain special work desks with their own activity-based lighting. The same is true for the free-standing sinks which can be found in every classroom. The children’s house of the Maria Montessori School in Hampstead, London, mainly works with spotlights to set activity-based light conditions. Both the International Montessori School in Tervuren and the Montessori Place School in Brighton use little lamps to create small island and corners for reading.

18 Meaningful Access to Water for the Children

Cleaning, washing, cooking, painting, gardening, many of the typical Montessori activities depend on the use of water. That is to say, all of these exercises also aim at the stewardship of resources and the personal responsibilities that are needed for sustainable living. ‘Children are inherently attracted to water activities. They love the process of pouring, washing, and transferring water. A child’s concentration may be engaged for long periods of time, simply by pouring liquid from one container to another, and back again. [...] It is the child who makes the man, and no man exists who was not made by the child he once was.’ 9

As a consequence, Montessori architecture strongly emphasizes a free but meaningful access to drinkable water — inside and outside of classrooms.

Best examples provide the METI School in Rudrapur and the Gando Primary and Secondary School, where drinkable water already is a scarce commodity. There, children have the opportunity to use child-sized hand pumps bringing groundwater to the surface. Whenever a student stops pumping, the flow of water immediately ceases. In other words, there is a connection between the personal involvement of the child and the access to water. Since it is difficult to pump and make use of water simultaneously, pupils in Rudrapur and Gando often work together.
Many pupils in developing countries still have no access to toilets. But even in Children’s Houses and schools in the industrialized world, the provision of lavatories is often handled as a compulsory chore and usually reduced to the legally required standards. In Montessori Architecture, the use of toilets is understood as an essential part of education.

Montessori toilets basically have to fulfil three special requirements. Firstly, they have to provide a certain degree of privacy and need to be designed to ensure independent use by children (including helping keep them clean). Secondly, ‘For a child, it means a huge difference to be member of a small community with thirty classmates or a tiny part of the mass with hundreds of students (using the toilet or washroom for instance). While a sense of responsibility can be acquired for a washbasin which is used by thirty, this is much more difficult for a large cloakroom used by hundreds.’ Thirdly, the toilets have to be placed at the ‘right’ location, not too far but also not too close to the classroom, depending on the age of the children. ‘On the way they see everything [that] is happening, they see all the different animals and every day they are confronted with it. So, it is not always true that the shortest way is the best. The verdict is, do not spend energy to make it very easy, because what you see is what you know.’

All visited institutions provide appropriately child-sized toilets (the squat toilets of the Gando and METI schools have smaller pans so pupils cannot fall through the pits). Many of the Montessori Children’s Houses and schools use half doors for younger children, which allow them to be unseen during excreting without being completely secluded. In the St. Bridget’s Montessori School in Colombo, children using the toilets enjoy fresh air and an exciting view of the garden due to the low walls and doors. While the new European reference to Children’s Houses show a tendency to make toilets accessible directly from the classrooms, the Gando and the METI school in Rudrapur have toilets in a separate building. The unattended walk from the classrooms to the toilets allow moments of contemplation and help children to adopt self-sufficiency.

If the environment of a school is purposefully conditioned for projects related to subjects such as biology, ecology, meteorology, or geology children can learn just as much in the open air as inside of a building. In this way, a classroom not only expands into the greeting space but also to the garden area. In Montessori Architecture much thought is given to the transitional space between the inside and outside of a classroom.

Transitional spaces, such as wind-protected and shaded terraces, allow the child to step outside without fully leaving the comfort zone of his or her classroom. It also is where interaction happens between classmates and other students since the garden is occupied by the whole of the school. Technically, these transitional spaces serve as fresh air extensions to the common working areas and are suitable especially for activities involving lots of water which gets spilt and sloshed around.

In Gando, Rudrapur, and Hampstead, there are terraces in front of the classrooms. Since in these cases the gardens coincide with the greeting spaces, schoolyards respectively, the terraces also serve as transitional zones between the greeting spaces and classrooms. In the METI School in Rudrapur, it is the place where pupils take off their slippers, sandals or shoes. In the St. Bridget’s Montessori School in Colombo, the open upper floor acts as a terrace and, because it is connected through a staircase, as transitional space between the classroom and the garden.
21 Inclusion of a Children’s Kitchen

Another series of typical Montessori activities that require particular attention in the design process are the ‘preparing and serving of meals’, ‘eating’, and ‘doing the washing up’. Montessori Architecture has to provide places for the preparation of food by children and eating tables for spontaneous use.

‘The special attention necessary to handle small fragile objects without breaking them, and to move heavy articles without making noise, has endowed the movements of the whole body with a lightness and grace which is characteristic of our children. It is a deep feeling of responsibility which has brought them to such a pitch of perfection. For instance, when they carry three or four tumblers at a time or a tureen of hot soup, they know that they are responsible not only for the objects, but also for the success of the meal which at the moment they are directing.’

Except for the St. Bridget’s School in Colombo, a children’s kitchen can be found in all visited Montessori Children’s Houses or schools. In most cases kitchen cabinets have been pushed against walls or into niches to be out of the way and take up as little space as possible. In the Apollo Schools in Amsterdam, however, the placement of small kitchen cabinets in each classroom was used for the articulations of places. As objects in space, they represent islands which can be approached from all sides. The Apollo Schools show that, when placed freestanding, built-in objects have a structuring effect without dividing the room into detached units (the way walls do).

Further Accessibilities

22 Natural Everyday Gathering Spaces Inside and Outside

Ceremonial spaces such as assembly halls or theatres are the ‘high points’ of where traditional school life takes place. Since the hall caters only for special events, musical, and dramatic performances, an official assembly hall usually is not part of a school’s daily life. Although every school in theory deserves such a facility, it is questionable whether it really justifies making what is for most part a sealed-off space, given the reality of the limited means available in education.

In Montessori Architecture, the task is to find a form for a space where performances and productions, ceremonies and celebrations can take place in the totality of greeting space and corridors; a form that makes sufficient room for such a demanding facility in what is a comparatively open situation. The leading question is, how to create an ‘Everyday Theatre’ — something which is just as important for formal events, as for fragmented everyday situations, such as to talk together, to hangout, use telephones, eat, and drink.

Out of the visited reference institutions, the probably best examples are provided by the Apollo schools. With his theatre-like organisations, the architect has created places to assemble for official or spontaneous gatherings, big enough to accommodate the entire school if necessary. The shape and form of the theatre invites children to use it actively as workplace, stage for acting, or hangout area. The heavy building material, the wooden surfaces, and the stealth-like shape of the room prevent echoes and enable a pleasing acoustic atmosphere despite the openness of the room situation. Students of the Gando Primary and Secondary School enjoy a small roof-protected amphitheatre sunken into the stone terrace. Next to indoor assembly halls, the METI Primary School in Rudrapur and the International Montessori School in Tervuren offer small arenas where children can come together. Theatre stages also can be found in Colombo and in Hampstead.

23 Integration of Spaces for Gross Motor Development

Although Montessori has body movement oriented practical life activities with comparatively little time spent sitting on a chair, doing activities such as dance, games, or sports is a regular option of the school day. Therefore the provision of adequate spaces inside and outside of the building is as essential as in any other traditional school system. The speciality in Montessori Architecture is the way these spaces are integrated into the rest of the premises. Because of their size, playing fields, gymnasiums, or sports halls are usually situated or housed in volumes away from the school buildings. Furthermore, traditionally, rules such as restrictions on footwear or special regulations using the changing and washing rooms lead to separation of the gymnastic spaces from the school both physically and psychologically. Montessori Architecture has to insist that sports facilities are visually linked to the school, integrated instead of being parked in boxes, away from it. ‘To effectively integrate sports activities spatially is certain to have a positive effect on the air of activities at school.’

The Gando Primary and Secondary School, the METI School in Rudrapur, and the International Montessori School in Tervuren all provide sports grounds which can be observed from the classrooms. There, children who are watching athletic exercises and games seem to be more inspired
and motivated. On the other hand, having an audience encourages better performances out of the players. The Montessori schools in Amsterdam Oost, Pijnacker, and Delft also contain indoor gymnasia, which allow physical exercise even during bad weather.

24 Walking on the Line Space in the Children’s House

In line with gymnastics [23] and practical life activities, the purpose of which is to assist young children in the coordination of movements, mastery of body and order, etc. Montessori offers another exercise that includes rhythmic movement to music.

The first rhythmic exercises are balance exercises. The children walk like little tightrope walkers along a line that has been drawn in chalk on the floor, usually in the shape of an ellipse. In our photograph, the children are carrying glasses filled with a coloured liquid and the idea of the exercise is to make sure that not a drop is spilled. Sometimes they also carry little bells, which they have to hold so carefully, keeping them still so that they make no sound as they walk. [...] At the beginning, they don’t listen to the music at all, or at least they don’t relate their movements to it. Gradually they hear and understand the music and their walking and hip movements become more and more related to the music until, without any intervention by the teacher, the movements develop into free dance.15

Even though the session may last for as little as ten to fifteen minutes by those children wishing to participate (others may continue working or just sit and watch), the ‘Walking on the Line’ game is a permanent installation. The line is never obstructed and always available to the child wishing to practise on his or her own, outside of the structured group session. In Montessori Architecture the design has to provide the spatial and acoustic conditions for ‘Walking on the Line’ spaces inside and outside of the building. Acoustically, it satisfies the need to use background music to enhance a calm group atmosphere while allowing the child to walk to his or her own rhythm.

‘Walking on the Line’ spaces can be found in all the surveyed Children’s Houses. Together with the display of the sensorial material [12] it is one of the visually most recognisable features in Montessori Architecture worldwide. Regardless of the country, such a ‘Walking on the Line’ space contains a smooth elongated elliptical line which is long enough for ten to twelve children. Inside the main ellipse it is possible to add a concentric ellipse to increase its capacity.
Earth Stewardship as a Horizontal Pattern

As already mentioned, nature plays an important part in Montessori education. While Pattern 15 and Pattern 20 deal with the relationship between the inside and the environment of the building, Montessori Architecture actively integrates biology into the interior as well as the vicinity. Intramural integration of plants and animals may be of especial significance within an urban surrounding — town or city. ‘What is decisive is that freedom granted to the child and the atmosphere of the environment allow him simply to see, absorb, be receptive. This is the basic attitude to nature of the true scholar. The ethos of allowing reality to take precedence over one’s own opinion, of not rushing to be of use, but of being receptive to the truth and seeing beauty, should influence.’ 16

Another aspect to teaching children about the natural growth and life cycles of many different species, which they can observe on a daily basis, is the development of responsibility, compassion, empathy, and understanding for other life forms. To take care of plants or pets teaches children to value life other than their own. A further benefit is stress reduction that occurs as a result of observing and petting animals, from which both the children and the animals can benefit. Ideally, adequate places and habitats for plants and pets are part of each classroom.

The St. Bridget’s Montessori School in Colombo basically is a bird observatory. The complete open upper floor shares the height with the surrounding trees and invites flocks to nestle and to use it as a wildlife reserve. In addition, there is an aviary to keep threatened species of birds. Animals such as cats, dogs, rabbits, chickens, reptiles of every kind, and fishes live in all of the visited Montessori Children’s Houses and schools. In the International Montessori School in Tervuren there are even ponies to be cared for by the children. In the Montessori Apollo schools in Amsterdam small flowerpots can be found on every desk, each is the responsibility of one of the children.

School and Grounds as a Habitat for Animals and Plants

Another typical Montessori practical life activity is gardening — planting, watering, caring for flowers, vegetables, and so forth. The possibilities are endless but depend on the particular environment. What in most cases is largely an inaccessible ‘visual greenery’, in Montessori Architecture is a purposefully conditioned and cultivated garden for children. ‘In Lankwitz the children had a wonderful little garden with lawns to run about on, shady trees, secluded spots, a number of children’s flower and vegetable beds, a sand pit and low garden benches. The garden was very popular with the children. Here they could play freely, observe nature, tend their beds. In summer they were allowed to run around in the sun with no clothes on and in the winter to clear the snow with their own little snow shovels. The beds were there for the children to cultivate however they liked.’ 17

Because of the metabolism, people tend to get tired after lunch. Since daylight decreases the production of the sleep hormone melatonin, 18 it makes sense to promote outside activities such as gardening in the afternoon — which, by the way, is true for all the visited Montessori Children's Houses and schools. In view of this, it is feasible to locate gardens to the southwest or west of the buildings where sunlight can be used from the afternoon until sunset. The aspect of orientation may be less significant in an urban environment with a high density of buildings. There garden facilities are so vulnerable that the only way of implementation often may require(s) roof terraces.
Such a roof terrace garden can be found on top of the Montessori College Oost in Amsterdam. Dedicated westside gardens for children are part of most surveyed schools or Children’s Houses. In the METI School in Rudrapur and the Montessori Place in Brighton, students produce vegetables and fruits and even sell part of the harvests to the local markets to enable children to experience the cycle of production and exchange managing and contributing to the budgets of the schools. The same is planned for the Gando Primary and Secondary School, where a successful implementation will depend on the implementation of a functioning rainwater harvesting, storing, and irrigation system.

27 The children’s Workshop and the Materials workShop

The need for a workshop in Montessori pedagogy derives from the nature of the materials and their use. Montessori materials are fundamentally different to conventional consumable educational provisions and they are used very differently. No material is duplicated; there is only one of each material or piece of apparatus available for the children. The range of materials is vast with well over a thousand pieces of apparatus. Very little is ‘consumed’ and disposed of as in a conventional classroom; instead equipment is chosen, used, and returned to its place by the child. Montessori children are users of shared materials, not consumers of things.

The workshop therefore has three distinct functions. The first is for the teachers and staff to make and conserve the materials. Much of the material is purchased from volume manufacturers developed by Maria and Mario Montessori, but the material can be made in situ by teachers following the blueprints, knowledge of which forms part of every Montessori teacher’s training. The second function is for the repair and refurbishment of material which, in use, experiences a high level of wear and tear. The workshop in a developed economy Montessori school, where factory produced materials are primarily in use, may involve no more than some space given over to minor repairs and repainting. In a developing world Montessori school, however, the only material available may be that made in the workshop. In addition the workshop may extend to also being the source of furniture and even building components. It should be understood that the workshop, in marginal situations, is a source of autonomy for the Montessori school. A third function for the workshop is as a learning space available for the children themselves to use in pursuit of the work they choose to do. Making something to help in the care of plants or animals or a model of something as part of an exploration of a mechanical apparatus for example. Children in Montessori education use real things, real crockery, real equipment and the same is the case in the workshop where real tools are used. This function obviously requires some very commonsense health and safety attitudes and tools must be age appropriate.

The Pijnacker school near Rotterdam has an external open-sided but roofed workshop where young children can manufacture things using real tools. The urban Montessori Lyceum Oostpoort has adolescent children up to the age of eighteen and the workshops for these children consist of fully equipped woodworking and metal working workshops. At Oost, originally offering vocational training, there
is a motor transport workshop and sound and music workshops. At the Corner of Hope School in an IDP camp in Nakuru, Kenya, the workshop, staffed by the teachers and a carpenter, is the source of the entirety of the stock of materials and furniture for 250 children.

28 Flexibility in Furniture Layouts

The Montessori paradigm derives from the independence of the child to work where he or she wishes. This can only be possible if the furniture and learning materials can be rearranged to suit the independent mind of the child. The architecture will naturally impose restrictions, but if the foregoing patterns have been observed the resulting architecture will very naturally leave significant opportunities for the children to adapt their environment to their own individual and collaborative wishes. Consequently there is no set layout and furniture is designed to be moved by the children themselves. Maybe desks need to be together because a collaborative project is ongoing or maybe the intended work will be individual and intense and involve extensive material requiring extra space, in which case the work might be laid out on the floor to allow for several periods of concentration.

The environment must be spacious enough to allow this exchange and constant reinvention of layout. The furniture elements must be of a suitable size for children to move them independently of adult help. The possibility of stacking is also desirable with storage space available so that floor areas can be cleared as part of everyday theatre [22], the integration of gymnastic space [23] or to allow for walking on the line [24]. The International Montessori School in Tervuren uses flexible furniture in its converted barn space to great effect as an adolescent workspace for individual work and collaborative work. Curtains across one end conceal staging for music and drama and sofas and armchairs provide adolescent-friendly workplaces and props for theatre production. A similar approach to the large communal entrance space at Montessori College Oost with ceiling mounted curtain tracks allows the division of space and the introduction of seating for presentations, meetings, concerts, and shows.

Benjamin Stæhli was a scientific leader at Future Cities Laboratory at National University of Singapore as well as town project coordinator in Ethiopia, Department of Architecture, Federal Institution of Technology in Zurich, Switzerland. He lectures on educational and communal architecture. In 2018, Stæhli presented a seminar paper at the Lucerne University entitled ‘Montessori Architectural Patterns’, this article is drawn from the conference paper.

Steve Lawrence studied Architecture at the University of Bath (UK). A Fellow of the Royal Society Arts, he has been a partner in Carrick, Howell and Lawrence, Architects since 1982. The idea for a publication on Montessori architecture first emerged in the early 1990s.

Today Stæhli and Lawrence are involved in the book project Montessori Architecture — A Design Instrument in collaboration with Nadine Wütrich. Publication of the book is part of the wider Design of Educational Spaces project by the Arthur Waser Foundation in Lucerne, Switzerland.
Notes

2. Numbers in brackets are cross-references to the numbered principles within this article. — Peller-Roubiczek, L. E., 1931. Haus der Kinder, Vienna
3. Peller-Roubiczek, 1931
8. Hertzberger, Herman Hertzberger’ (transcript, 2017)
12. Helming, H., in Müller and Schneider, Montessori, p. 125
13. Schwarz-Hirrl, E., (1923), in Muller and Schneider, Montessori, p. 84
Inclusive Education: Montessori Evolving
Inclusive Education in the Age of COVID-19

Silvia C. Dubovoy

Children’s mental health was a rising topic of conversation before the COVID-19 pandemic of 2020, and now that children have experienced the strain of months of social distancing, educators are asking how they are going to face the new students who come to their classrooms exhibiting symptoms of the unique stress endemic to this moment in history. Reading, writing, and mathematics will be the least important issues that teachers need to deal with when school resumes. It is for this reason that I find Nimal Vaz’s article, which follows, so relevant right now.

As a close friend and respected colleague of mine over many years, Nimal Vaz has continually impressed me with her commitment to refining the work of Montessori educators in order to more fully support children with diverse abilities. We both benefited from the enriching content of the AMI Special Needs Course originally created by Dr. John Osterkorn several decades ago, and after his passing, she and I considered starting a similar course in order to carry on his important work. Eventually, I did create the AMI Inclusive Education Course, in which we study not only children with ADHD, autism, and language/learning disorders, but also the mental health of other children with challenges that may manifest similarly in the classroom, such as children in refugee camps, foster homes, poverty, and those stereotyped as slow learners because they reside in a country where the language is not their mother tongue. I believe our discussion needs to be broadened to go beyond the learning disorders that get the most publicity these days. As long as we keep the discussion focused on a few specific conditions, we increase the likelihood of seeing this issue in terms of ‘us’ and ‘them’, a tragically false dichotomy. Each of our lives is a kaleidoscope of points plotted on a spectrum, some within the normal range and some far, far away, all representing different aspects of our true selves. We are neither here nor there, us nor them. Humans are complicated.

One of my main objectives in the course has been to draw a distinction between therapy — treatment intended to heal
a disorder — and the work of Montessori educators, which is to accept the child unconditionally, look for his strengths and focus on his self-esteem and personality. Montessori educators are not therapists and should not aspire to that role. Incidentally, they are also not parents, and should not aspire to that role. Therapists with specialized medical training are an essential part of society, as are parents, but if their role is conflated with that of Montessori educator, the child will suffer. The two approaches fix their gaze on diametrically opposed aspects of the child: Montessori focuses on the strengths; therapy focuses on the disorder. Montessori educators need training and better access to community resources so that they can learn the art of how to connect parents with specialists when appropriate, in a manner that does not adversely affect the child. Beyond that, the role of the Montessori educator is to customize the support for each child by studying his characteristics in depth and then use the existing material in the environment which has already been scientifically designed for the purpose of facilitating a wide range of growth and independence, thereby meeting the child’s interest and ability wherever it lies.

**Notes on Terminology**

The following article by Nimal Vaz contains some terminology that I would like to put into context. Vaz was writing about inclusive learning environments long before the Montessori world became widely interested in the topic. She was, as they say, ahead of the curve, with decades of direct personal experience informing her ideas. Even so, some terms she employed when this article was first written are now no longer considered to be appropriate. This is also true for some terms that Maria Montessori used in her time.

Today, as society has advanced and individuals with physical, learning, and behavioural characteristics outside the norm have become more centred in the work of their own advocacy, we have come to learn about more respectful terms that aim to adjust the tenor of our discourse — terms like ‘differently abled’, ‘exceptional abilities’, and so forth. We should of course use the most updated terms available to us at any given moment, and also understand that as time goes by, the terms will surely be revised again. This is part of a natural process of refining our thinking as a culture and working toward a more nuanced understanding of how to talk about the diversity of human experience. At the same time, if we become overly concerned with whether someone has used a term that is now considered derogatory, it is possible to miss out on genuinely helpful content. Maria Montessori, writing from her social milieu around the turn of the twentieth century, has important things to tell us if we can look past antiquated phrases that appear in her writing like ‘mentally defective children’. Nimal Vaz brings her own valuable insights, which are described in this article using some now outdated phrases as well, like ‘mentally retarded’.

Speaking of terms, there is another seemingly benign phrase that is still used quite often, which I personally have chosen to use with extreme caution: special needs children (as grouping children in one category). As Nimal explains, this term was coined with the best intentions, in order to describe these children in a positive light. In reality, each and every child deserves education that is tailored to his or her unique needs. This concept is central to the Montessori philosophy. It is generally true that educators are less well equipped to support children with the so-called ‘special’ conditions such as autism, ADHD, etc., but my concern is that by using the descriptor of special for the children themselves, we put the emphasis on the wrong thing.
Each child is utterly unique and special, by definition, by design. We might more accurately state that parents and educators have ‘special needs’ when dealing with children whose behaviours and thought processes are unfamiliar to them based on their own life experiences, or whose behaviours trigger emotional responses from them which cause them to be less effective. As adults, our work is to address our own special needs so that we can more fully support the spectrum of children in all their variety.

Honest Self-Reflection:
The Task of Every Adult

In the Montessori world, the concept of inclusive classrooms embracing a variety of differently abled children has mostly been met by discussions about whether schools are equipped to give these children what they need in order to thrive: Do educators have the appropriate materials and methods? Will these children require more time from the adults than other children? In other words, the question has been whether the school has the ability to help the children. But is that really the only question on our minds? It is worth considering whether the parents of children with typical abilities feel uncomfortable with the concept of an inclusive classroom because they see certain children may require increased attention to the detriment of their child. Across the globe, cultures have historically projected negative and misleading ideas about people with exceptional abilities. No one is immune from the prejudices that permeate society — neither parents nor educators. We all have our work cut out for us.

If we are to discuss the topic of inclusive education in earnest, we cannot escape the seminal and overarching need to reflect on our own adult attitudes — our conscious beliefs as well as other ideas that have crept into our thought patterns while we were unaware. Inclusive education is not simply the idealistic gathering of different children under one roof. As long as adults continue to perceive certain people as fundamentally problematic and less valuable than the others, children will not receive the support they deserve.

Fortunately, more and more Montessori educators have an awareness of the lifelong habits of introspection and self-growth that working with children requires. At the same time, Montessori training can and should do a better job of providing educators with two essential lines of professional growth. The first is prevention by way of educating parents so that they do not become an obstacle to the healthy development of their child. The second is a reconciling of factual information about common exceptionalities and the outside specialists who may be able to help these children outside the classroom environment, coupled with the carefully cultivated ability to see beyond the related diagnoses, assessments, labels, and stereotypes in our own work with the children.

Our Vision of Full Inclusivity

Children with exceptional abilities reap immeasurable benefit from being fully included in the Montessori environment. Vaz explains this concept so well, as she reflects on the wisdom of Montessori’s own words:

Instead of treating this class of deficient children as if they formed a group apart, as England, an island in the middle of the sea, is cut off from the world, we might consider them as though they stood in the same
relation to normal children as though they were, for instance, Belgium and France, cut off by limits, but limits which might any day be moved.

(“The Education of Defective Children”)

This is a plea for the integration of the child with special needs in a Montessori classroom. The challenge to us today as Montessorians is to be leaders in understanding and facilitation rather than punishers of differences, to reduce rather than add to the risk of being a uniquely different human being.

In the end, it is not only the materials that will make a difference in the lives of children with exceptionalities, but the voice of the teacher, which carries within it an invaluable ability to convey that alchemical holy grail known as unconditional acceptance. It is this feeling of acceptance that leads a child to acquire the foundation of a healthy personality, and that personality is precisely what allows the child to see himself as having just another beautiful way of being, neither better nor worse than others, no matter his condition. There are countless examples of humans who overcame tremendous challenges because there was just one person in their orbit who was able to see their spirit shining brighter than their deficit.

The work of Montessori educators is this simple and this profound: We have to protect the personality of the child. If we miss this crucial aspect of development because we have confused our role with that of a therapist, the child will pass an ‘invoice’ to society when he is a young adult. Or maybe sooner. Time moves in peculiar ways these days. As our physical movement has ground to a halt, movements for social justice take hold. The young grow restless. We look back to history; we look ahead to the future. We ask ourselves if a return to the status quo is even what we want anymore.

Into what brave new world will we re-emerge? We are building that world right now, each of us, with our thoughts and actions. With every breath, we build.

It is my hope that we, as a community, will rise to the occasion of this moment in history and embrace the responsibility to fully integrate our Montessori environments, welcoming children who exhibit a wide variety of learning styles and unique abilities. In the process, we will benefit deeply from the presence of these exceptional children who have so much to teach us about resilience, love, and the unique manifestations of intelligence.

Silvia C. Dubovoy, PhD, is a trainer, lecturer, examiner, and consultant for the Association Montessori Internationale. Silvia has a BA, an MA, and a PhD in Psychology from Universidad de Barcelona, Spain. She holds AMI Assistants to Infancy (0–3), Primary (3–6), and Special Education Diplomas and has worked as a teacher trainer in Mexico, Canada, Argentina, Spain, and the US. An Assistants to Infancy and Primary Director of Training, she is director of the Montessori Institute of San Diego, in La Jolla, California; a lead member of the faculty at the University of San Diego; and an associate professor with Loyola University in Maryland.
The Special Needs Child from the Montessori Perspective

*Nimal Vaz*

*Nimal Vaz* has a deep understanding of the special needs of children. She writes of ‘educational justice’, which is the ability ‘to give every human being what he needs to bring him to his fullest potential’. She warns adults not to give too much help, but to use their observation skills to allow the child to be independent and confident. Vaz observes that children with special needs often have courage, tenacity, and perseverance. ‘What is most striking is their determination to survive, to explore, and to master their environment [...] Disabilities that appear to us as major handicaps are reduced to inconveniences by their courage’ (Communications, 2009/2, p. 67). The integration of the child with special needs into a Montessori classroom is valuable for both the ‘special needs’ children and the ‘typically developing’ children. The term coined by Montessori, normalization comes through work, especially practical life activities that engage the child and help to integrate his thought, will and actions. Vaz includes twelve basic guidelines for working with children with special needs which will contribute to the Montessori legacy on special education.

“Cooperative Learning,” “Inclusion Classroom,” “No Child Left Behind,” “Everybody’s Special” — these are mantras teachers hear all the time.

In the movie *The Incredibles*, the sister of Dash, a third-grader, says to him in response to his ambitions, ‘Everyone’s special, Dash.’ He responds by saying, ‘Which is another way of saying—no one is.’

The villain in the movie * Syndrome* makes the same point when he envisions empowering the masses with his invention: ‘Everybody will be super, which means no one will,’ he says.

Equality and justice—so often we get hung up on these two words. Equality—we all want to be equal—to whom or what? The word equality is sometimes like a red flag to a bull—so much so that Dr Hans J. Eysenck of the University of London has written a book entitled *The Inequality of Man*.

What does Dr Montessori tell us? She says that people get caught up with equality and justice. It “often means only that there is a single law for all; for the rich and powerful and for those dying of hunger” (*The Absorbent Mind*, p. 260). Even in the classroom the teacher has to be careful. If he does one thing for one child, he has to do the same for all the children because, if not, he is not being just. Montessori remonstrates, saying, ‘This is a kind of justice that puts everyone on the lowest level; as if, in a spiritual sense, we were to behead the tallest in order to have them all of the same height’ (p. 260).

Montessori goes on to say that, on the higher level we are talking of, educational justice is more spiritual. It lies in making quite sure that every child shall make the best of himself. Justice here means the ability to give every human being the help to bring him to his fullest potential. This is the *individual education prescription* — the IEP — that the Montessori teacher has in her head for every child in the class: to help each child to advance along the road to independence. This is the real meaning of the term “to educate.”

The phrase *special needs child* tries to show consideration for the sensitiveness of parents and family members. There is less stigma attached to this term because it has overtones of desirable qualities. *Special* can refer to the condition of being outstanding in a certain capacity. The term is valid in
that the children we have in mind deviate from the average and need special understanding and care. The term is used loosely today to include all children who are different. It applies to the mentally retarded, the physically handicapped, the emotionally handicapped, the cerebral palsied, the autistic syndromes, the learning disabled as well as the gifted child. What is important to keep in mind is that we who work with this child have to understand that this is a child first, the specialty is second, if he is to succeed.

This is the greatest need of the handicapped child. In Montessori we have so much to offer this child because for us education is an aid to life.

Montessori’s Discoveries
As you all know, Montessori worked with these special children from 1898 to 1900. She writes in her book The Discovery of the Child, ‘I had the intuition that the methods of Séguin were not merely an attempt at helping inferior beings, mentally defective children, but they were based on principles far more reasonable than those in use in ordinary education. Here indeed the result was not only that the pupils ‘learned something,’ here one witnessed an awakening of the personality’ (p. 25).

Montessori goes on to tell us this method of educating these children was different from the methods used in regular schools of the day (also today). But the “methods” were not particular to an “inferior mentality,” meaning special needs children.

On the contrary these different methods contained a system of mental treatment that was very logical and superior to that being empirically applied to normal children. Slowly I became convinced that [applying] similar methods to normal children would lead to a mental awakening and a beneficial modifying action in them also. I had in fact come upon an experiment of scientific pedagogy! (p. 25)

This is why an integration of the special needs child in a class of normal children is possible. Montessori tells us that,

It is possible to draw comparisons between [special needs children] and normal children if we consider children of different ages, that is, compare those who have not the power to develop [special needs children] with those who have not yet had the time to develop (very small children). Backward children are judged
mentally as being children whose mentality closely resembles that of normal children some years younger. In spite of the fact that in such a comparison there is lacking the consideration of initial force innate in such differing degrees in the two natures, the comparison is not illogical. (p. 36-37)

So, to us as Montessorians, to integrate the special needs child with the normal child seems to be a perfectly sensible thing to do. Our teachers are taught to “observe” and “follow the child.” Paediatrician Mel Levine, who wants to revolutionize American education by showing teachers how children think, says that educators need to go through a process called “demystification.” Today there are a great number of books written about infant brain development proven by research and MRIs, validating Maria Montessori’s work in 1906. Much work has also been done on the different types of intelligences. Teachers are bombarded with knowledge. Their heads are spinning and they do not know which way to turn. They are mystified. To “demystify” is to cut through the words and medical jargon and, as Levine says, ‘Observe the child and look for clues.’ He tells us, ‘Teachers, more than anyone else, have access to observable phenomena’ (cited in Kantrowitz & Wingert).

Observation is the keystone of the Montessori method. Maria Montessori’s words to us are ‘Follow the Child.’ We do this by observation.

In working with and observing these special needs children, Montessori tells us, ‘Nothing in fact is so fascinating as to attend the mental awakening of these children who are enslaved by their own inferiority, and to witness this kind of liberation of their soul ... opening up toward interests that give life to their intelligence, to witness the happiness that comes to them through every activity in which the hand becomes capable of achieving something’ (Discovery, p. 24). This fact, Montessori tells us, made her enrol as a student of philosophy at the University of Rome because she wanted to understand the principles of education. Montessori credits Séguin with completing a real educational system for defective children: he was first a teacher and then a doctor.

Education always seems to lag behind science, although — as the head of Columbia University’s Teachers College tells us — ‘At this moment philosophy is central to education. Equally important in the future will be biology’ (cited in Kantrowitz & Wingert).

How the brain works is what Montessori learnt from her work. The theories of the absorbent mind, the sensitive periods, movement, human tendencies, deviations, and normalization, to name a few — those are the same for the normal and special child.

In his book All Kinds of Minds, Dr Mel Levine organizes current thinking about learning into what he calls “neuro-developmental constructs,” which include attention, language, memory, neuromotor function, and social cognition. Montessori’s systematic, scientific method for the development of attention (concentration), language, memory, neuromotor function, and social awareness is unbeatable if applied correctly by a competent adult.

In our Montessori environment we have to use what Montessori called “a rich stock of teaching materials.” This material is ‘excellent in the hands of anyone who knew how to use it, but by itself could pass unnoticed’ among special children (Discovery, p. 29). She goes on to say,

I understood why teachers had become so discouraged, and why the method had been abandoned. The theory that the teacher must place himself on the level of the pupil plunged the teacher of defectives into a kind of apathy; he knew that he was educating inferior intellects, and therefore he did not succeed in educating them. So it is with the teachers of little children who think of educating them by placing themselves on their level with games and often with nonsensical talk. Instead of that, what we must aim at doing is to awaken in the mind of the child the man who is asleep there.

I was possessed by this inspiration, and I believed that at the start the teaching material had to be associated with the voice of the teacher which called and roused the children and induced them to use the material and educate themselves. (p. 38)

This is the reason why in the Montessori teacher training courses most demonstrations of exercises begin with words — he adult needs to incite the child’s interest in what the adult is about to present.

Montessori was guided by great respect for these special children; however, she did not let their misfortune get her down — she used all her physical skills, her charm of manner to rouse the interest of these children. Montessori tells us that Séguin ‘holds an entirely original idea’ when it comes to training teachers to take care of special children, ‘It looks like advice given to a woman who is preparing herself to be an enchantress.’ The teacher should be beautiful (make the most of his or her assets), have a fascinating voice, and should take great pains to make themselves attractive. Their ‘bearing and the modulations of their voices should be studied with the same care’ as that taken by actors and actresses. This is a ‘kind of secret key, which turns upon the action of the spirit’ (p. 30).
Montessori goes on to tell us that this method is very effective in working with special needs children; it is, however, a drain on the energy of the teacher.

I obtained surprising results from them, but I must confess that whilst my efforts were producing intellectual progress, I was prostrated by a kind of exhaustion—I felt that I was being drained of some of my strength. What we call encouragement, comfort, love, respect, are drains on the human mind, and the more lavishly one spends oneself in this way, the more one renew and reinvigorate the life around. (p. 30)

The Attitude of the Adult
Today, there is much talk about finding oneself, about getting an identity. In his book on Mother Teresa of Calcutta, Something Beautiful for God, Malcolm Muggeridge writes, ‘In abolishing herself, she found herself’ (p. 4). This is Mother Teresa’s philosophy. One has to lose oneself to find oneself. Muggeridge goes on to say, ‘There is much talk today about discovering an identity, as though it were something to be looked for, like a winning number in a lottery, … Actually, on a sort of Keynesian principle, the more it is spent the richer it becomes’ (p. 4). I like to think that this is what happens to the human spirit in the service of the handicapped.

Once we know ourselves and others better, then we can stop supposing that a person is defined by the full complement of the limits he has, his senses, or his mental disability. Progress will be attained only when we can think of individuals in terms of their qualities.

In society, people have “mindsets” about the handicapped — the people with special needs. Writing in The Formation of Man, Dr Montessori referred to this subconscious pattern as an “OMBIOUS”: “an Organization of Evil (Male) has been formed which assumes the semblance of Good (Bene) and is Imposed on the whole of humanity (Umanità) by Suggestion; when we combine the initials of these characteristic words and form a word, we then get: OMBIUS” (pp. 50-51). This social ombius dominates the child.

Here is an example: A child tries to dress himself — he puts on his coat and tugs at the zipper. An adult comes along and wants to help. Thinking it “love” for the child, the adult zips up the coat. The child may or may not protest, but either way, the next time he will be dependent on the adult’s help — he will whine and say, ‘I can’t.’ The adult, out of a misguided sense of love, the OMBIUS, says, ‘It is hard for you; let me do it for you.’

In the same situation, another adult comes along. She observes the situation differently — she notices the child is holding the zipper incorrectly. She approaches the child cautiously, asks if she can help, shows him how to put the zipper foot into the clasp — the child zips up his jacket — smiles — ‘I can do it myself!’

Observation made this adult turn help into a stepping stone to independence, confidence, and happiness.

When we watch special needs individuals work, what is most striking is their determination to survive, to explore, and to master their environment. This is what Dr Montessori saw in observing that first batch of children in the mental asylum. Disabilities that appear to us as major handicaps are reduced to inconveniences by their courage. Most special needs individuals are very tough and tenacious in confronting the challenges life presents to them. In spite of the difficulties they face, they continue to respond to the best of their abilities. No matter how severe the disability, the special needs person never stops trying to make a more successful adaptation.

In the words of Mortimer Adler, ‘Adversity is a better prod of character than affluence’ (cited in Payne). When we read the lives of special needs people — e.g. Helen Keller, Winnie (whose biography became a 1988 TV movie), David Pelzer, Donna Williams — we realize that they were wiser than their protectors. Many special needs people refuse to accept their limitations. This is knowledge that needs to be shared with the parents.

Too often the parent is the forgotten element in the teacher-child-environment complex in the school. We need to remember that the parent has the same problems as the teachers but has them greatly magnified. We have this child for a few hours a day in a limited and controlled situation; parents have the child twenty-four hours in all kinds of situations and types of demands.

In working with the parents of the special child, we have to acknowledge their disappointment. Many times we need to assess where they are on the road to acceptance. They need to go through the stages of fear, anxiety, anger, grief, guilt, and acceptance. This calls for greater communication between teacher and parent. When a parent understands a problem, there is usually no longer frustration at unrecognizable behaviour. Researchers note three frequent attitudes on the part of mothers toward their handicapped children:

- Mother rejects the child or is unable to accept the child as a special needs individual.
- Mother overcompensates in her reaction to the child and the disorder. She is unrealistic, rigid, and overprotective.
- The third group consists of mothers who accept their child along with the disorder.
Care and affection make a difference. Instruction, patience, and stimulation make a difference. If parents can be convinced of the nearly infinite restorative powers of the infant brain — that is, the brain of the child before six — that child will have a fighting chance.

The Adaptive Brain
From Dr Montessori’s theories of the absorbent mind and sensitive periods, we know that the infant brain is incredibly adaptive. Given half a chance, the child will make up what she has been deprived of before the age of six.

What the special needs child needs, in fact what we all need, is instruction, support, and companionship. In Dr Montessori’s words,

To dedicate oneself to the study of teaching deficient children is a very good way to evolve methods of education. Errors in education dealing with normal children are to some extent compensated for by the fact that the child can be educated in spite of them; but when we deal with the deficient children we have to find the exact thing which will correspond to the needs of the child. (“The Education of Defective Children”)

We are constantly learning from pathology. This is especially true in the field of speech and language. It is interesting to note that much of our knowledge of language development comes through the observation of special needs children and their language deviations. Montessori, on the other hand, observed the language development of the normal child and designed a programme around this to help all children.

How do we learn? Mel Levine tells us, ‘There’s a huge amount of knowledge about how learning works that hasn’t gotten to the front lines, the teachers’ (cited in Kantrowitz & Wingert). This was another unique phenomenon observed by Montessori. Not only did she observe that it was a hierarchical system — she went about finding out how she could provoke it deliberately in the special needs children she worked with.

Levels of Learning
The late Dr Jon Osterkorn points us to the five levels of learning: sensation, perception, imagery, symbolization, and conceptualization (p. 2). Initially, Montessori tells us, learning must be preceded by a physiological examination of the special needs child to find out if there is a physical limitation.

1 Sensation
This is the simplest, most basic level of learning. If any of the five senses are not functioning, then they will not do their job of transmitting information leading to the nervous system’s involvement. Once the infant is born, ‘the hand is truly the organ of intelligence,’ for what is felt by the hand ‘forms the very structure of the mind’ (Osterkorn, p. 3).

Montessori has many observations on this fact. Our prepared environments encourage young children’s movement to use their hands to learn from the environment that is free from adult interference or assistance. Montessori also found that special needs children show little sensitivity to pain or tactile stimuli. Therefore she set about restoring these sensations as a first step to learning — by hot and cold baths, sensitizing fingers, massage, etc.

2 Perception
Perception is the second level of learning. This is the ability to recognize sensory information. Montessori learnt from her observations that feeling guides seeing, seeing guides reaching, and hearing guides looking. This is the way an infant responds.

However, we do not all react in the same way to all the stimuli coming in; the individual is selective. This perceptual focusing is known as attention. Montessori directed her observations to training the focusing of special needs children. She calls it the education of the fixed gaze.

3 Imagery
The third level of learning is imagery. Perception concerns awareness relative to ongoing sensation, whereas, according to Osterkorn, ‘imagery pertains to information already received’ (p. 4). Osterkorn states that the powerful interplay between sensation, perception, and imagery has been reviewed by Dr Montessori in explaining the power of the absorbent mind. She states that engrams (traces of knowledge) are stored in the mneme, the ‘vital memory, which does not consciously remember, but absorbs the images into the individual’s very life’ (cited in Osterkorn, pp. 4-5).

She goes on to tell us that during the period of the absorbent mind, both conscious and unconscious (zero to six years), the child’s intellectual power becomes greater with this interplay of sensation, perception, and imagery. In regular education, ‘the only object is to store knowledge in the conscious memory, and no opportunity is given to the child, by continuous and varied experiences, to increase his engrams’ (To Educate the Human Potential, p. 14).

Johnson and Myklebust tell us that children with a disturbed spatial perception find it difficult to learn from everyday experience, cannot recall experiences in the form of imagery, cannot play games as others do, and score low on picture arrangement tests. These are called non-verbal
disorders of learning, and our observations show that these are sometimes exacerbated by difficulties in pregnancy, premature birth, early separation from the mother, family instability, or other factors. This observation is backed up by Richard Restak in *The Infant Mind*.

### 4 Symbolization

The fourth step in the climb to learning is symbolization. Symbolic behaviour includes both verbal and non-verbal parts of learning and represents the ability to recall experience. Researchers tell us that there are three aspects of symbolization: inner language, receptive language, and expressive language. Inner language is the language in which one thinks; the meaning of words must be acquired before a word is used as a word.

Children who have inner language deficits present significant problems, especially in the area of remediation.

Writing in *The Formation of Man*, Montessori speaks about the remediation of the inner language, initially by the exercises for enrichment of vocabulary, nomenclature cards, objects of the environment, and the naming lessons (the three-period lesson); then by the extensive use of the moveable alphabet: its very simplicity makes it a powerful tool.

The second aspect of language is receptive language, including visual and auditory components of thought. When impaired, this is most debilitating, because it leads to the inability to understand the spoken word. Children who have disabilities in auditory reception commonly show behaviours characterized by hyperactivity, perseveration, disinhibition, distractibility, and poor sustained attention. Receptive language also includes reading.

In today’s society, the thinking is that, in terms of the verbal system, reading precedes writing. However, Montessori, from her observations of children, gives us an opposing viewpoint, which most people are either unaware of or have not heeded. She tells us in no uncertain terms, ‘Written language can be acquired much more easily by children of four years than by those of six years of age — the time at which compulsory education usually starts. While children of six years of age need at least two years to learn to write, and do so with much difficulty and against nature, children of four years learn this second language within a few months,’ acquiring it with great enthusiasm (*Formation*, p. 81, emphasis in original). In this way, writing follows the inner path from within. She goes on to say,

If, instead, writing is made to start from books, hence from the capacity to read—and if such books give groups of arbitrarily chosen words which have to be learned—then the difficulties are increased. The result will be a separate language—a written language taken from without and derived from the deciphering of syllables or words without any interest. (p. 84)

When we begin to understand this, put it into practice, and observe what follows, we will begin to see what Montessori saw in her observation of children: that is, an explosion into writing and reading.

Expressive language, the third component of symbolization, happens when there has been sufficient organization of both inner language and receptive language. Expressive language is of two types — spoken and written. Dr Montessori gives us intensive and interesting exercises for the child to perform to acquire both to perfection.

*Aphasia* means a loss of language, while *dysgraphia* means an inability to write. Both of these conditions can occur in adults who have suffered a stroke, and both have been associated with lesions in the brain. To speak as well as to write assumes not only the ability to recall and hold words in the mind but also the ability to relate these signals to the appropriate motor system, to activate the motor system for the appropriate expressive movements.

We in Montessori have found a successful way of overcoming both of these conditions by using the sandpaper letters of the alphabet to teach the sounds of the letters, not the names of the letters. Also our observations tell us the sensitive age — when the sounds of letters are stored in the absorbent mind. The sensitive age for the tactile act of tracing the letters is usually three-and-a-half to four-and-a-half years. Our observations also tell us that at every developmental stage of the human mind the child’s cognitive understanding of the world about him lays the basis for the next step.

### 5 Conceptualization

The final step in learning is conceptualization, which we in Montessori often refer to as abstraction. The critical factor is the way in which experiences are classified and categorized. Montessori’s thorough observation of children made her develop the sensorial material for classification and categorization. The use of this material, correctly in all its steps, is essential. These materials lead the child in graduated steps from the very concrete and stimulus-bound to a high level of abstraction. This can also be seen very clearly in the math material.
The ability to conceptualize is man's highest achievement. It includes all facets of a child’s learning and experience. When we work with special needs children we have to consider the interrelationship among these processes of sensation, perception, imagery, symbolization, and conceptualization, as did Montessori. Our observations of the special needs child have to be based around these; then we can discover at which of these stages in the learning process the child has difficulty. We can then begin to remediate and help the special needs child, in the Montessori environment.

**Psychological Support Through Inclusion**

We have also to be aware that emotional problems can delay or damage the learning process, and our preparation of the environment must include positive psychological support for the growth of the spirit of man.

In Montessori’s words, ‘The fact that children learn by moving — by activity, this came by observation of deficient children, it was first realized in them. These principles which were discovered from deficient children were brought to bear upon the education of the normal. From this then sprang not merely a new method but also the solving of many problems’ ("The Education of Defective Children").

By applying the same principles to deficient children, by placing them in an environment that allowed their personality to expand through stimulation of their interest and intelligence, many have profited and many have been cured.

Again, in an article published in 1932, Montessori tells us, instead of treating this class of deficient children as if they formed a group apart, as England, an island in the middle of the sea, is cut off from the world, we might consider them as though they stood in the same relation to normal children as though they were, for instance, Belgium and France, cut off by limits, but limits which might any day be moved. In fact, the deficient children are generally brothers or children of normal persons. ("The Education of Defective Children")

This is a plea for the integration of the child with special needs in a Montessori classroom. The challenge to us today as Montessorians is to be leaders in understanding and facilitation rather than punishers of differences, to reduce rather than add to the risk of being a uniquely different human being.

We need to see our classrooms in the context of normal as well as special needs children. In reality, many children who come to us between the ages of three and six suffer from deviations of the personality, which Montessori terms *psychic deviations*. In *The Secret of Childhood*, Montessori tells us that deviations present themselves as extreme distractibility, disorderliness, ‘disobedience, laziness, greediness, selfishness, quarrelling, naughtiness, … also the so-called creative imagination, delight in stories, affectionate attachment to persons, submissiveness, play, etc.’ (p. 171) Deviation, Montessori tells us, manifests in the child like this:

The hand moves aimlessly; the mind wanders far from reality; language takes pleasure in itself; the body moves clumsily. And these separate energies, finding nothing to satisfy them, give rise to numberless combinations of defective and deviated growth, which become sources of conflict and despair.

Such deviations cannot be attributed to the personality itself. They come from a failure to organize the personality. (The Absorbent Mind, p. 185)

These deviations of normal children mimic the behaviours of children with special needs.

In the book *A Pediatric Approach to Learning Disorders*, Levine, Brooks, and Shonkoff have listed common denominators for school-age children with chronic inattention, ‘Purposeless selection of weak stimuli, weak resistance to distraction, impersistence, inefficiencies of motor activity, instability, impulsivity, academic failure, social failure, performance inconsistency, diminished self-esteem’ (p. 52).

**Constructive Activity**

The cure of deviations—the normalization of the child both “normal” and special needs — comes through work. Montessori argues that these children can be cured by ‘a piece of work done by the hand with real things, work accompanied by mental concentration’ (The Absorbent Mind, p. 186).

Because deviations are a failure to organize the personality, she lets us know that the unity of the personality comes about through the hand and mind working together. Once a child begins to coordinate her movements, she must perfect them through practice. It is this practice period that is very important in the years three to six. Presentation, repetition, practice.

The environment offers motives for constructive activity. When this occurs, all the energies of the child concentrate...
together and the deviations disappear. It is this process of transition from the deviated to normal development that Montessori calls *normalization*. Normalization must be our greatest concern for the child from three to six. During the process of normalization, the child develops character quite spontaneously. Montessori identifies this period from three to six as the embryonic period for the formation of character.

At this point, I would like to make a distinction between Montessori’s term *constructive activity* and play. The term constructive activity has been misunderstood by traditional education. Activity has been replaced by “play” and “play therapy.” Montessori felt that for movement to be educational, the objects the child manipulates have to be “real.”

Our carefully designed practical life area has to have many objects of “synthetic work.” Work that will help the child focus on purposeful movement will bring his mind and body into synthesis. Remember, these also include science experiments and art projects to get the child interested.

For our children with special needs, the practical life activities are very valuable. The child is wholly engaged in these activities and has great concentration. These activities help to integrate the thought, will, and actions of the child. This leads to what University of Chicago psychologist Mihaly Csikszentmihalyi calls flow. ‘Being able to enter flow is emotional intelligence at its best. Flow represents perhaps the ultimate in harnessing learning. In flow emotions are not just contained and channelled but positive, energized and aligned to the task at hand ... that experience is a glorious one —the hallmark of flow is a feeling of spontaneous joy — even rapture’ (Goleman, pp. 90-91).

Spontaneous joy is also one of the characteristics of normalized children.

**Emotional Intelligence**

The new brain research talks about EQ as opposed to IQ. EQ does not show up on an IQ test. EQ is a phrase coined by Yale psychologist Peter Salovey and John Mayer of the University of New Hampshire to describe qualities like understanding one’s own feelings and empathy for feelings of others in a way that enhances living.

Special needs children, particularly with ADD and ADHD, generally lack in emotional intelligence. Yet these are skills that can be taught in the prepared environment through the Exercises of Grace and Courtesy. Daniel Goleman says, ‘Emotional Intelligence is a set of traits — some might call it character — that matters to our personal destiny. People who cannot marshal some control over their emotional life fight inner battles that sabotage their ability for focused work and clear thought’ (p. 36).

**Basic Guidelines for Working with Special Needs Children**

- An appropriate mixture of children. More “normal” children than special needs children. A good ratio may be five special needs children of different disabilities to a class of twenty-five to thirty children with one good assistant.
- A good assistant, one the adults in charge can relate to and work well with. The assistant needs to have a basic understanding of Montessori.
- Directress should have at least three years’ experience with normal children. She should be a flexible individual with a good sense of humour. Ongoing education in the field of early childhood research and exceptional children will help.
- Open, caring attitude toward parents and other caregivers.
- A three-hour work period is a must. Children with hyperactivity, anxiety disorders, etc., may have vacillating rhythms throughout the day. A long uninterrupted work period respects the needs of all children.
- Children should begin the school programme at three years and stay through the three-year span of development.
- The environment should have the Montessori materials for all four areas of work. The Practical Life area should have many water activities.
- Music is always an integral part of the Montessori classroom, especially one for special needs children. Movement, song, and walking on the line are very important.
- Language development — many children need spoken language exercises. Stories, poetry, show and tell time. Much work with the nomenclature cards as a spoken language exercise. Sound games before sandpaper letters, moveable alphabet.
- Expectations. Always encourage the child. Many special needs children want an adult presence close by initially. To sensitively guide and encourage the child is an important role of the adult.
- Focus. Help the child concentrate by keeping distractions, including other children’s disturbances, at a minimal level.
- Always encourage independence.
Above all, we need to be humble and carefully observe the child. Montessori had a deep respect and reverence for the work of the child. Children with special needs are sometimes handicapped by us — by a system that fails to provide them with access to an appropriate education that meets their learning needs.

We must think deeply for all our children and for tomorrow’s world. We must clarify the essence of man, study how to foster human ability and develop their ability during the early stages when children are perceptive and adaptable.

Mortimer Adler

© Nimal Vaz, 2008

Previously published in AMI Communications, 2009, issue 2

**Bibliography**


Payne, James S., *Exceptional Children in Focus*, 3rd edition (Columbus, OH: Merrill, 1983)


**Nimal Vaz** received her AMI Primary diploma in 1964. She had an interest in working with special needs children which led her to study special education. She received her master’s degree from Arizona State University in 1966. Six years later Vaz began a Montessori classroom for children with developmental problems in one of Arizona’s largest hospitals, a program she directed for fifteen years. In 1987 she founded the Montessori Center School in Arizona. Vaz has taught, written, and lectured both within the US and internationally on Montessori education. She was an examiner and chaired the advisory committee for the AMI Special Education training in Munich, Germany.
Montessori for All at Cornerstone

Liesl Taylor

The Association Montessori Internationale, steeped in the roots of sustaining Montessori’s mission and vision, advocates for whole-hearted educational reform. The single-mindedness of Montessori philosophy and the nurturing of its developmental psychology is an unconscious to conscious revolution. Montessori’s first schools were with poor, traumatized, educationally challenged and environmentally compromised children. We know that Montessori provides a healing environment to children who are culturally and socially oppressed. The time is right for a fresh start-up strategy for Montessori for all children and all cultures.

Elementary teacher Liesl Taylor works at Cornerstone Montessori Elementary School (CMES), a public charter school, attached to the Montessori Center of Minnesota (MCM). In this article she emphasizes the importance of inclusion and to never lose sight of those fundamental Montessori values.

The mission of CMES is to support children from culturally and economically diverse backgrounds living in or near St. Paul’s East Side through a rigorous and high-impact Montessori programme that empowers them to make positive decisions, develop self-discipline, and create a true sense of responsibility for themselves and others in their community. Cornerstone Montessori School, a programme of MCM and partner with CMES, works to create a broad community of multicultural and economically diverse families who share the mission to nurture the child’s natural desire to learn and grow through quality Montessori environments, leading to a harmonious and peaceful world. Most unique is placing a teacher training programme for 3-6 and 6-12 under the same roof as the two urban schools.

Children are human beings to whom respect is due, superior to us by reason of their innocence and of the greater possibilities of their future. Maria Montessori

Just as every child is human, every child, in all of her loveliness and complication, deserves an education that promotes her development to the fullest human potential.

The Montessori community is fast moving away from the notions that children with special needs can’t be well served in a Montessori environment and, even worse, that serving those children compromises the Montessori experience for others.

To implement a system of education in environments that appropriately demand the use and development of all our human tendencies, fostering optimal development, we must insist that it is for every child, and work tirelessly to make it so. At Cornerstone Montessori School, this work has two pillars: staying absolutely grounded in the implementation and protection of high-fidelity Montessori and tapping and integrating the expertise of specialists and outside resources so important to supporting the guides and the success of all children. The benefits for children with special needs as well as the children living with them in community are indisputable. Consistently, we see our special populations thrive developmentally and academically. We see the profound effects living and working together in a community diverse in need on our children’s increased capacities for understanding, compassion, cooperation, and problem-solving for the good of the whole.
Do “More Montessori”, Better

In serving children with special needs, we must never compromise the key components of Montessori. Quite the contrary: these very components bring about the most meaningful change in the lives of children with special needs, as for all children. Sadly, so many well-trained Montessorians let the implementation of these principles slip, especially if they are struggling to meet the needs of children with significant challenges. When we work in public settings with diverse groups of children, we must stay unwaveringly grounded in our commitment to provide high quality Montessori, especially for children with significant deficits. Our country has followed fad after educational fad, making desperate grabs at what might “close the gap”, agreeing only that so far nothing is working, when all the while we have a scientifically proven method of education that supports the development of each human being to his or her fullest potential.

We know that, in a high-fidelity Montessori programme, the whole child is nurtured. The multi-aged classroom is a community of people simply living and working together. Without defined grades and grade-level lessons, children don’t see themselves, or each other, as “behind”, or “ahead”, or “smarter”, or “in the slow group”, because those distinctions aren’t made. Children learn that they are at school to work extremely hard doing their own best work each day.

We do not interrupt the three-hour work cycle; we work diligently to inspire deep concentration during that time and guard it religiously. Lessons are designed to appeal to the developmental needs and attributes of the child receiving the lesson. Because each child’s learning experience is tailored, struggling children feel like learning is something they can do. Learning feels fun! Children are invigorated by the work they have completed and are inspired to try harder, taking on increasingly greater academic challenges and experiencing their own success.

In a presentation that two six-year-old children gave to Cornerstone guests in our second year of operation, one child finished up by saying, ‘At this school, everybody’s smart!’

Children experiencing an authentic Montessori education believe in themselves as capable people and important members of society. Children who believe that about
themselves have more capacity to excel academically, whether it means remediating lagging skills or soaring beyond expectations.

With all children, regardless of ability, we need to consider human tendencies, developmental characteristics, prepared adults, and the prepared environment. And, we must consider this work in the context of relationships: with the child, with parents or guardians, and with the specialists and support staff. Montessori’s unique strength is this theoretical grounding. A child of privilege with a long Montessori background and a fourth-year child with considerable special needs joining Montessori for the first time have the same human tendencies and predictable developmental needs.

**Human Tendencies**

Living and learning each day in an environment that fosters the use and development of tendencies that are the very essence of being human is ideal. Spending time in an environment that doesn’t foster these tendencies will make the most “normalized”, regulated child cranky at least, and numb and passive in their own education at worst. Tragically, the first things to go for a child who is struggling are often the freedoms to move, choose, explore, communicate, and work on something meaningful. Montessori reminds us of this: ‘The task of the educator lies in seeing that the child does not confound good with immobility, and evil with activity, as often happens in old-time discipline.’

**Developmental Characteristics**

With second-plane children, the reasoning mind, a powerful sense of justice, the ability to imagine, a seemingly infinite capacity for big work, a drive to be with peers, and hero worship are characteristics (among others) we all know and experience daily in our work. Even when a child is escalated or dysregulated — possibly raging in her environment or our office space — we must remember to respond in a way that appeals to these developmental characteristics. Just as we appeal to the child’s reasoning mind when we give a presentation, or to her strong sense of right and wrong when setting up a system of justice in the classroom, so too must we help an elementary child who is struggling to reason through a hard situation or to express an injustice appropriately. We must have foremost in our minds all that we know about children, especially in these hardest moments, and appeal to the child in crisis with a twinkle in our eye and with understanding in our hearts, enticing her along a path of development, just as we do with engaging stories and beautiful presentations. We have a wealth of knowledge and energy for working through the most challenging situations with struggling children when we remain firmly grounded in these ideals.

Children with special needs or escalated or explosive behaviours attending schools with more conventional discipline policies and procedures, possibly essentially marching them through to suspension or expulsion, are not likely to see themselves as people who have something valuable to offer their communities. It is our job to stick with all of our children, our most struggling children especially, all the way through an incident, supporting deeper understanding and skill development so that each time a child has a better chance to be more successful the next time. It is our responsibility to involve them, support them, believe in them, and guide them as they learn increasingly more about self-advocacy, compassion and empathy, and being an important, contributing member of their community.

**The Prepared Environment**

Almost all of our specialist work is done as a “push-in” to the classroom, as opposed to pulling children out. We do have a lovely smaller room where the specialists can take smaller groups or individual children when that best supports the child’s needs. Still, a school environment to serve all children must have prepared spaces beyond the classrooms. At Cornerstone we have several designated places for children to choose when they are feeling escalated and unable to cope in their regular environment, as well as the greenhouse, my office, and a sunny spot in the main hallway. All of these additional spaces are prepared with the same attention to the principles of beauty, simplicity, and order we give our classroom environments. Children who are feeling terrible will feel much less so in a beautiful space; we must never underestimate the importance of lovely spaces, well-prepared to meet our children’s needs.

**Relationships**

Developing relationships with the children and fostering their strong relationships among each other and with the other adults is the absolute foundation for all of the other hard work we have to do together. The impact of the environment and the relationship to the trained teacher...
and with peers in the environment cannot be overstated. Community violence, drugs, and institutional poverty destabilize families and children. A sense of belonging and accountability to their friends and community creates an atmosphere that fosters connection and respect. In turn, this enables the child to find greater peace and engage with materials and activities.

Donna Bryant Goertz’s book Children Who are Not Yet Peaceful has added a new dimension to our work. Now our teachers are dealing with relationships as a part of the core curriculum. We are in our first year of implementing school-based mental health services precisely to capitalize on these moments, and we are already seeing a profound effect on the entire programme. We must not underestimate how rich our environments are for this kind of development. These lessons are even more important (and there are more opportunities for them) for children in crisis or struggling with other aspects of development.

Embracing and Integrating Experts and Expertise

Montessori guides are enlightened generalists rather than subject matter experts: we know enough to excite interest, and to guide the work of the children in all subjects. But when a child’s thirst for knowledge exceeds what we are able to provide in the classroom, we encourage them to tap the knowledge of an expert, perhaps by going out or inviting someone in. We work with our support staff in our classrooms and schools in the same way. Our staff, including paraprofessionals, highly specialized licensed special education teachers, English language learner teachers, literacy specialists, we observe the children and present school psychologists, and contracted therapists, have expertise need when we are working with children in crisis, children with special needs, and children new to Montessori. Our support staff are our partners in this huge work, and we must set up work cultures that embrace and welcome different areas of expertise and then support our whole team in ongoing, positive sharing of ideas as we seek to best serve each child.

Working with a team of highly trained specialists has been key in helping the Montessori guides understand how to best support children with special needs — without taking away any of the richness of the Montessori experience!

Orienting the Adults

Teachers who have been through training and those close to them know how intense, wonderful, and transformative that preparation can be — it’s the key to our best work. Though we can’t fully train every adult in the building, they all deserve a clear picture of how they fit into this tricky work of adding adults and expertise without compromising the child’s Montessori experience.

Roles

It is extremely important that everyone understands his or her role — all children and all adults. Often, Montessori teachers and specialists can work side by side, as long as guides are careful not to undermine another adult in front of the children. Just as we observe the children and present lessons they are ready for based on our observations, we do the same with the multitude of interactions between our supporting adults and the children. Once the adults are oriented, you can have different adults come in or take advantage of situations that arise with adults already in your room. A clear understanding of roles among children and adults (it’s not Susan’s job to help you get the tape you are not supposed to have!) will really support their work with everyone feeling comfortable, welcome, grounded, and without compromising concentration and the development of independence.

The children must know their roles as well. They are at school each day to do their own best work: work on academics, behaviour choices, and the work of growing a wonderful community.

All children and all adults, no matter the role, have school-wide agreements, arrived at each year through our experiences together in our community with the children as involved as the guides and other adults, embodying our respect for one another and for human development.

Learning to Work Together

Elena Aguilar, the author of The Art of Coaching Teams; Building Resilient Communities that Transform Schools, taught us that ‘Artists are notoriously messy... there isn’t a formula that can be used to build an effective team.’ We have taken this as an invitation to be in a safe, messy place together and as we practise our arts and produce great work. Within this space, I have set expectations for how adults will work with one another, and with children. Adults are expected to assume good intentions and
communicate constructively with each other. With children, I expect them to practise consistency, respect, openness, empathy, and above all, inclusion. Most importantly, our actions and words must convey to the child, every moment, what we believe:

- All children are good.
- Poor choices are separate from a lovely child.
- Mistakes are OK! We use them in work and behaviour to learn from.
- When you are struggling, it never changes my high opinion of you.
- Every day is new. I will never ever give up on you.

We want to help our support staff and all adults working with the children to understand that we are working towards longer-term goals. If there are paper scraps on the floor, for example, rather than telling every child to pick up ten scraps we might ask the children to look all around and see if they are feeling really pleased with the way they are leaving their environment for the day, or ask if everyone has carried out their responsibilities. We would prioritize a few scraps, working towards an independent desire to care for their room over giving the children an order that accomplishes all the scraps being off the floor but does nothing to support the children’s growth towards independently caring for their environment. We will embrace the messiness that comes with prioritizing long-term independence in making good choices for oneself over blind obedience and it is important that we share these ideas with our support staff.

### Seeking the Support of Outside Experts

Just as we seek the help of specialists within the classroom when it is needed, our entire community has benefitted from exceptional workshops by exceptional people. Jodi Pfarr has helped us understand the cycles of generational poverty. Our staff is studying the work of Dr Ross Greene, a clinical child psychologist and author of Lost at School, doing ground-breaking work on constructive problem-solving. Dr Travis Wright has helped us understand the effects of trauma on children. Lisa Delpit’s Other People’s Children: Cultural Conflict in the Classroom has inspired us to look closely at ourselves and our biases. Alicia Sojourner, a racial equity consultant manager at the YWCA here in Minneapolis, spoke to us about the developmental stages of understanding race, racism, and how to have healthy conversations with children of different ages, and worked with staff and parents prompting us to look more deeply at ourselves relative to understanding race and racism.

When the weight of this work washes over and consumes me, as I know it does all of us at times, I think of the children. I think of their voices singing their many songs... of the light in their eyes...of their awesome dance moves... their resilience...the depth of compassion and understanding they are capable of showing each other when given the skills and the space.

Some children in our school live very privileged lives. Many others are in the midst of ongoing crisis from living in poverty. Others have significant deficits in their basic skills and significant special needs, yet they come to school and “shed” so very much to engage in working so hard; they laugh, they learn to make friends, they care for younger children and each other. They demonstrate significant academic growth. They also struggle, they scream, they run, they swear, they break things. All children, regardless of need, so deserve for their adults to be one hundred percent
invested in this work. They need us to do better, dig deeper, and challenge ourselves, a fraction of the challenge they overcome each day, to give them our very, most-genuine best so they have the opportunity to be their best. Of course, it is hard work; our children will tell us, though, that we human beings are meant to do hard work!

**Liesl Taylor** is the Head of School of Cornerstone Montessori Elementary School. She holds an AMI Elementary and a public school teaching license, K-6 with a specialty in 5-8 Science. This article is reprinted by courtesy of the author and David Ayer of montessoripublic.org who first featured this article as an “insight,” excerpted from the Winter 2018 (Vol. 2, no. 2.)
Montessori Developmental Principles to Support the Needs of the Elderly

Jennifer Brush and Michelle Bourgeois

In 2014, a group of dedicated dementia care experts were brought together by AMI and the Montessori Australia Foundation to present their research and practice in the area of Montessori as it is used with elders at the first International Montessori Environments for Aging conference in Sydney, Australia. During that ground-breaking conference the AMI advisory board for Montessori for Dementia and Ageing was formed, and subsequently the AMI Practice Standards and Quality Indicators for Montessori for Aged Care established by that board can be applied in communities of elders and individuals living with dementia. From the prepared environment to support of independence and opportunities for grace and courtesy, this application of Montessori principles focuses on ‘the well-being of the whole person, including physical, spiritual, social, mental, and emotional needs’.

Jennifer Brush and Michelle Bourgeois, members of the AMI advisory board for Montessori for Dementia and Ageing (formed in 2014), share how the AMI Practice Standards and Quality Indicators for Montessori for Aged Care established by that board can be applied in communities of elders and individuals living with dementia. From the prepared environment to support of independence and opportunities for grace and courtesy, this application of Montessori principles focuses on ‘the well-being of the whole person, including physical, spiritual, social, mental, and emotional needs’.

In 2014, a group of dedicated dementia care experts were brought together by AMI and the Montessori Australia Foundation to present their research and practice in the area of Montessori as it is used with elders at the first International Montessori Environments for Aging conference in Sydney, Australia. During that ground-breaking conference the AMI advisory board for Montessori for Dementia and Ageing was formed, and subsequently the AMI Practice Standards and Quality Indicators for Montessori for Aged Care (AMI). The Montessori Advisory Group for Dementia and Ageing continues to be the main advisory body to AMI on all matters concerning the application of the Montessori approach for older people and persons living with dementia. The group works to support quality standards in the delivery of a continuum of care and services and to achieve quality outcomes for each person to enable life to be lived as fully as possible.

Maria Montessori did not design environments for older adults, but medical professionals, researchers, clinicians, and architects have contributed to a large body of evidence that has resulted in person-centred ageing and dementia care guidelines. AMI Trainers for Dementia and Ageing are person-centred dementia care experts who have worked in care settings for the elderly and are knowledgeable about both clinical guidelines and research outcomes, as well as the organizational structure and operations of elder care settings. We are able to apply the Montessori philosophy of life to older age, as another plane of development, with its own unique prepared environment. Central to both the Montessori philosophy and person-centred care are the core values of respect for the individual, the importance of knowing the elder deeply, seeking and honouring the person’s preferences over all aspects of their daily life, and creating a supportive environment that allows for continued participation in familiar and preferred activities, inside and outside (Douglas, Brush, and Bourgeois).

What follows is a brief description of a Montessori community for elders and those with dementia.
Key Components of a Montessori Community for Ageing

Montessori is based on the principles of free choice and purposeful activity. In a Montessori community for elders, individuals with a wide range of abilities work both individually and collaboratively on an array of activities from which they are free to choose, explore, and discover (Brush, Douglas, and Bourgeois). Elders have freedom to move within the community, and to engage in household roles and responsibilities, guided as needed by trained staff who have completed at least two days of education with an AMI trainer (AMI). The focus is on the well-being of the whole person, including physical, spiritual, social, mental, and emotional needs. Communities offer occasions for new learning, religious practices, meditation, art, music, exercise, and so forth. In addition, there are opportunities for interaction with children, friends, family, and groups outside of the care community.

Prepared Environment
The prepared environment is designed to facilitate maximum independence and exploration by all members of the community. Hands-on adult activities and materials are accessible to elders twenty-four hours a day. The community is considered the elders' home, and every effort is made to remove staff supplies and medical equipment from the community spaces. This allows elders to feel ownership of their space, encouraging participation in care of the community. Since reading is a preserved ability long through the course of dementia, visual aids such as step by step directions, invitation signs, memory books, wayfinding signs, and name tags are used to create a supportive environment that compensates for memory loss and sensory impairment.

Freedom of Movement
Elders choose where to sit and what to work on, with guidance or assistance as needed from trained care partners. They are encouraged to move about the environment rather than remaining seated or in one place all day. This helps elders to maintain balance, fine and gross
motor skills, and overall healthy functioning of the body’s systems. Whereas the loss of physical abilities accelerates in many long-term care communities, movement is encouraged in the Montessori setting, allowing elders to maintain and strengthen the physical abilities and skills needed to remain independent.

**Hands-On Activity**

Elders work with both specially designed materials and everyday household items. Activities are hands-on and often involve movement and sensory stimulation. Each activity has multiple purposes. These may include strengthening gross or fine motor skills, maintaining hand-eye coordination, developing sustained attention on a task, or providing sensory stimulation. Some activities focus on the preliminary skills needed to maintain aspects of independent living, such as pouring, spooning, buttoning, and zipping. The purpose of an activity may also be artistic expression, enjoyment, or the satisfaction that comes from making a meaningful contribution to the community.

**Intrinsic Motivation**

Humans are born with an intrinsic desire to explore and learn. Rather than focusing on keeping elders ‘busy’, the prepared environment provides opportunities for choice, independence, and meaningful engagement. When elders are free to follow their interests and meet their own needs, they feel fulfilled rather than bored. A Montessori household takes on a busy ‘hum’ of movement, activity, and collaboration.

**Concentration**

Montessori observed that after a period of intense concentration, working with materials that fully engage their interest, children are not exhausted but emerge refreshed and contented. She called this state ‘normalization’. With regard to elders, we think of normalization as joyful engagement in work that one finds satisfying. Care partners do not interrupt elders’ concentration when engaged in meaningful activity and only offer assistance when it is needed.

**Independence**

Humans are naturally driven toward achieving independence. When care partners take over a task, offer unwanted assistance, or interrupt they are often serving as an impediment to the person’s dignity and creating a situation of excess disability. Often, care partners unconsciously become the centre of the environment, constantly directing instead of allowing the elders to make decisions for themselves. Instead, a Montessori prepared environment is set up to facilitate maximum independence for elders, and care partners invite elders to engage in daily tasks (either independently or in partnership) rather than completing these tasks for them.

**Mixed Abilities of Individuals**

Elders of different abilities work together, form friendships, and help each other in a supportive community. Peer collaboration is encouraged; elders share their strengths with others who need more support in those areas. Rather than staff taking over all leadership roles, elders have opportunities to use their leadership skills in areas of strength and interest. Opportunities are provided to teach, work cooperatively with, and learn from children both in the care community and the school setting. The inter-generational programming that we have completed has shown benefits to elders such as improve affect, increased engagement, and maintenance of cognitive skills (Bourgeois and Brush, under review). During inter-generational interaction elders and children worked together and the elders guided the children in the activities. This preserved behaviour and overlearned role of a mentor is not something that needs to be taught to the elders or people living with dementia.

---

**Empowering Elders and Care Partners to Thrive**

Brush and colleagues have shown that after culture change to a Montessori community, elders displayed significantly more positive emotions, affect, and feelings of self-esteem and belonging. Care partners reported significantly more job satisfaction.


Meaningful Engagement Through Montessori

www.providermagazine.com/reports/Pages/2019/

Meaningful-Engagement-Through-Montessori-.aspx


Montessori-Approach-Purposeful-Living-in-Memory-Care-V8N2

**Individualized Engagement**
Each and every elder living in a Montessori community has an individualized plan that is created as a result of assessment of and collaboration with the elder and their family (when applicable). This individualized plan is communicated to all staff so that the community as a whole works together to support the elder in meaningful life engagement.

**Observation**
Observation is an integral part of the Montessori philosophy. We recommend routine observations of all elders in the community, both on their own and when interacting with others. Many healthcare professionals find it difficult to sit quietly and simply observe. Our days are busy, yet our constant physical motion means we are missing out on noticing important information from elders. Observation enables us to gather information that will help us adjust elders’ individualized care plans to better meet their needs.

**Montessori Triad**
Care partners serve as guides and facilitators, connecting elders with opportunities for purposeful engagement in a prepared environment to support intellectual, physical, emotional, and social well-being. In the care setting, therefore, the Montessori Triad refers to the dynamic interaction among the elder, the Montessori-trained care partner, and the prepared environment.

**Grace and Courtesy**
In the classroom grace and courtesy lessons introduce students to basic skills and social strategies that enable the children to function as part of a community. In a care community, it is the role of the staff to model grace and courtesy at all times and to assist elders who need support with these skills. Social skills such as offering and responding to greetings remain relatively intact through ageing and dementia, so elders enjoy opportunities to welcome guests, invite friends to join them during activities, help others, and to assist with caring for the community.

Older adults and people living with dementia have the same needs as everyone else — to feel valued and respected. In the absence of a cure for dementia, socialization and engagement in purposeful activities is a powerful treatment for the symptoms associated with dementia. People with dementia still need to feel wanted, learn new information, have relationships with friends and family, and contribute to the community. A Montessori community provides a safe, engaging, and meaningful environment for elders to live a purposeful and rewarding life.

**References**

Bourgeois, M., and J. Brush, “Intergenerational Montessori Program for Adults with Memory Concerns”, under review for *Clinical Gerontologist* (Milton Park, UK: Taylor & Francis)


Jennifer Brush is director of Brush Development (US) and programme director of Montessori Education for Dementia at St. Nicholas Montessori College, Ireland. A recent Fulbright Specialist, Jennifer is a member of the AMI advisory board on Montessori for Dementia and Ageing and an AMI-certified Trainer for Montessori for Dementia and Ageing.

Michelle Bourgeois, PhD, is director of the PhD programme in the Department of Communication Sciences and Disorders at University of South Florida. She is a member of the AMI advisory board on Montessori for Dementia and Ageing.

This article has been adapted with permission from Jennifer Brush, *Montessori for Elder and Dementia Care* (Baltimore: Health Professions Press, 2020).
Many parents are recognizing a disturbing truth revealed by the COVID-19 crisis: school is often regimented and boring, and it doesn’t fit the way that their children learn naturally. Peering through the window of home education, parents see that schools’ approaches often provide poor ways for their children to learn.

Moms and dads are spending their days encouraging their children to do activities that schools require to be completed at home: filling in dull worksheets and completing internet-based tasks, as computers replace teachers in ordering, providing, and grading children’s activities. Many families dislike this tedious regime, but neither parents nor children have much idea of what they might do instead. Families have gotten used to a certain way of learning, and they may struggle to take a different approach.

Some just give up. As one frustrated parent announced on Twitter: ‘This is my Kindergartener’s home school curriculum. And nearly everything requires a printer, which we don’t have. We quit.’ Are such parental reactions a harbinger of a more general revolt that we might expect against conventional educational approaches that have been embedded in school systems for nearly two centuries, and from which a big change is long overdue?

Some children thrive during lockdown learning
On the plus-side, COVID-19 is also highlighting how education might change for the better. Lockdown learning has proved more fruitful for some households than others. Some children are more accustomed to independent study that engages with what is around them: they are better able to thrive while in lockdown. For example, children have walked around their neighbourhoods to spot and count the colours of people’s front doors and then made bar graphs. Others have surveyed signs of spring, noticing dirt softening, birds singing, and buds emerging, and they’ve compiled the information into reports. Others went looking for symmetrical and asymmetrical shapes in their homes and neighbourhoods and reported back. They are not staring at computer screens or filling in worksheets all day.

Angeline Lillard wrote a blog on how lockdown learning questions traditional education. She argues that lockdown has highlighted how schools fail to build on children’s natural ways of learning through their independent curiosity and learning approaches. She encourages parents to make a start at organizing children’s environments so they can learn more independently.
This difference in experience is highlighting to parents a gap between how many children are taught in schools and how learning might change if education were based more on what we know about child development. Alternative approaches recognize that children build understanding through active interaction more than by listening; by ‘constructing’ what they learn rather than being told.

In this “constructivist approach”—found, for example, in Montessori education—student questions drive the learning, interactive teachers create an environment fitting children’s developmental level, and lessons are built on student understanding with continuous assessment and collaborative student work. Such methods can fail when delivered without structure. But with sufficient structure, children thrive.

Teacher-text-centred model of education
Conventional schooling relies much more on a teacher-text-centred model of education. For over 150 years, much of the world has used this model, which depends primarily on teachers (helped by textbooks and computers) telling children what others think they need to know. This approach has been widely adopted because it makes sense to adults, who seem to learn in a linear fashion from what they are told or read. Teachers are also quite knowledgeable, so it stands to reason that they should tell children what they need to know. Children are often framed as “blank slates”, which fits with a model of teachers transforming children by giving them information and making them learn it. Many parents, with school direction, are now trying to follow this model at home.

Children learn by self-direction
But this conventional approach is fundamentally flawed. We can see how children naturally develop. No one instructs babies on how to form syllables. Six-month-olds start to get ready to speak by closely watching other people’s mouths as they talk, and thereby gleaning the
information they need to form phonemes. We also know from research, such as Celeste Kidd’s, that children focus their attention during play on what they believe to be achievable levels of learning. They know what is within their grasp, and they can often work out the next stage of learning themselves, particularly in a supportive, well-equipped environment.

Outside of school, young children actively teach themselves. We don’t set up a blackboard and tell children at 12 months that it’s time to walk. They pull themselves up, mastering the task through repetition and with a clear goal in their minds. Student teachers know all of this. They study how children develop and are trained to deliver child-centred education. However, once they reach the school environment, they typically find few supports for this approach and have little option but to conform to more traditional methods.

Teacher-text-centerd learning has survived its own inadequacies thanks to the introduction of incremental changes that prevent its collapse. These include grading and examinations to stimulate the flagging interest that children have in this unnatural type of learning. More recently, high stakes testing of whole schools has further pushed teachers to conform to the model. However, outcomes have not improved. The worst hit are the lower-income schools which, under the demands of stricter testing regimes, double down on didactic instruction. Research shows that this has resulted in less time spent on non-tested (but often enriching) material, increased stress in children, higher dropout rates and education reduced to filling out bubble sheets. Taking these effects together, the school achievement gap, which testing was meant to address, has actually increased.

Use COVID-19 to change how your child learns
COVID-19 and the meagre gruel often served up as lockdown learning at home has highlighted the problem to parents. It has also removed the incentives that usually maintain the system — grading and standardized exams have been dropped this year for many children. Mom and dad are really stumped for ways to persuade children to stay focussed. Having been educated conventionally themselves, they may find it just as difficult as their children do to develop more self-directed ways of learning at home.

My advice to parents in this lockdown is to make a start at organizing children’s environments so they can learn more independently. Is your child old enough to plan meals or prepare portions of a meal, with some adult support? If so, then build that into every day, and set up the kitchen to enable it. Think of useful activities your children can do on their own. These can be as simple as making their beds or washing some dishes. Play a counting game, and then send the children off to do some counting on their own. Try to set them up with independent activities, be it with paints and brushes or building blocks. Expect them to put things back and tidy up afterwards. It can take a while for them to work like this, so you’ll need love, compassion and patience, taking one step at a time. New York Times columnist Michaelleen Doucelf described coming to this realization with her four-year-old at home. Given the opportunity, children love being involved in real life activities.
You’ll find resources for parents at the Association Montessori Internationale and distance learning resources at Aid to Life. We have a brief opportunity within the lockdown to change the way our children learn so that it fits what comes naturally to them. If enough of us do it, conventional education may also begin to think again. The new normal doesn’t have to be the old normal.

Reprinted by kind permission of the Child and Family Blog.

References

Lillard AS (2020), The Impending Education Revolution, Unpublished Manuscript, University of Virginia

Dr Angeline Lillard is professor of psychology at the University of Virginia, and has been studying Montessori’s methods for more than two decades. In her best-selling book Montessori: The Science Behind the Genius, and through articles, an educational DVD, and speaking engagements, Dr Lillard presents Montessori’s theoretical principles, the science research that has followed them, and how they are implemented in a Montessori classroom.
My heart has never felt more filled with wonder at this world or gratitude for human life within it. As I took my dogs out at six o’clock in the morning, my first sight was of the full moon, still completely visible through the tree’s bare branches beyond the pond and pasture. When I turned east back toward the house, the brilliant red beams of the rising sun were just peeking through the tree limbs; the moon and the sun at once! A glorious sight I had never seen at our house before. Then I received this image on my iPhone from my doctor son-in-law of the Virginia countryside by his home. He had taken it with his drone. Human ingenuity throughout the ages has brought us such wonder! Scientists around the globe, working together to defeat a common enemy to our health; inventions that boggle the mind, owned and operated by individual citizens; and the beauty of the earth that out of the darkness of winter each year brings us the light of spring in all its glory. Truly we are the most blessed of all the peoples who yet have lived.

True, right now we are facing an enormous challenge, one that seemingly arrived out of nowhere, a shock to our daily existence; all turned upside down in a nanosecond. Here is how a young mother explained to me what parents are experiencing:

There is fear and anxiety. People are coming to terms with the idea that school might not be back in session until September. They feel overwhelmed by how to carry on their children’s academics. They are anxious about getting their own work done. And there is a general fear — that the world might be falling apart, that we brought these children to the earth, and now the unknowns of its future are right in front of us. It’s unsettling not to have our usual routines and sources of comfort.
And I think most people realize that they have to manage their own emotions because the home is a small space, and we don’t want to overflow on our children. Everyone is doing their best, but everyone is tired, too. My husband, now working from home and not at all prone to anxiety, said, ‘I am so much more tired than I should be for what I have done each day. It shows how much all this is weighing on my subconscious.’ It is telling that he is carrying this, too.
And so we are for the near future in a time of great darkness. How do we get back to the light, to the hope and joy of the lives that we had been living? It brings to mind my father and one of my earliest memories. He is sitting in his big armchair, home all day now in the Great Depression of the 1930s, reading and writing, a tension about him, thinking and looking distant. By the time I was six years old, I understood that he was not only worried about my brother, mother, and me. The responsibility for the families of the thirty employees in his small machine tool shop in Dayton, Ohio, weighed heavily on his mind, too.

I remember too from this time, my beloved brother, a year and a half older than I, sneaking out of his bedroom in his pyjamas, and racing through the snow, barefooted, to his friend’s house next door. I knew this was terribly wrong of him because he had been put to bed with a sore throat, but I did not tell my mother. It was not long, however, before my anxious mother was returning home with him in tow — the memory made vivid for me because he got hot lemonade as medicine and I did not! In those days, before penicillin, antibiotics, and vaccines for childhood diseases, every cold, sore throat, and stomach ache was treated with the strictest bed rest. In spite of my mother’s vigilance — healthy diet, precise sleep and rest schedule, daily outdoor exercise and play — I spent days of quarantine at home for measles, mumps, whooping cough, and scarlet fever, mostly because of my brother who seemed to catch everything while I managed only to have chickenpox.

There were other periods of quarantine, too, and they were more frightening. When I was in the fifth grade, my whole class was quarantined for weeks. One of our classmates, who had appeared well and healthy when we were last with her in the afternoon, died that same night in the hospital from meningitis — a period of nine hours from onset to death. Both saddened and frightened, we talked on the phone with each other, and described the dreams we were having that she came alive again in some form that we could see, half believing that they could be true. After the weeks of quarantine were over, her mother invited us to a memorial ‘birthday party’ for her where we were asked to sing “Happy Birthday” before an urn of her ashes.
Even as a child, I knew that what we were doing — what for us as children was a bizarre event — was meant to console this mother in her anguish for her only daughter.

The health threat that frightened us most, however, was polio. During an epidemic, there were whole summers of closed swimming pools, movie theatres, camps, and parks — and no friends to play with. We were frightened by the risk of paralysis and being put in an iron lung, trapped and immobile.

And then one day, there was a new fear. I was at the riding stable when an older friend’s mother arrived with the news that bombs had been dropped on Pearl Harbor. At home that night, and throughout World War II, we listened to the radio, following the news of defeats and victories, bombings and devastation.

I also remember my dad, a five foot, two inch bundle of energy and purpose, striding down the hallway at six o’clock in the mornings to wake my brother and me, singing the words of a hymn from his childhood, ‘Awake for the dawn is breaking…’. Then he was off and out the driveway to his factory and its, by now, hundreds of employees.

Close to the war’s end, I remember the ceremony when my father and his factory’s workers were given the Army/Navy E Award for supplying ‘precision aire’ gauges for measuring airplane parts — to the thousandths of an inch for the first time in history — and a vital contribution to the Allied victories in Europe and eventually Japan. In 1947, my father took us along with him on a business trip to Europe that included a visit to English friends of our family. They had children the same ages as my brother and me. Sharing meals with them, we experienced how little food they had — and of what poor quality — even now two years after the war was over. We listened to their stories of the London bombings, and witnessed the devastation for ourselves as we drove through streets still piled high with rubble and the remains of demolished buildings.

By now, I was sixteen years old, and had spent the whole of my childhood and early adulthood in an economic depression, a war, and the aftermath of the war. The fear and darkness of our present time have called up these memories of sadness and anxiety from my youth. But they are not truly representative of what occupies my mind today when I think of my childhood. It is memories of the light in life that are the strongest, and most often in my mind. I am reminded that we make a decision in every moment of what we choose to let our minds dwell on.

As many have said, ‘We don’t describe the world we see. We see the world we describe.’

If we want to have happy lives, it is important to remember this truth; that is why I want to mention what I think of first when I remember my childhood. It is the games that my brother and I played indoors and out: cards all over the living room floor, depicting airplanes or routes for cars to follow; Tinker Toy and Lincoln Log constructions; wooden bird houses made with the jigsaw, hammer, and nails and paint in our basement workshop. We dammed up the streams in the woods by our house with mud, leaves, and stones to make ‘lakes’ for rafts and boats of sticks and ‘villages’ of rocks, peopleed with imaginary characters who had adventures of all kinds. We built tree houses on a hill by our house, read books there, drew and sketched the landscape, and ‘spied’ on the activities of the adults below us. All was exploration, imagination, and earnest activity of the kind that children thrive on. I don’t remember the adults being present at any such time, but perhaps they were watching from afar.

I do remember my mother reading to us every day, though: Bible stories, Tom Sawyer and Huckleberry Finn, Treasure Island and other classics, books about heroes of all kinds, and a series about young boys and girls surviving through hardship. I remember that my favourite of the latter was entitled Rough and Ready. My mother also told us stories of her own childhood, one of hardship that nevertheless had a happy ending, as we could see for ourselves that she was happy in her love for our father and for us.

One of my mother’s stories had a lasting impression on me. She told me the story she’d been told about my grandmother giving birth to her, her first child, all by herself, while my grandfather rushed from their farmhouse through the night in his horse and buggy to fetch the doctor some miles away. (When later I asked my grandmother how she managed what seemed so frightening to me, as a child who thought she wanted twelve, yes twelve, children of her own when she grew up, my grandmother said in these exact words, ‘I always figured that I could do whatever my mother had done.’)

I have said that my mother described her life as one of hardship. That was, in part, because her early life was filled with the hard work of a household — particularly a farm household — in those days: washing, drying, making and mending clothes, cleaning, sweeping and scrubbing floors, cooking, baking, canning and preparing food, growing vegetables, milking cows, and tending to chickens. Mother even had picked cotton in the fields of Oklahoma for a year. Grandfather took the family there because his sister claimed to be having success drilling for oil. After a few years of no oil, and, I am certain, insistence from my grandmother (she was a strong person), the family returned to Ohio and my grandfather went to work for Rough and Ready.
the National Cash Register Co. Every spring he would talk about the crops in the farms outside Dayton and how high the corn was growing. Once I asked him if he missed his farming days. He said in a wistful voice, 'It was never the same after we started using tractors.' Clearly he and his horse ploughing the fields together in solitude and quiet had been important to him.

These are real events of the past that happened during my childhood, but events in themselves are not the lasting part of anyone’s life. It is the intangibles that accompany events that are lasting. The intangibles of life — love, courage, optimism, a sense of freedom — see us through life’s challenges and give us a glimpse of a deeper level of reality than we can ever fully comprehend or articulate. It is these intangibles that my parents managed to make real for my brother and me as children. Somehow in our home there was always a prevailing mood of energy and confidence, a feeling of ‘we can do this’. The result was that we were not afraid to grow up. The world to us appeared as an exciting place, full of possibilities. We felt too that we had a part to play in it that was ours alone, with our own tasks and challenges to face. I think that my parents accomplished this solid base for us in our childhood by recognizing that adults cannot give any quality or knowledge to children directly, trying to shove it into the mind and soul from the outside.

Churchill said it best when he was praised for giving the British people courage in the first year of World War II. He replied that he had not given them courage. Rather, he had helped them to find their own courage, implying that it was there all the time, waiting for them to discover it.

So it is for all of us as parents — and teachers, too — to understand that our role is to help our children discover within themselves their innate gifts of the human intellect and spirit, their curiosity and thirst for knowledge about the world, their ability to love and forgive others — as well as themselves — and above all, and especially in the darkest of times, to rouse the courage and optimism within them. We bring these intangibles, this deeper level of reality, into our homes for ourselves and our children in these times of significant stress: by not expecting too much of ourselves or others, including our children; creating homes where kindness and patience prevail; and where appreciation for our lives and the lives of others is expressed by word and action.

As the American philosopher and psychologist William James (who had much influence on Maria Montessori) wrote, “The deepest principle of human nature is the craving to be appreciated” (p. 33). I feel this deep appreciation for each parent who helps us to build a school community worthy of the children entrusted to us. I am also filled with admiration and appreciation for all of those who in this most trying time are showing the greatest possible dedication, energy, and ingenuity in meeting the needs of our special communities. And to our children, my appreciation and love know no bounds. Just as Montessori said, you are truly ‘the hope and promise of humankind’.

Let us use this present opportunity to spend our time and energies in devotion to our children, helping them to understand that life expects much of each of us but that we have the courage to meet its ongoing challenges. In these most difficult times, the intangibles within us enable us to grow in the knowledge and love of our world and human life within it, and thus travel through darkness into the Light.

**References**


---

**Paula Polk Lillard** is an internationally respected authority on Montessori theory and practice. She is the author of four books and countless articles. Lillard cofounded Forest Bluff School in Lake Bluff, Illinois, in 1982, serving as primary teacher and head of school. She taught for eight years in traditional public and private schools before discovering Montessori and fifty years of experience has since deepened her conviction that the Montessori approach solves the basic dilemma of guaranteeing a superior, well-rounded, intellectual education to children and young adults while, at the same time, granting them the freedom to follow their individual interests and passions. Lillard now devotes the major portion of her time to guiding and supporting parents locally, nationally, and internationally through her writing, lectures, and parent education meetings. A graduate of Smith College with a master’s degree in Montessori Education from Xavier University, Cincinnati, Ohio, she is an AMI-certified Montessori primary teacher and has served on both the board of directors of the American Montessori Society (AMS) and AMI-USA.
Epilogue

This AMI Journal has arrived at its destination for 2020 — the realization that our legacy is strong, for the sake of the world’s well-being and heart-felt appetite for work in order to become who we are. We actualize a very special kind of learning-by-doing through all stages of life, comprehensively, through maximum coming together without borders.

The question is to bring about a radical change in the way we view human relations, endeavouring to influence men’s consciousness by giving them new ideals, fighting indifference and incomprehension; to awaken in man’s spirit a sense of gratitude towards other men. This can also be done with children. In fact, these endeavours should begin with the children, giving them the opportunity to reflect on the social value of work, on the beauty of labour carried out by others, whereby the common effort enriches the life of all.


David Kahn
The next steps...

Although this 2020 journal has reached its concluding pages, the major themes that drive our mission are never far away. Our next journals will therefore take on board some of the UN’s major Sustainable Development Goals whose sense of urgency we subscribe to.

**Quality Education**

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The AMI journal on this topic will focus on the reform Montessori education has always set out to realize. Now more than ever societies around the world are starting to appreciate the Montessori principles for their real value, and more governments embrace the curriculum endorsing it to also enter the public system. We will embark on a global journey bringing articles and stories from our diverse Montessori world.

**A Sustainable Planet**

Montessori principles foster stewardship of our environment in all aspects. Respect for Nature, and interaction with Nature also are intrinsic values for building a respectful and just society. In *The Discovery of the Child*, Maria Montessori argues that it is not only necessary for their physical life to have children exposed to the vivifying forces of nature, but that to place their soul in contact with creation is also essential for their psychical life. The effects of Nature offer the human being intellectual and spiritual benefits.

When preparing for this journal David Kahn shared some of his experiences with adolescents when exploring Nature. ‘The inner harmony of community on the farm and the interdependency of plant and animal life in the wetlands raises hope for eco-balance in hard times. When I think back to the year 2000, when the Montessori Farm School (Ohio) began, I remember my experiences living with the adolescents. We explored the woods, the wetlands. The students studied the surrounding forest, the new spring growth of low brush, sedges, rushes, and swamp milkweed. We would gather in the middle wetlands surrounded by dragonflies, damselflies, blue herons, and small mammals and snakes. The adolescents found muskrat dens in the headwaters. They were enchanted by this gathering of nature’s plants and animals in the middle of this habitat. They sketched on their drawing pads and wrote poems about ant hills, a wasp nest, a turtle. The experience created a calm unity, a sense of shared awe, a soulful silence.’

The editorial team invites you to contribute to these upcoming journals, or share suggestions. Please write to publications@montessori-ami.org.