

Editor's Introduction

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We are living in challenging times. We are witnessing, almost helplessly, what appears to be the dismantling of the American State and the brutal trampling of the avowed values of a composite nation committed to generosity of spirit and equal opportunity. Meanwhile, overseas, violent wars that seem to belong to a century past continue to wreak immeasurable suffering and destruction.

History teaches us that this, too, shall pass, that after destruction the rebuilding begins, that the long arc places crisis in perspective, that a lesson will be learned.

But when the dust will settle on current events, as dramatic and at times tragic as they are, we will still need to face the greatest challenge of them all, which is not going to go away. In the simple and poignant words of poet Amanda Gorman, already a voice of a young generation, "Climate change is the single greatest challenge of our time" (see her poem "Our Purpose in Poetry: Or, Earthrise" on page 43).

Climate change and its challenges seem to have faded into the background as some kind of a fad that had run its course. Still, even if attention might have waned, or been pushed aside by other catastrophes of our own making, the reality of climate change, of transformed and difficult living conditions, keeps coming at us in accelerated speed. Our task, as Waldorf teachers, remains in essence the same: to keep preparing our students for the challenges of both a personal and a common future. And preparing for the future of climate change might be the single greatest challenge of our profession. This is the theme of the current issue of the *Research Bulletin*.

Cedar Oliver, a "traveling teacher" who has been making his impact on and learning from Waldorf students throughout the country for close to three decades, seizes on this theme in the opening article, "Teen Education in a Time of Climate Crisis."

Who is education for? Oliver ponders while reviewing his teaching of, for example, organic chemistry. How does the role of education shift in adolescence? The insights he provides in this meditation are invaluable:

Around the globe, throughout humanity's long tenure on Earth, the message given before and after puberty has been remarkably clear: Before, we elders are responsible for you. After, you are responsible with us. The rites of passage into

maturity communicate clearly, "This is your world now. You are steward, caregiver, entrusted."

Crucially, in this new stage of life, education is no longer for your benefit.

The context of these reflections, that weave in and out of Cedar Oliver's own teaching experience, both in indoor and outdoor classrooms, is the theme of this issue, how to prepare students for their role, their stewardship, their responsibility. Oliver measures success in this task by the transformation of the students' way of perceiving anew, perceiving differently: an object, a living thing, an ordinary experience. One of these new ways of perceiving, and especially in the context of climate transformation, is that of time beyond the human scale. Oliver induces this new perspective by studying hominid evolution in relation to the climatic changes that posed possibilities and impossibilities along the long way.

This is also the focus of Harlan Gilbert's succinct and meticulous "Arcs of Climate," several pages ahead, where he unfolds, side by side, several time scales of Earth's climate transformations. Demonstrating the complexities of the dynamic system which is Earth's climate, Gilbert places the one that we are very much concerned with—the one of anthropogenic climate change—in a wider context that could open up new avenues for perceiving, thinking, and teaching.

In her elegant article, "Responding to the Climate Change: The Earth as a Living Whole," Marisha Plotnik, a seasoned science teacher and a staff member at the Nature Institute in Ghent, demonstrates from within the Waldorf classroom and lab how guidance is offered to high-schoolers to "know Earth differently." "When we bring students towards a meaningful encounter with observable processes," Plotnik concludes her description of the pedagogical process, "interacting with those processes through careful experimentation, and uniting their discoveries, through thinking, with other dimensions of experience, we set them on the path towards understanding the Earth as a living whole."

Michael Holdrege has recently published an extremely rich resource for the 11th grade biology blocks, the book *Embryology, Genetics, and Ecology: Windows into the Dynamic Nature of Living Organisms* (Waldorf Publications, 2024). In the current issue, Holdrege describes a unique collaboration between science

and Eurythmy in the 10th grade classroom. Grappling with the question, how to concretize for the students large-scale atmospheric phenomena that cannot be directly perceived by the senses, Holdrege turns to Eurythmy's movements and gestures. Recognizing in their Geophysiology class the similarity between certain atmospheric motions and certain Eurythmy letter gestures, the students turn to a choreographed illustration of sky-high natural phenomena through their own bodies. It is hard to overestimate the impact this way of learning can have on students: the literal embodiment of knowledge and the exercise of affinities between one's own individual body and that of Earth in its widest atmospheric reaches.

Caroline Martin, with the experience of teaching middle and high school science in several Waldorf schools and with a doctorate in geochemistry, reflects here on the right balance in teaching climate change and global warming to a generation that is emotionally fragile and jaded at the same time. "Merely teaching the blunt forecasts and grim deductions," Martin writes, "may be as directly injurious to the teenage population as global warming to human civilization." One of her important recommendation in this reflective essay is "that teachers instill in our students today a view of Earth that is robust in its ability to rebound against a back-drop of constant change." While by no means playing Pollyanna, Martin, informed by long-view science and a deep-seated trust in human creativity and resilience, concludes with an optimistic tone: "I take too much comfort in the geological perspective to fully believe Earth is not on humanity's side."

In my own contribution to the conversation, I offer to see the challenge of teaching the challenges posed by climate change as a pedagogical opportunity, just as climate change itself is an ethical-existential opportunity for humanity to come into its best by responding to the call of responsibility. The pedagogical opportunity I discuss in laying out a senior year History main lesson, entitled "Ecological Citizenship," is that of pulling together all the strands of idealism implanted in our students throughout the grades, and encouraging them into the universal mission of this and the following generations. The concept of "ecological citizenship," academically articulated but also intimately resonating, offers an identity variant wherein we see ourselves as part of an ecological whole and take on the challenge of committing to both survival and justice in climate change adaptation and mitigation.

We conclude our offering on addressing climate change and environmental crisis with a reprint of a conversation piece with John Fentress Gardner, a beloved educator and thinker who guided the Waldorf School of Garden City for a quarter of a century, as it developed from a three-grades experiment into a full-fledged

N-12 Waldorf school. Originally published in 1971, as a Myrin Institute Proceeding, this conversation, addressing the question of an environmental crisis before climate change has come into collective consciousness, is still very much relevant today in both its description of the human causes of the crisis and the need for a new human awareness and attitude in addressing it. Gardner advocates for intuitive perception and knowledge of the world, whereby we can recognize beyond the material appearances of nature that which we can also find within ourselves, regaining a human-world affinity that has been lost to a mechanistic, materialist perspective. "Any turning away from intellectualism towards intuitive understanding," Gardner states, "will lead to a renewal of warmth and of conscience towards nature." When we find again in the natural environment "values that match what is intimate and basic in ourselves – we shall find ourselves at home again in the universe."

Later on, Gardner expands:

If we are to find a goal other than material goods, it can only be goodness itself. As Plato said, humankind's real goal is not goods but goodness. Goodness can be achieved only by the free choice and effort of each individual, but it can also be achieved only when the spirit of the whole awakens in each of us.

More than fifty years later, this conversation continues to be helpfully instructive in its outlining of the kind of consciousness, the kind of attitude, and the kind of education that is needed in the time of environmental crisis, the time we are living in.

Following this collection of thematic articles, we turn next to introduce an ongoing research project of the Research Institute: A Qualitative Meta Research in Current Educational Practices. The project aims to review and compile contemporary research on pedagogical topics relevant to Waldorf practices. The Research Institute hopes that these overviews would be helpful to schools, teachers, and parents as we continue to verify the efficacy of Waldorf pedagogy in light of newly acquired knowledge.

Two examples of the Qualitative Meta Research Project are included in this issue: Jason Child's review of studies affirming the various benefits of music classes for all students, and Nettie Fabrie's expansive study of current research on the teaching of cursive handwriting in the elementary grades. We hope that these two samples would pique your interest in the much more that is yet to come.

With great confidence in our ability, as individuals, as educators, as a community, to face all challenges coming our way, we wish you thoughtful, helpful readings.