

News from the Institute

Farmers at The Nature Institute

In February twenty-five farmers, farm apprentices, and gardeners gathered at The Nature Institute for a weeklong course. This course is offered as an intensive for participants in the North American Biodynamic Apprenticeship Training and is open to others as well. This was the first course in the new wing of our building, and it was wonderful to have adequate space for all the different activities (see photos).

A central aim of the course is to help participants learn to observe and think about nature and their work in qualitative and relational ways. There were three areas of exploration. We studied the four elements—solid, fluid, air (gas) and warmth—through a variety of practical activities. As one apprentice wrote in her evaluation, “The exercises relating to the elements (water movement, air movement, etc.) were really stimulating and inspire a deeper kind of looking.” Two sessions each day were dedicated to the study of animals. We considered the contrasting and mutually enhancing ways of being of plants and animals. We observed farm animals and considered in some depth the cow. This work culminated in a consideration of domestication and the relation between animals and human beings in farming and evolution. Each day concluded with a session on astronomy—helping participants understand the basic relations between earth, sun, planets, and, stars.



Here are some comments from different participants about the course as a whole:

“The approach/perspective of the teaching was a major contribution to my enjoyment of the coursework. Coming from a standard education background, I found the open-ended and inquisitive nature of the course to be liberating.” (Apprentice)

“I have never before experienced such a patient and beautifully interwoven presentation of ideas, concepts, questions, observations.... I loved both listening and engaging with the material through ‘experiment’, observation and discussion – I thought that the active and more passive (i.e. listening) exercises in learning were very well balanced. I am used to learning in a very rigid, structured manner; I am accustomed to overflow of facts. This course seems to be aimed at deeper aspects of learning: thinking, attitude, and perspective. Facts slide from the surface of thought, whereas developing thinking and perspective is something internalized and lasting. I especially loved the interwoven nature of the course: for example, speaking of liquid as a state of matter and then

discussing the fluidity of thought and then transitioning into the fluid nature of a cow. Everything was so artfully connected in its patient presentation!” (Apprentice)

“The content was all very interesting, and particularly the way it was presented. I appreciated how over the course of the week we were carried through a process, whereby every subject eventually came together to build an overall picture. This will allow for the perspectives and practices in observation to carry over into practice when we no longer have this wonderful context to work within.” (Apprentice)

“I found the course content to be very grounding and yet meaningful from a personal subjective point of view. Learned a lot about the Earth, animals and the stars, and got a sense of how it all interconnects. It was helpful in using my observational skills to an extent beyond the norm and developing appreciation for nuances in nature and objects. Though my interest is primarily gardening and horticulture, I benefited from learning all different dimensions of farm life and the wonders of the natural world.” (Gardener)



In Conversation

An essential element of our work at The Nature Institute doesn't make itself apparent in lectures or publications. This is the area of dialogue and conversation with colleagues and supporters. Some of this happens through email, but person-to-person interactions are especially important to form new connections and to strengthen existing ones. Some of these interactions occur during breaks at workshops or courses. We also make concerted efforts to meet with people to address specific topics and concerns. All this helps create a community of striving people who inspire one another. It may not lead to all the collaborations we could envision, and it is a fact that most everyone today finds him- or herself with “too much to do.” But knowing we are contributing to something larger—something carried in a variety of ways by individuals and institutions around the globe—invigorates our efforts.

It's not possible to describe such conversations, but I'd like to mention a few that I've had in the past months. While in California I met with Beth Weisburn of the Center for Contextual Studies to discuss science education and the training of science teachers.

I also took long walks and conversed with John Gouldthorpe in Point Reyes Station about John's plans for a “Point Reyes Center for Radical Thinking” (working title). We also discussed participatory knowing, the nature of models, and much more. For a forthcoming audio project, John interviewed me about the Goethean approach to science. While in Minneapolis, Minnesota, I spoke with Albert Lindermann and Bill Manning about the challenging task of grasping and writing about a spiritual perspective on evolution, and in what ways it would be possible to present—in a manner appropriate for our times—Rudolf Steiner's deep and far-reaching view of the spiritual basis of all evolution that he portrayed one hundred years ago.

On my trip to Europe in March, I spent a few days at the Science Research Laboratory at the Goetheanum, Dornach, Switzerland. This is where, thirty-four years ago, I studied the Goethean approach to science for a year and carried out a project on a phenomenological approach to heredity. On this current trip I worked with my friend and colleague, geneticist Johannes Wirz, and was able to visit my former teachers and mentors, Jochen Bockemühl and Georg Maier. CH

Building Expansion Completed!

As we hope you can discern from the photos, the new wing is beautiful and provides a fine setting for our education work. We are also pleased that the wing was built in an energy-efficient way. Here are some of its “green” features:

- The lower level is constructed out of 14-inch insulated blocks that consist of concrete-bonded, recycled waste wood fibers.
- Siding is rough-cut white pine harvested in the northeast.
- Deck boards are rough-cut white oak harvested in the northeast.
- The upper level has 9-inch thick walls, and the framing consists of two parallel rows of 2 x 4-inch studs, so that there is no thermal bridge between the outside and inside. Insulation consists of blown-in, recycled cellulose in the walls and loose cellulose in the attic.
- All trim, window sills, baseboards, and stair treads are made of wood that we salvaged from the December 2008 ice storm; we had trunks from oak, hickory, maple, and pine trees that were locally milled, dried, and planed.
- We installed geothermal heating systems in both the new and old wing. These are very energy-efficient systems that utilize the constant ground warmth of 50 degrees Fahrenheit. Fluid circulates in closed loops through ground wells and warms (in the winter) or cools (in the summer). The heat is transferred and, in the winter, raised to a higher temperature through heat pumps; in the existing building air is warmed (forced-air heat) and in the new wing fluid is warmed that circulates through tubes in the floor (radiant floor heat).

We also renovated the outside of the old building. We added an inch of insulation all around and then sheathed it with the same white pine siding that is on the new wing. In this way ‘old’ and ‘new’ have a unified appearance.



Here, There, and on the Printed Page

- *Mathematics Alive!* Ten middle and high school teachers braved a winter snow storm to arrive for a weekend workshop at The Nature Institute in early March on algebra and the golden mean. The workshop was led by Henrike Holdrege and Marisha Plotnik, and in light of the responses of participants, it looks like “Mathematics Alive” is going to become a yearly event. This was the third year we’ve offered it. One participant remarked, “I got lots of ideas of how to introduce algebra to the class in a deeper way. We’ve done a short ‘Introduction to Algebra’ block, but now I can really build on it in new ways—from many different angles, as you so expertly showed us.” The workshop involved a variety of activities—presentations by Henrike and Marisha, movement exercises, games, problem solving in groups, and dialogue. In the words of another teacher, “the workshop this weekend was extremely helpful for teachers of all levels. The ideas presented to us are definitely going to be useful in helping students grasp mathematical concepts more thoroughly. It makes the math much less frightening for students, especially for those who struggle.”
- *Giraffe at the library.* In December Craig gave a talk with slides at the local Philmont Public Library on “There’s More to a Giraffe than its Long Neck.” The talk was sponsored by the local arts and education organization, Free Columbia.
- *Explanatory genes?* January finally saw the publication by Harvard University Press of *Genetic Explanations: Sense and Nonsense*, containing Steve’s chapter, “The Myth of the Machine-Organism: From Genetic Mechanisms to Living Beings.” The chapter looks at how the concept of the controlling and explanatory gene has been giving way to a growing awareness of the coordinated activities—the “intentions”—of the cell and organism as a whole. It then addresses the problem of meaning and intention in the organism, asking whether such terms force one into a mystical mode of thinking or (as the chapter argues) are fully compatible—and indeed required—by a scientific approach. Steve subsequently expanded this chapter into the first three major articles found at The Nature Institute’s “What Do Organisms Mean?” website (see below). Those articles are: “Getting Over the Code Delusion,”



These pictures were taken in February, right after a lovely snow storm and right before a course for farmers and apprentices, which was the first event to take place in our expanded facilities.

The photos of the interior show the large classroom (800 square feet) and the foyer that connects the new wing to the original building.



“The Unbearable Wholeness of Beings,” and “From Physical Causes to Organisms of Meaning.”

- *Living thinking.* At the annual conference of Western Waldorf Teachers in February at Rudolf Steiner College in Fair Oaks, California, Craig conducted a six-session workshop concerned with “Cultivating Living Thinking in the Sciences.” He also delivered a keynote talk, “The Curriculum: Directive or Living Process?”

- *Evolution.* Craig gave a series of three public talks in Minneapolis, MN, on evolution, sponsored by the Two Rivers Folk School.

- *Genes and evolution.* At the very end of February Steve published on The Nature Institute’s “What Do Organisms Mean?” website his latest article, “Genes and the Central Fallacy of Evolutionary Theory.” At considerable length—and dealing especially with the nature of whole-organism heredity—he shows how the genetic foundations of existing evolutionary theory have crumbled, leaving a hollow logical structure in place of a real theory. The article is accompanied by a summary, a set of brief excerpts, and five shorter, supportive pieces. You’ll find them all at the “What Do Organisms Mean?” website: <http://natureinstitute.org/txt/st/org>.

- *Light and darkness.* Henrike traveled to Florida in March and was the main presenter at the 9th annual Florida Anthroposophy/Waldorf Education Conference. The theme of the weekend conference was “The World of Light, Color, and Darkness: Contemplative Goethean Practice.” She held an introductory talk, “Inner and Outer Light,” that was followed by a three-part workshop on the conference theme. The conference was held at a retreat center near Tampa.

- *Biology for the living.* In March at the International Refresher Week for high school teachers at the Institute for Waldorf Education in Kassel, Germany, Craig gave a 10-session course on “A Biology Worthy of Life” that focused on how teachers can work with students in developing dynamic and relational ways of understanding biological phenomena such as heredity. He also gave a keynote talk to all conference participants—over 200 teachers from more than 20 different countries—on “Living Thinking.”

- *Seeing afresh.* In April Henrike and Craig were invited to hold a half-day workshop on “Seeing With Fresh Eyes” for staff of the Center for Discovery in Harris, New York. The Center “offers individuals with a range of disabilities and medical frailties—and their families—innovative educational, clinical, residential, and social and creative arts experiences designed to enrich their lives through personal accomplishment.”

- *Language of the embryo.* The Spring, 2013 issue of the *Journal of Pre- and Peri-natal Psychology and Health* contains Steve’s article, “The Eloquent Embryo.” The article was stimulated by a 2007 workshop conducted by Dutch embryologist, Jaap van der Wal at The Nature Institute, and was Steve’s attempt to report on a body of research relating to the expressive language of the developing embryo. That language has a lot to say about the age-old question, “Where do we come from?”

The article is also available on our website: <http://natureinstitute.org/txt/st/mqual/embryo.htm>

