

In Gratitude

I met Georg Maier for the first time in 1981 during a course for young science teachers in Stuttgart, Germany. In one particular class session he laid out for me—as I now know—the foundation for a radical transformation in my approach to optics and the phenomena of the visual world, and, more generally, to all of natural science.

What did we do that afternoon? Imagine a group of young teachers and students sitting in a circle in an otherwise bare room with just one rather small, rectangular window. Georg asks us to pay attention to the various shades of darkness and brightness on walls and ceiling. It is dark in that corner up there and much brighter here on the wall opposite the window. We learn to see the window from any spot in the room in its visual size and shape: either we walk to a spot and look at the window from there, or we imagine it as seen from that spot. From the dark corner, the window appears as a thin sliver; from the wall opposite, it is a much larger rectangle.

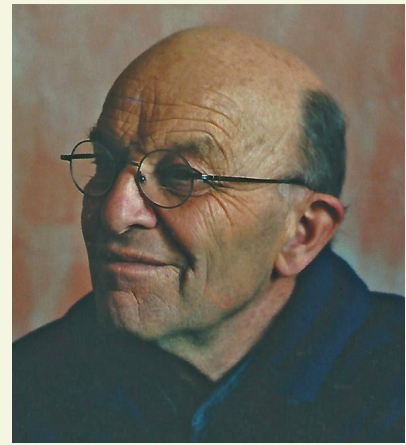
Why were these simple observations—led by a highly trained physicist—so powerful for me? Through my middle school, high school, and college education I habitually explained and understood optical phenomena in the usual ways: I referred shadow, mirror, and refraction phenomena to the ray model of light; diffraction, polarization and color phenomena to the wave theory; and I grasped other phenomena, such as light absorption or emission, with the aid of quantum mechanics. In this one afternoon session, Georg introduced us to an experience and understanding of illumination that made no use of any of these conceptual frameworks. Rather, we looked and learned to see.

When we planned the new addition to the building of The Nature Institute in 2011, I made use of what I had learned that day in Stuttgart. I poured over the completed architectural drawings and imagined the illumination of each room. That our staircase and downstairs foyer today has good daylight owes to the fact that I then discovered the need for another window, and we changed the plans.

From that first meeting with Georg, it was for me a long path to unlearn what I had learned before. In the early years of The Nature Institute, I began working with Georg's book *Optik der Bilder*, which was first published in 1986. This book was a last minute purchase before I emigrated to the United States twenty-four years ago. It stayed put on my book shelf until after The Nature Institute was founded in 1998. With the help of this book—and with the help of other authors, Goethe being one of them—I found a new relationship to the visual world and its many manifestations that has been continuously nourished by growing interest and joyful wonder, new observations and discoveries, and a deepening understanding.

This work has led to numerous workshops and courses at The Nature Institute and elsewhere in the past decade. I hear from participants that for them also interest is roused and eyes are opened, and a respectful and joyful experience of the colorful world is called forth. That is not a small thing. It can be life-giving.

I am deeply glad that Georg knew that his life's work was bearing fruit in America—for instance also in the work and teachings of his colleague Michael D'Aleo, a physics teacher and trainer of physics teachers. As a teacher himself, Georg was not always easy to understand; it was often difficult to appreciate what he was pointing to. His above-mentioned book, like others of his published writings, is not easy to read. But it is worth the effort. *HH*



GEORG MAIER (1933 - 2016)

Georg Maier was born in Stuttgart, Germany, on May 26, 1933. With his mother and older sister he emigrated to Great Britain in 1939, where he went to the Wynstones Rudolf Steiner School in Gloucester. After the war, when his family was reunited in Germany, Georg and his sister attended the Waldorf School Uhlandshöhe in Stuttgart. Georg studied physics and earned his Ph.D. in Munich in 1960. He did research on neutron diffraction at the nuclear reactor in Jülich, Germany, before he took a position at the Natural Science Section at the Goetheanum in Dornach, Switzerland, in 1969. There he worked for more than 30 years as a scientist and teacher. He enjoyed his connections to America and found colleagues in Stephen Edelglass, Ron Brady, and Michael D'Aleo.

Georg passed away in Dornach on June 14, 2016.

Georg Maier's book, *An Optics of Visual Experience*, is available in a sturdy paperback edition for \$35 from Adonis Press at <http://adonispress.org/product/optics-visual-experience/>.

Also you will find another book, *Being on Earth: Practice In Tending the Appearances*, available free on our website: <http://natureinstitute.org/txt/gm/boe/>. Chapter 5, authored by Georg, contains more about his life training as a physicist.