Editorial

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> "There is a delicate empiricism that makes itself utterly identical with the object, thereby becoming true theory. But this enhancement of our mental powers belongs to a highly evolved age."¹

Goethe wrote these words at the age of eighty, just three years before his death in 1832. They are his mature articulation of 50 years' work to establish an explicitly participatory, phenomena-based scientific practice. While some of Goethe's discoveries may have entered mainstream science, his methodology has not. And yet Goethe's approach has also never been fully ignored. Repeatedly it has been the focus of vibrant discussion about the nature of science. Many giants of modern science have found it necessary to grapple with Goethe the scientist—Darwin, Haeckel, Helmholz, Sherrington, and Heisenberg, to name a few. Thousands of scholarly articles and many volumes have addressed Goethe's approach. And yet, Goethe is a perennial outsider. I think it is fair to say that within the broader contemporary scientific community his efforts are virtually unknown or deemed irrelevant to the advancement of science.

But the very fact that Goethe's way of doing science ever and again becomes a topic of discussion—as this volume testifies—indicates that he has hit a central nerve concerning the problems and tasks of human knowledge. When we become aware of the boundaries and limitations of the conventional scientific approach and search for orientation, Goethe's work remains a bright and unique source of light illuminating a pathway into new terrain.

Although Goethe is often portrayed in opposition to science, he viewed his efforts as a further refinement of scientific method. What has made this Goethe-inspired evolution of science both enticing and forbidding is that it involves, in Frederick Amrine's words, "the metamorphosis of the scientist."² Goethe knew that his delicate empiricism entailed "an enhancement of our mental powers" and for that very reason it still remains in its infancy. It entails becoming aware of the "object" view of the world that so strongly informs both our everyday and scientific thinking. When we leave this "natural attitude" (Husserl) behind, we can begin to see how we participate within the world and then work to gain new bearings for our thinking and perceiving. This is the path—both arduous and exhilarating—that Goethe trod.

The essays in this volume reveal each author's individual journey into this new terrain. A rich picture of the fruitfulness of Goethe's approach unfolds. Our hope is that this issue will stimulate further work to elucidate Goethe's "delicate empiricism" and, above all, encourage its ongoing practice. It is the practice itself that brings about transformation, a transformation our culture of knowing sorely needs.

Notes

¹ Written by Goethe (1749-1832) in 1829 and included in the chapter "Reflections in the Spirit of the Wanderer" in his novel *Wilhelm Meister's Journeyman Years*. Quoted in Miller, D. (ed). (1995). *Goethe: Scientific studies* (Collected Works Vol. 12). Princeton: Princeton University Press, p. 307.

² Amrine, Frederick. (1998). The metamorphosis of the scientist. In Seamon, D. and A. Zajonc (eds.) *Goethe's way of science: A phenomenology of nature.* Albany: State University of New York Press, pp. 33-54.