

The Marriage of Sense and Thought

Stephen Edelglass, et. al.

(Reviewed By Susan Howard & Douglas Sloan)

Technology has, of course, existed since the time of the Pharaohs. We can admire the skill of the goldsmiths, enamelers and glassworkers, as well as the power of the pyramid builders. Improvements in the trades were certainly made from time to time. However, the rate of technological change since Galileo has been so great that modern technology cannot be compared with anything existing before. Why did the isolation of the individual from the environment bring about such a dramatic spurt in technological development?

We find the answer to this question if we compare the activity of the craftsman with that of the “natural philosopher” of the seventeenth century. The craftsman intimately connected with his work. He may experience while hammering how a change in direction of the blows makes the work easier and he might invent a new form of support for the work. While assembling a structure, he might see how an additional member could increase the strength. New inventions and improvements came about because the craftsman was dealing directly with his work. Contemplating the piece while in bed at night, he imagined how the working conditions or the product could be improved.

The new science practitioner worked quite differently. Having learned to derive general principles and to picture idealized situations which never occur in reality, he was able to manipulate these principles and pictures in the privacy of his isolated mind where there were no constraints to inhibit changes. He was much freer than the craftsman to imagine new possibilities and new arrangements of well-known forces. Although an invention can be made relatively easily in the mind, everyone who has made one knows how long it usually takes to make it work in practice. Nevertheless, the human mind’s ability to work on problems theoretically opened up new and radically different methods of bringing about change in the world.

Excerpt: The Rise of Technology and the Concept of Energy from *The Marriage of Sense and Thought*

The Marriage of Sense and Thought: Imaginative Participation in Science, part of Lindisfarne Press’s RENEWAL IN SCIENCE series, is the newly revised and retitled edition of *Matter and Mind*, originally published five years ago. It is the fruit of more than a decade’s collaboration among four authors - Stephen Edelglass, Georg Maier, Hans Gebert and John Davy - seeking to develop a viable phenomena-based methodology of science. They succeeded in developing a methodology based on direct experience rather than on the usual looking behind the phenomena that leads to treating pseudo-phenomenal constructs as if they were real.

This is a book of vital interest to Waldorf teachers - both high school and class teachers - because it delineates a pedagogically appropriate basis for science teaching. A number of well-known scientists have also praised the book’s phenomena-based methodology, recognizing the possibility it holds for healing the alienation between human beings and the natural world.