A hundred years ago, as the nineteenth century drew to a close, scientists around the world were satisfied that they had arrived at an accurate picture of the physical world. As physicist Alastair Rae put it “By the end of the nineteenth century it seemed that the basic fundamental principles governing the behavior of the physical universe were known” (Rae, 1994). Indeed, many scientists said that the study of physics was nearly completed: no big discoveries were to be made only details and finishing touches.

Michael Crichton from the introduction to the 1999 science fiction book, *Timeline*

This introduction to *Timeline* draws a clear parallel to work in the evaluation of science and technology education programs. To begin this
journey, we drafted a prospectus that looked as though it could become a catalogue of basic and well-known parameters of evaluation—perhaps a bit pedestrian, but nevertheless a useful compendium of important knowledge. As the 19th Century scientists were hopelessly wrong so were we.

The prospectus for the book was very general in nature permitting flexibility in approaches to assigned topics. To our good fortune and that of you, the readers, chapter authors would not let us get away with such modest initial thinking, they just ran away with ideas. The authors collectively demonstrate that the need for evaluation in science and technology education continues to be enormous. They consistently identify aspects of these two areas in which saying that there is limited evaluation taking place would be a serious overstatement. They describe a literature-base that is frequently and even frighteningly sparse with great opportunities for major breakthroughs in how to deliver programs as well as how to evaluate them. They concretely illustrate the necessity of carefully defining and describing the entity to be evaluated while at the same time making us aware of the difficulty in regard to the “under the surface” (almost hidden) aspects of science process, information technology, and systemic reform to name a few topics.

Science and technology education are in reality complex phenomena embedded in multifaceted, intense, and complicated educational contexts. Identifying, separating out, and isolating features of programs and their effects is not easily done. Methodologically, the authors are virtually emphasizing the use of multiple sources of data and multiple methods to provide documentation regarding how innovative programs are being implemented and in determining their outcomes. Moreover, they routinely employ, either explicitly or implicitly, theoretical models or frameworks that guided their efforts thereby underscoring the importance and the influence of such structures on the design and conduct of evaluations. The chapters are exciting and open new possibilities for carrying out evaluations, and for conducting research on evaluation in addition to the substantive dimensions of science and technology education.

In edited volumes such as this one, a summarizing chapter written by the editors is usually the last one in the text. In this case the order is reversed, an action in accord with the original plans for the book. What propelled our thinking, why did we choose to go this way? The reasoning was as follows. All of the chapter authors, except for the two co-editors, did not know what the others were writing and in most cases they were not personally acquainted with each other. They were given a general topic and were free to deal with it in any manner they chose. Suppose that from this nearly orthogonal work, similar issues and themes were generated without understanding or prior knowledge of what others were doing. Would their