When teaching introductory courses at the University of Chicago, Richard McKeon would often comment that “any problem pushed far enough is philosophic.” His point was that philosophizing is not just the technical province of academic professionals but an important aspect of all thoughtful undertakings, whether or not it is recognized as such. The present volume explores the consequences of this idea in the disciplines of the natural sciences, with particular focus on physics. It is the first of a projected three volumes, the succeeding two of which will treat, respectively, the social sciences and the humanities. All three are based on courses McKeon taught. He was widely regarded as an extraordinary teacher, both in his lectures and in his exposition of texts during discussions, and these volumes will present a uniquely detailed record of his educational practice. Focusing on understanding recurring issues in the disciplines and fundamental assumptions present in arguments about those issues, each will provide an introduction to philosophy as McKeon conceived of it. Possibly most important, both individually and as a whole they will provide an introduction to McKeon’s philosophic and historical semantics. Previously appearing in only the briefest of sketches, this is the interpretive approach on which, in one form or another, he based his own philosophic inquiry. Moreover, it is the semantic schematism which for years his students and colleagues have found to be so powerful in making meaning of the complexity of intellectual arguments not only throughout the history of Western thought but also across the whole spectrum of intellectual inquiry. In short, these volumes will introduce to those who did not personally know him something of McKeon’s remarkable contribution to education and philosophy.

A few words about the provenance of the present volume are in order. On Knowing—The Natural Sciences grows out of the first of a series of three courses McKeon invented and taught at Chicago in the 1950s and 1960s. The other two courses, which all comprise the succeeding volumes, covered the social sciences and the humanities. McKeon developed this set of courses to
provide an introduction to the interdisciplinary program of the Committee on the Analysis of Ideas and the Study of Methods, which he helped found in 1945. The natural sciences course was first taught as Ideas and Methods 201, “Concepts and Methods: The Natural Sciences,” in the autumn quarter of 1951 and he repeated it in the autumns of 1953, 1955, 1956, 1958, 1959, and 1961. In 1963, in connection with a reorganization of the curriculum (see his remarks about this change in note 1 for lecture 1), the revised course was offered with the same title but listed as Ideas and Methods 211. This year was the last time McKeon taught the introductory natural sciences course, and it is this last version which is presented here.

The lectures and discussions herein are based on transcriptions of a collection of tape recordings made by an unknown individual or individuals in 1963. They have been in the possession of one of the editors, David Owen, since the late 1960s. Because the tapes were recorded informally on inexpensive equipment, they are generally of poor quality. Despite careful rerecording with a parametric equalizer and playback through a ten-band equalizer, the editors have had to interpolate individual words and phrases, especially those of students in the discussions, in the context of the development of an idea. Passages utterly unrecoverable by these methods have been eliminated from the text, omissions which are indicated in the notes.

The editing of both the lectures and the discussions has been greatly assisted by the extensive collection of notes kept by McKeon in preparation for his classes. A virtually full set of notes exists for each of the eight versions of the lectures for the natural sciences course. McKeon was obviously meticulous both in his preparations for class and in his preservation of the materials so generated, which he frequently recast for use in later, sometimes indirectly related, courses. An example of how fully developed his lecture notes were is the set prepared for lecture 10 which is contained in appendix E.

The editing here has been further supported by a set of extensive notes kept by one of the students who took this course for credit, Douglas Mitchell. All the figures and tables that appear in his notes are included here. Additional figures and tables, based both on McKeon's spoken remarks as well as on the lecture and discussion notes which he prepared for class, have been prepared. Any figures and tables that do not exist in Mitchell's notebook have been so identified in the notes.

When taken together with the forthcoming works on the social sciences and the humanities, the lectures presented here form the definitive elaboration of McKeon's schematism of philosophic semantics. The schematism itself was never published during his lifetime, though a typescript copy circulated among his students and colleagues at Chicago from the mid-1960s on. It finally appeared posthumously in "Philosophic Semantics and Philosophic Inquiry" in
ing of this volume for the Press as well as provided his complete student notebook to supplement the tape recordings of McKeon's course. Most importantly, though, he has been absolutely essential in both planning and executing this project; without his suggestions and support, this aspect of McKeon's work would almost certainly never have had the opportunity to receive a public hearing.

— The Editors