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WRITE: *Professional Staff Appointments*

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tory treatise on the analysis of stationary stochastic processes, and it is to be hoped that they will publish a companion volume of this nature so that physicists as well as statisticians may appreciate the recent advances in this field.

Physics in my Generation. By Max Born. 232 pp. Pergamon Press, London and New York, 1956. \$6.50. Reviewed by Charles Süsskind, University of California.

A collection of nineteen papers, lectures, and book introductions, all but six of which were written after World War II, and all but two of which have been published previously. The two exceptions, which are also among the two longest contributions, are a lecture on "Physics and Relativity", presented at the International Relativity Conference in Berne in 1955; and "Development and Essence of the Atomic Age", a public lecture that Professor Born gave at various meetings in Germany during the same year. The first lecture comprises a brief review of the development of physics during the fifty years since Einstein's papers first appeared (a period that also coincided with the span of Born's professional activity), and provides some interesting footnotes to the history of modern physics, particularly with regard to the relationship between Einstein and Born over most of this very exciting era. Thus, Born takes issue with his erstwhile Edinburgh colleague, Sir Edmund Whittaker, who (in the second volume of his monumental *History of the Theories of Aether and Electricity*) considered the special relativity theory to be due largely to Poincaré and Lorentz; Born allies himself squarely with the multitude who would ascribe the major innovation to Einstein. The other paper contains some more or less profound comments on the study of history, in which Born wonders whether Toynbee's speculations about uniformity in history should not be interpreted in the light of the laws of statistics—a suggestion that might well serve as a starting point for a whole lot of PhD theses in history. Born argues that a trained scientist cannot go along entirely with the ideas of Spengler and Toynbee, but neither can he accept the just-one-damn-thing-after-another school of historical interpretation.

But perhaps the most interesting facet of this collection is the contrast between Born's 1921 introduction to his *Einstein's Theory of Relativity* and the 1951 postscript to his *Restless Universe*, the two essays that constitute the opening and closing selections. "In 1921 I believed," Born reminisces, "that science produced an objective knowledge of the world . . . superior to other, more subjective ways of forming a picture of the world—philosophy, poetry, and religion; and I even thought the unambiguous language of science to be a step towards a better understanding between human beings.

"In 1951 I believed in none of these things. The border between object and subject had been blurred, deterministic laws had been replaced by statistical ones, and although physicists understood one another well

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enough across all national frontiers they had contributed nothing to a better understanding of nations, but had helped in inventing and applying the most horrible weapon of destruction."

Nevertheless, the *leitmotiv* of Born's postwar essays is hope, not despair, and the belief that science may ultimately prove to have played as important a part in the raising of moral standards as it has already played in changing the material world.

The book reads very well and only rarely suffers from too literal translation. Max Born, who celebrated his 75th birthday last December, has had a distinguished career—Göttingen, Berlin, Frankfurt, back to Göttingen; then, with the advent of Hitler, Cambridge, and finally Edinburgh, where he remained until his retirement in 1953. He now lives in his native Germany, and evidently devotes a major part of his efforts to stirring up the consciences of his fellow scientists, urging them to take a more active part in the making of governmental policy. It is a pity that his characteristic modesty has constrained him to include far less autobiographical material in the present volume than another man of his attainments might have been impelled to include.

Electrical Measurements and their Applications. By Walter C. Michels. 331 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1957. \$6.75. Reviewed by H. Y. Carr, Rutgers University.

An undergraduate course in electrical measurements has the responsibility for developing in students both understanding of basic theory and familiarity with commercially available instruments. Such a course must provide students with the opportunity to use not only older standard equipment but also new equipment incorporating recent advances in instrumentation. The remarkable instrument exhibit in New York's Coliseum during the March meetings of the Institute of Radio Engineers indicated vividly the importance and difficulty as well as the excitement of this task.

An up-to-date reference book is a necessity for a laboratory course in this rapidly developing field. The recent publication of *Electrical Measurements and their Applications* by Walter C. Michels is an important contribution to the fulfillment of this need. The author has been careful to point out that this new book is a successor to and not a revision of his earlier text. This is demonstrated by the emphasis he has given to new instruments and to new topics. The transient response of amplifiers, measurements at radio frequencies, transmission lines, and specialized measurements in nuclear physics are some of the new topics. By giving a brief but lucid presentation of the material found in older conventional texts, Michels has been able to add new topics without resorting to an undesirably long book. Quite properly the theory which is given is generally restricted to fundamental questions of instrumentation. The student is expected to obtain specialized details such as those related to circuits from the instruction