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Engineer or Physicist to take part in the development and operation of a 3 BEV Proton Synchrotron. Facilities include a wide range of electronic systems, sophisticated high power systems and cryogenic devices. Will work in close contact with groups performing basic research in particle physics. A broad background in electronics is desired with a solid understanding of physics fundamentals. Position will require irregular hours.

PLEASE SEND RESUME

Concerning education, experience and salary requirements to:

Dr. Lyle Smith, Accelerator Dept.

BROOKHAVEN NATIONAL LABORATORY

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HELP WANTED

INTERMEDIATE PHYSICIST

SAN FRANCISCO BAY AREA

Northern California research firm seeks Intermediate Physicist who wishes to participate in important weapons research studies. This position requires knowledge of fluid dynamics and shock hydrodynamics, effects of explosions, and general familiarity with nuclear weapons effects. Would prefer man familiar with fast-response transducers and recording systems. U.S. citizenship required.

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ever, these are trivial matters compared to the quality and value of the material for all workers in hypersonic flow.

Quantity and Quality. The Hayden Colloquium on Scientific Method and Concept. Daniel Lerner, ed. 221 pp. The Free Press of Glencoe, Inc. (Crowell-Collier Publishing Co.), New York, 1961. \$4.50. Reviewed by R. B. Lindsay, Brown University.

AN interesting viewpoint regarding different ways of looking upon human experience is that which distinguishes the qualitative from the quantitative aspects. Some have felt (and apparently they have followers even today) that the most effective way to grapple with experience is to understand its "nature" or "essence", i.e., *what* it is, whereas others have consistently taken the attitude that a grasp of quality is not enough: We must not be contented with our understanding of any element of experience until we can answer the question "how much?" In general we may say that the so-called humane studies tend to stress the importance of the qualitative point of view, whereas the sciences emphasize the quantitative.

The second series of Hayden Colloquium lectures at the Massachusetts Institute of Technology was devoted to an examination of the problem of quality and quantity in various intellectual disciplines. These lectures and three other related ones have been gathered together in the volume under review, with a summarizing introduction by the editor. Seven scholars and scientists present their views on the comparative roles of quality and quantity in mathematics, quantum physics, psychology, neurophysiology, politics and law, and finally economics. The coverage is generous and the points of view so diverse that it is difficult to find much coherence in the book as a whole, one of the common difficulties associated with collections of this sort. For example, it is clear that to the social scientist quantification means essentially the representation of experience in terms of numbers. This was indeed the standpoint of classical physics insofar as the numbers represented the results of the measurement of so-called "quantities". In quantum physics, on the other hand, as the article by Weisskopf in this collection emphasizes with great clarity, the meaning of quantification is essentially a morphological one, i.e., associated with the existence of characteristic forms or patterns in the description of phenomena, particularly on the atomic level. The stationary states of atoms are a good illustration. Similarly as Kemeny points out in his article "Mathematics without Numbers", modern mathematics is becoming in certain lines less and less numerical, and it may well be that these brands of mathematics will have great value as a language with which to describe experience.

Most of the articles are accompanied by brief bibliographies providing guides for further reading. The book strongly suggests the importance of a systematic large-scale treatment of the subject under discussion.