NALGENE Automatic Pipet Washing

However, good friends of the section in the AAAS headquarters and in other sections lent support, and at the annual meeting Section L held two sessions on Sunday, cosponsored by Section Np (Pharmacy) and the Philosophy of Science Association, and one session on Monday, cosponsored by the Philosophy of Science Association.

The Sunday morning symposium, “Can Science Provide an Ethical Code?”, presided over by Hermann J. Muller, was exceptionally well attended. Because Henry Margenau was ill, his paper was read by Lewis K. Zerby. The answer to the symposium question is “yes,” as was ably argued by the speakers, who included Chauncey D. Leake and Richard Rudner. The prepared papers were followed by general discussion.

Each of the three very different papers of Sunday afternoon—on Albertus Magnus’ scientific method by Father William H. Kane, on pharmaceutical manufacturing by K. K. Chen, and on the thermometric scale by D. J. Lovell—was followed by questions which served to bring further elucidation from the speakers. Norwood Russell Hanson presided.

On Monday morning, a view of man-machine systems, presented by George O. Wright, was followed by a survey by Dorrit Hoffleit of astronomy’s development in the 20th century and by a talk by Karel Hujer describing the emphasis on dialectical materialism in the treatment of the physical sciences behind the iron curtain. I. Bernard Cohen’s vice-presidential address on “The history of science and the problems of understanding the science of today” concluded the series of papers. C. Doris Hellman presided.

At a business meeting immediately following the papers, regret at Jane Oppenheimer’s illness was expressed, and the names of the new section chairman, Carl B. Boyer, and the new committee-member-at-large, Adolf Grünbaum, were announced. It was reported that a national committee for the history and philosophy of science was being formed under the auspices of the National Academy of Sciences-National Research Council and that this committee would become the adhering body for the International Union of History and Philosophy of Science.

C. Doris Hellman, Acting Secretary

General Systems Research (L2)

Two of the contributions to the symposium, “Organization for Humans, Cells, and Artifacts,” were basically mathematical. A paper by C. Foster, A. Rapoport, and E. Trucco (presented by A. Rapoport) was concerned with the conditions under which Prigogine’s theorem of minimum entropy production could be applied to nonsolated systems of known internal structure. It was shown that, if a minimum exists, certain constraints upon the topological arrangement of the feedback loops are implied. M. Kochen presented a procedure for treating an organized system with discrete, synchronized information transfer between its parts, formalizing certain aspects of cooperative group behavior so that it is possible to describe how subunits can be selected and interconnected so as to produce a system with specified behavior.

K. E. Boulding took up the implications of such efforts in his presidential address. He suggested that four levels of systematic knowledge could already be discerned, including (i) purely empirical systems based upon constant interaction; (ii) maps, and blueprints, and plans; (iii) systems used for the design of artifacts; and (iv) theoretical models which explain and predict the “inner workings” of the other systems. General systems research aims at a fifth level—systems of theoretical systems. As these are found, it is expected that marked economies would result in work directed at the first four levels. This should have important consequences in the conduct of the affairs of national states.

As long as the possessors of scarce knowledge were restricted to physical and biological systems, the skills for operating the state could be purely empirical (for example, politics, business, and law) and scientists would perform as specialized experts. But with progress in operations research, administrative science, and other general systems approaches, a conflict may be foreseen between the “folk” culture and the scientific subculture embedded in it.

How do “the people” control the specialists? Democratic theory is based upon the assumption that the kind of knowledge required for government is not scarce or difficult. Are we doomed to another Middle Ages, with Science as the Church and the Military as the King? A growing self-consciousness of science itself as a social system may offer means for resolving such conflicts and preventing such eventualities.

Richard L. Meier, Secretary-Treasurer

Medical Sciences (Section N)

This program was the first symposium on the human integument that had been arranged before an AAAS meeting. The title was “The Human Integument—Normal and Abnormal.” The program was organized as a symposium with four half-day sessions, jointly with the AMA...
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Committee on Cosmetics and the Society for Investigative Dermatology.

The first session was on “The integument as an organ of protection.” In this session considerable attention was given to the cells forming the barrier to absorption of various molecular structures. A very interesting and informative paper by Robert D. Griesemer (Harvard Medical School) outlined in terms of the physical chemistry of membranes some of the problems related to the transfer of molecules across the skin barrier. It was clearly evident from the discussion how anatomical considerations make precise studies of this nature very difficult.

In the second session of the symposium, “Circulation and vascular reactions,” Benjamin W. Zweifach (New York College of Medicine) outlined some very fascinating experimental studies on the hemodynamics of skin circulation and the pharmacological effects produced by toxins and drugs such as epinephrine, which is a well-known vasoconstricting substance, and a very interesting synergistic action between epinephrine and bacterial toxins in tissues which had been depleted of histamine and serotonin was described. Alan C. Burton (University of Western Ontario) reviewed the physiological considerations of cutaneous circulation.

In the third session of the symposium, “Sebaceous gland secretion,” Eugene J. Van Scott (National Institutes of Health) described with beautifully illustrative slides the anatomical structures of the skin and subcutaneous tissues, with particular reference to sebaceous glands. Differences between skin taken from different parts of the body in relationship to the etiology of acne vulgaris were discussed. Allan L. Lorincz (University of Chicago), in a paper describing the biochemical-hormonal aspects of sebaceous secretion, outlined investigations which gave relatively strong evidence that a sebatrophic factor exists in secretions of the anterior pituitary.

In the last session, on the “Pathogenic factors in premalignant conditions and malignancies of the skin,” Raymond R. Suskind (Kettering Institute, Cincinnati, Ohio), discussed accelerator substances in the production of skin cancer, showing how certain chemical substances frequently used as solvents, when employed in proper sequence, considerably potentiate the carcinogenic action of well-known coal-tar hydrocarbons.

ALLAN D. BASS, Secretary

Dentistry (Section Nd)

Two half-day sessions and one evening session were held by Section Nd; the average attendance was 60. Each of the sessions was devoted to discussions of