

*Politics in 1952*. The latest addition to the Brookings political shelf is of modest proportions compared with most of its companions, but its contribution to our knowledge of presidential politics can scarcely be measured on this dimension. In *The 1956 Presidential Campaign*, Charles A. H. Thompson and Frances M. Shattuck have compiled an excellent summary of the major public events which preceeded the re-election of President Eisenhower.

Even the casual citizen must be impressed, if not overwhelmed and dismayed, by the complexities and confusion of presidential politics. The amateur pundit along with the serious student of American politics will appreciate the order and coherence which Thompson and Shattuck bring to their subject. Without omitting any of the major phases of the campaign, they have distilled, summarized, and condensed to present a well-paced account, extending from the election of 1952 through the repeat performance 4 years later. The result is true to the authors' explicit promise, in the preface, "to do a history of a political campaign."

It is less clear that this very readable volume redeems the implied concern, also voiced in the preface, for rigorous analysis of human behavior. Of the many aspects of political behavior, the antics and aspirations of presidential politicians are probably among those least amenable to analysis in terms of the various elegant models now being put forth for the study of decision-making or other phases of elite politics. *The 1956 Presidential Campaign* may provide case material and illustrations for theoretical speculation and generalization, but its major contribution is more likely to be appreciated by the reader interested in contemporary political history.

The professional scholar may be somewhat irritated by the authors' selection of footnotes. Frequently the most public and widely known events are described and then carefully attributed to the *New York Times*, while events not recorded by the journalists and interpretations obviously based on little known fact are presented without documentation. Both the scholar and the amateur politician may detect an occasional overtone of partisanship in the authors' choice of words and emphasis. One would guess that Thompson and Shattuck are either Stevensonian Democrats or else a pair of badly over-compensating followers of Mr.

Nixon. It may be only this reviewer who thinks that extended direct quotations of Mr. Eisenhower's informal remarks are a disingenuous form of unsympathetic criticism (see, in particular, page 278), but the use of a subtitle such as "Nixon's many masks" (page 289) is less open to interpretation.

Such minor cavils should not obscure my sense of the many good qualities of the book. It provides a most useful chronicle of the events of the campaign. It also records the most important facts of convention and election, with detailed presentation and some analysis of the votes cast in each. Finally, *The 1956 Presidential Campaign* captures the full spirit of its subject for future generations who will have forgotten, or never have experienced, the delight and the despair of the second Eisenhower-Stevenson contest.

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**Automation and the Worker.** A study of social change in power plants. Floyd C. Mann and L. Richard Hoffman. Holt, New York, 1960. 272 pp. \$4.50.

A power company built a new automated plant, "Advance," in a rural town. Elaborate questionnaires were given workers in Advance and in one of the older plants, "Stand." This text presents and interprets some hundred tables of comparative data obtained from these questionnaires.

Many variables made it difficult to create a reliable research design. The plants differed in managerial climate, work-force characteristics, and other nontechnological respects. The fact that there were fewer supervisory levels at Advance appeared to increase the status of the foremen and to improve communications.

Most workers at Advance had been promoted from older plants to jobs with enlarged responsibility, more prestige, improved working conditions, and higher wages. It was hardly surprising to find that workers at Advance had increased job interest and job satisfaction; since management was "paying attention" to Advance, the discovery of lowered job satisfaction at Stand might also have been expected.

Advance was not without its own problems. The pressure of management for early results increased work tension.

The interdependence of operations required centralized maintenance, which aroused conflict. The workers were dissatisfied with second and third shift arrangements. There is a full chapter, "Continuous operation; patterns and effects," which highlights the shift problem as a generally unsolved issue with which all management must become concerned. The increased capital investment per employee in automating production or data processing will inevitably increase the number of companies and human beings affected by shift work.

For companies about to introduce new processes, Mann and Hoffman suggest a conceptual viewpoint which anticipates effects on the total organization, not merely on the point of change; which recognizes that people do not adapt quickly to new problems or new skills; and which recasts traditional training methods to develop intellectual, rather than motor skills, as well as greater understanding of the role each new job plays in the interrelated production complex.

The authors concede that the effect of technical changes on the social system is not a new concept, but state that "planning continues to focus on engineering design and to ignore the psychological and sociological factors."

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**An Introduction to Kansas Archeology.** Waldo R. Wedel. With a "Description of the skeletal remains from Doniphan and Scott counties, Kansas," by T. D. Stewart. (Bureau of American Ethnology, Bulletin 174.) Smithsonian Institution, Washington D.C., 1959. xvii + 723 pp. Illus. \$3.

Although titled "an introduction," this monumental volume is the most complete archeological synthesis yet made for any state in the union. Its author has worked on the archeology of the Central Plains for nearly 30 years; for most of that time he has been its most outstanding authority. The present volume is based on Wedel's field work in Kansas during 1937, 1939, and 1940 for the U.S. National Museum; but in order to make the record for the state as complete as possible, he has compiled numerous bits of evidence from now-obscure sources reaching back into the 19th century, on the one hand,

and from work done by himself and others since 1940, on the other. The result is a beautifully organized and complete record, with the original data clearly separated from the author's scheme of interpretation.

Wedel is more than a supremely competent archeologist; he is one of the rare students of the interrelationships of man and environment who can separate fact from fancy. Beginning with a study of natural environment and climate in Kansas, he proceeds to a thorough examination of documentary data on the known tribes of Kansas: the Kansa, Osage, Pawnee, Wichita, Plains Apache, Kiowa Apache, Kiowa, Comanche, Cheyenne, Arapaho, and Padouca. In historic times some of these tribes were purely bison hunters, some were agriculturalists, and some combined these economies. As in most parts of the United States, it is difficult to relate certain tribes to the archeological past, but Wedel handles these problems with his usual consummate skill.

Thus, whether the author is discussing the purported association of artifacts with the Pleistocene fauna at Russell Springs, the ceramic or agricultural complexes which may be related to eastern "Woodland" cultures, or the problems of identifying historic "Quivira" and "El Cuartelejo," we see the same careful sifting of evidence and lucidly stated opinions, not to mention his greatly detailed descriptions of the sites he personally excavated.

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**Information Processing.** Proceedings of the International Conference on Information Processing, UNESCO, Paris, 15-20 June 1959. Oldenbourg, Munich; Butterworths, London, 1960 (order from UNESCO Publications Center, New York). 520 pp. Illus. \$25.

This conference, the first international conference devoted to information processing, was sponsored by UNESCO, and it brought together approximately 2000 experts on computers and information processing, representing 39 countries. Howard Aiken, the director of the computation laboratory at Harvard University, was president of the conference; Pierre Auger served as the secretary-general.

The papers and symposia at the conference were on subjects in the following categories: methods of digital computing; a common symbolic language for computers; automatic translation of languages; pattern recognition and machine learning; logical design of computers; and computer techniques of the future.

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**The Biology of Marine Animals.** J. A. Colin Nicol. Interscience, New York, 1960. xi + 707 pp. Illus. \$14.

Although the theme of this book is ecological, its content is mainly physiological. It is concerned with the physiology of the solutions made by marine animals to the problems presented by their environment.

The introductory chapter summarizes the properties of the marine environment which impinge upon vital processes. Most of the others deal with comparative physiology and, in arrangement and content, resemble Prosser's *Comparative Animal Physiology*. The two books have eight chapter titles that are almost identical.

Water, ions, and the *milieu interne* are taken up first, then respiration and digestive functions. Here, for example, although there is overlap with Prosser, Nicol's emphasis is more on feeding mechanisms and functional morphology, less on enzymes and intermediary metabolism.

A long section of three chapters is devoted to sensory physiology, transmission, and effector mechanisms. Pigments, color change, and bioluminescence are treated in the next three chapters.

Chapter 14 departs from comparative physiology to deal in a well-rounded way with associations. These are categorized as commensalism, symbiosis, and parasitism, but Nicol emphasizes that these are stages in a spectrum of relationships between closely associated organisms.

Finally, an account of skeletons, shelters, and special protective mechanisms is given. Here as elsewhere the discussion is in a phylogenetic framework which does not discriminate against marine vertebrates other than fishes.

All of the chapters are well docu-

mented reviews. References, mainly through 1956, are conveniently grouped with each chapter and occupy 80 pages or 12 percent of the book. A sample of 200 revealed 84 percent to be in English and 70 percent to be from British or American sources; only 1.5 percent were from the Japanese literature.

Specialists will doubtless find their own research areas slighted in favor of less exciting aspects of marine zoology. However, Nicol has attained a commendable balance of the various ecological aspects of comparative physiology; and the coverage conveys the fascination of observation and experiment to those for whom the book is mainly intended—young biologists making their first serious excursion to the sea and undergraduates specializing in marine zoology. However, even the brighter among these readers will find the book meaty. Knowledge of comparative morphology and general biology are expressly presumed, and some familiarity with the generic names of the better known invertebrates is helpful.

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**The Story of Engineering.** James Kip Finch. Doubleday, Garden City, N.Y., 1960. xxvii + 528 pp. Illus. \$1.45 (\$1.65 in Canada).

The increasing popularity of books dealing with the history of engineering and technology is pointed up by the appearance of this paperback original (meaning that there is no hardback edition). In this book, 200,000 words of text and 32 pages of nicely lithographed illustrations are used to tell the story of the construction of all kinds of structures and machines from the earliest times, in Egypt and Mesopotamia, nearly to the present, in Western Europe and the United States.

James K. Finch, Renwick professor emeritus of civil engineering and retired dean of the school of engineering at Columbia University, has for many years pursued as an avocation the study of engineering history; he has published one other book, *Engineering and Western Civilization* (1951), and numerous articles on various aspects of the subject. He is one of a very few engineering teachers who have found interesting and relevant the history of their profession