such as India and Pakistan, where more than two-thirds of production is for communal use and lies outside the market; the neglect of the community development programs which are proving so successful in so many of the developing countries; the treatment of increased capital investment per capita as the determinant of per capita growth in income; the absence of any discussions of the role of development planning; and the exclusion of the balance-of-external-payments problem, which so seriously plagues most countries which are seeking more rapid development—all these aspects of Leibenstein's book indicate how partial the analysis is and how little it grapples with the real problems of economic growth, however successful it may be in diagnosing economic stagnation.

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A Frontal Section Anatomy of the Head and Neck. Otto F. Kampmeier, Arthur R. Cooper, Thomas S. Jones. University of Illinois Press, Urbana, 1957. xii + 25 plates. $15.

The authors have prepared a clear, accurate, and well-labeled atlas showing the frontal-section anatomy of the head and neck. This should be a useful reference book for surgeons and others concerned with the detailed topographic anatomy of the regions dealt with. It shows the anatomy of the anterior faces of 20 frontal or coronal sections through the head and neck to the level of the cricoid cartilage and seventh cervical vertebra. The original sections, each about 1 cm thick and evenly spaced, were cut fairly symmetrically through a young adult negro specimen.

The plates are natural size. In their preparation, photographic enlargements of the sections were reworked and clarified by author-artist Tom Jones. Bones are colored with a yellow overtone, but other structures are uncolored. The various other anatomical structures—nerves, vessels, muscles, and so on—are clearly depicted, and the labeling is quite complete. Except for the temporal fascia, however, fascial planes of the head and neck were ignored. In addition to the 20 frontal sections, there are helpful reconstructions showing the front and side views of the skull, a midsagittal view, and lateral views of the arteries and veins.

The introductory pages include notes on the preparation of the sections and plates and historical notes on the section approach to anatomy, with special concern for frontal sections.

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Quelques Problèmes de Chimie Minérale. Rapports et discussions publiés par les Secretaires du Conseil sous les auspices du Comité Scientifique de l'Institut. R. Stoops, Ed. Institut International de Chimie Solvay, Brussels, 1957. 544 pp. Illus. F. 590, paper; F. 675, cloth.

This book contains 12 papers dealing with problems in modern inorganic chemistry, presented at the 10th Congress of Chemistry held at the University of Brussels in 1956 under the auspices of the Scientific Committee of the Solvay International Institute of Chemistry. The value of the papers is enhanced by the inclusion of detailed discussion. Five of the papers are in French, and seven, in English. Much of the discussion is also in English. For those interested in the modern phases of inorganic chemistry, this published work should be extremely valuable.

The papers, presented by leading authorities from France, England, Denmark, the United States, and Sweden, deal with such subjects as the complex compounds of the transition metals; physical chemistry of some nonstoichiometric phases; nonstoichiometric organic compounds; absorption spectra of complexes with unfilled *d*-shells; application of the screening theory of chemical reactions involving nonmetallic solids; applications of the crystal-field theory to problems of transition-metal chemistry; problems of solid-state chemistry; and the influence of adsorbed gases on the reactivity and stability of surface crystalline lattices.

Included in the book are pertinent features about the institute, the composition of its administrative committee, a list of those who participated in the congress (which includes members of the scientific committee, the members who gave the papers, invited members, various secretaries, and invited auditors), the speech of the president of the institute, the banquet address of the president of the administrative committee, the speech of the president of the congress, and the closing speech.

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The Galactic Novae. Cecilia Payne-Gaposchkin. North-Holland, Amsterdam; Interscience, New York, 1957. 336 pp. Illus. $8.50.

About four hundred years ago Tycho Brahe wrote, "all philosophers agree, and facts clearly prove it to be the case . . . that the heavens and the celestial bodies in the heavens are without increase or diminution, and that they undergo no alteration, either in number or in size or in light or in any other respect" [quoted by J. B. Irwin, *Sky and Telescope* **16**, 544 (1957)]. Yet, it was Tycho himself who, in 1572, observed in the constellation Cassiopeia one of the rare cataclysmic "alterations" in a star of our galaxy —a supernova explosion in which a previously unknown (and probably invisible) star suddenly blew off a large fraction of its mass with a velocity that must have been of the order of several thousand kilometers per second and that raised the apparent brightness of the star until it rivaled Venus and could be seen in full daylight. We have no knowledge of the brightness of the star before its outburst. But at the present time there is no star in the position of the supernova brighter than about the 18th magnitude. The decline from maximum brilliance to the present postnova stage must have corresponded to at least 22 stellar magnitudes, or a factor of almost one billion. There is, however, in the region of the supernova a ragged-looking patch of turbulent nebulosity which emits not only visible light but also a large amount of long-wave radiation; it is, in fact, a conspicuous source of radio radiation. By analogy with the better known supernova of the year 1054—the Crab Nebula—it is reasonable to conclude that the radiation of the remnants of Tycho's supernova is, at least in part, of the "synchrotron" type.

While a supernova may appear in a single galaxy at a rate of one in several hundred years, the less spectacular normal novae appear at a rate of several dozen per year. Such a nova may suddenly increase in brightness by a factor of about 10,000; and the velocity of the ejected gas (about 0.00001 of the mass of the star) is more moderate—of the order of a few hundred kilometers per second.

All types of novae are now believed to represent particular stages in the evolution of old and massive stars which have exhausted most of their nuclear energy sources and are in the process of readjusting themselves to the state of "white dwarfs," a process that must involve a drastic reduction in the mass of the star.

Cecilia Payne-Gaposchkin's new book is a comprehensive summary of everything that is now known about these stars. It describes and coordinates the observations made by hundreds of astronomers during the past nine hundred years, and it illustrates the enormous difference between the research methods of the astronomers and those of other scientists. The phenomenon of a nova is not only a relatively rare occurrence, it is also one of short duration. An individual astronomer may succeed in observing its brightness or its spectrum on only a few