new technologies, new settlement patterns, increased population, and new forms of social organization. These developments were largely haphazard—so much so that, like modern man, prehistoric man usually wasn't aware of what was really happening to him.

The first great step forward was man's emergence from the animal world into the world of culture—that is, into a world in which imagination created new tools and new ideas that transformed the environment. A second major step was taken with the emergence of literate food-producing societies brought about by the domestication of animals and plants, population growth, and the creation of writing. The third and most recent step, which is beyond the scope of this book but which is part of the same story, is the industrial-atomic revolution and present-day population explosion.

Each of these events has radically altered the direction of man's development, initiating vast changes in his relationship to the world around him and in his relationships to his fellow men. The documentation of these changes and of man's response to them during the long prehistoric period forms a basic background to the social and intellectual dislocations we are currently experiencing. *Prehistoric Societies* provides an excellent guide to this background and should be required reading for all those who consider themselves educated but who are unfamiliar with the subject of prehistory.

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International Series on Dynamics

This textbook, **Foundations of Solid Mechanics** (Prentice-Hall, Englewood Cliffs, N.J., 1965. 539 pp., $18), by Y. C. Fung, is intended to bridge the gap between elementary textbooks and the more advanced literature; it does an incredibly good job of meeting its objective. The text was developed at California Institute of Technology for a graduate course which represents a broadening of the traditional elasticity course. Major emphasis is on the linear theory of elasticity, but about one-third of the book deals with topics that are not traditionally considered a part of static or dynamic elasticity. These include plastic behavior of materials, elasticity and thermodynamics, thermoelasticity, irreversible thermodynamics, and finite deformation. Fluid mechanics is specifically excluded, but the author has nevertheless included a formulation of the constitutive equation for a linearly viscous fluid.

The treatment varies somewhat in depth from topic to topic, but it is nowhere shallow and is almost always exceptionally clear. The basic introductory chapters and the treatment of dynamic and static elasticity are especially outstanding. The thermodynamic formulations are limited to small deformations. In irreversible thermodynamics, the author limits himself to linear processes, states the Onsager reciprocal relations, and presents Biot's treatment of relaxation modes and hidden variables, with application to linear viscoelasticity. In the chapter on thermoelasticity he achieves a practical flavor by calculating the temperature and stresses in a turbine disk as an example. The 22-page chapter on linear viscoelasticity introduces tensorial relaxation and creep functions, formulates stress-strain relations in differential equation form, and discusses boundary value problems and integral transformations, waves in an infinite medium, quasistatic problems, and reciprocity relations. Finite deformation is treated in chapter 4, called "Analysis of strain," and in the final chapter, chapter 16, called "Finite deformation." The last chapter contains the fundamentals needed for formulating equations of motion in the presence of finite deformation and a clear derivation, given in a material (or "Lagrangian") description, of the von Karman equations for the large deflection of plates. There is a useful 27-page bibliography in which other books and important papers are cited.

The reader will find here a carefully written, readable book which assembles a large amount of useful material. The topics treated seem to be sensibly selected with an eye to engineering applications and tutorial value. The book is as up-to-date as can be expected in a rapidly developing field. Naturally, the instructor who is alert to current developments in rational and technical mechanics may decide to omit or present improved versions of some sections, but it should nevertheless be possible to give a very good course by following the book closely. The students who work through this book will get a sound introduction to solid mechanics.

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An Introduction to Histology

This short monograph, **Living Tissues: An Introduction to Functional Histology** (Pergamon, New York, 1965. 154 pp. Paper, $2.95), by R. L. Holmes, is stated to represent an introduction to the study of the morphology and the function of tissues. It is simply and clearly written and outlines the basic concepts and methods of classical histology. In addition, it stresses the use of newer histochemical, fluorescent, and autoradiographic techniques and attempts to point out the functional significance of structural elements. It is by no means a comprehensive text but consists of a series of examples that illustrate the organization of tissues. A series of 36 photomicrographs are included, which are of good quality and complement the text. References are kept to a minimum and when given refer to more comprehensive texts and to a few classical articles in the older literature. A more thorough bibliography would have been useful to the novice.

This volume appears to accomplish the author's main goals. One decided drawback is the lack of information concerning the ultrastructure of cells as determined by electron microscopy. Material illustrating the qualities of phase-contrast microscopy is also omitted. This volume can be recommended for the biologically oriented high school student and the undergraduate who requires an introduction to histology.

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History of Science

"Michael Scot may be regarded as the leading intellectual in Western Europe during the first third of the thirteenth century." With this statement Lynn Thorndike begins his most recent book, **Michael Scot** (Nelson, Edinburgh, 1965. 151 pp., 30s.). And certainly Michael