this approach has been largely limited to the so-called external relations of science. In the near future lies the possibility that social relations may be the key to the internal development of science as well.

Dupré and Lakoff are both identified on the cover of this book as assistant professors of government at Harvard. Hence they would doubtless admit themselves accountable for the query as to what political science has to offer in the delineation of the scientific revolution. While most of their account is descriptive narrative, they do in their conclusion venture into a more analytical way of stating the changed relation that is their subject. They see the partnership in research between the federal government, on the one hand, and business and the universities, on the other, as profoundly modifying the definition of the words *public* and *private* in our national life. They also conclude that, in the political sphere, the line between technical advice and policy-making is equally modified and that scientists are inextricably engaged in both. "If science and the nation have become interdependent but not indistinguishable it is because implicitly and explicitly those who have shaped the relationship have recognized that cooperation is essential if free institutions and individual freedom are to continue to function successfully. They have therefore sought to answer a national need but at the same time to promote institutional pluralism and personal responsibility."

Plea for Public Understanding

In their final paragraph, the authors transcend analysis with a fervent plea for better public understanding of the policy structure and politics of science in the nation. "Without public understanding of the new ways of partnership in which science and the nation have been brought together, old ideological dogmas may hinder vital progress. In the last analysis, a democratic nation can cope with the scientific revolution wisely only if thoughtful citizens know what it truly entails." Among the several groups within the public who must exert themselves in this enterprise are both scientists and social scientists, whose aroused efforts might provide the basis of information and theory on which the present authors could thankfully take up anew the task of sketching a portrait of the scientific revolution of our time.

Facets of Achievement

Essays in Pre-Columbian Art and Archaeology. Samuel K. Lothrop and others. Harvard University Press, Cambridge, Mass., 1961. 507 pp. Illus. $12.50.

Most of the 27 papers in this volume deal with American Indian civilizations in Middle and South America, but there is some coverage of less advanced cultures, both ancient and modern. Counting joint authorships, it is clear that 28 students of the American Indians in areas south of the United States have contributed to this volume as a gesture of respect and affection for one of the greatest producers and thinkers in their field. The lead article and one other are by Lothrop himself.

The editorial committee consisted of Doriz Stone, Gordon F. Ekholm, Junius B. Bird, and Gordon R. Willey, who provide a preface. Their effort was to make the collection "representative of the extremely wide range of interests in a distinguished career" and with "a particular eye to those objects that are commonly classified as art." They justly note that no Americanist contemporary of Lothrop has "extracted from the work of art so much information on the past or such insight into the lives of the makers." I steal space to add that no one has been more universally liked as well as respected for his accomplishments.

With one exception all the papers involve recent discoveries or new research. The top-drawer nature of the editorial group assured contributions of high quality only. Most students of the field covered will find required reading among these papers, and they will broaden their knowledge by reading them all. The emphasis on art objects gives the collection a special unity and requires generous illustration. The book is attractively printed and aims at the general reader as well as at the specialist. It should prove an excellent medium for showing the former how archeologists use "art" where written documents are lacking.

The objects discussed range through small and large stone sculpture, products of the lapidary, baked clay figurines, pottery vessels, textiles, paintings on pottery and wood, and work in the precious metals. Without entirely departing from the art category, there are valuable contributions on the design of ancient ball-game courts and equipment for the players. A new "experimental formulation of horizon styles" illustrates the desire of all the authors to rise from well-founded particulars to the level of useful inferences.

The first of the two papers by Lothrop himself breaks the pattern. "Archaeology—then and now" covers the period from 1915 to 1960. A leading theme is the change in a field man's problems wrought by the automobile and the airplane, and there is much delightful reminiscence. A prize photograph, taken at Copan, Honduras, in 1916, shows Lothrop in the background and the already venerable W. H. Holmes watching Sylvanus G. Morley, who is apparently loading his own mule. The final pages outline the history of Middle and South American archeology as Lothrop has seen it develop during the last 35 years.

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Problems and Potentials

Control Mechanisms in Cellular Processes. The seventh annual symposium publication of the Society of General Physiologists. David M. Bonner, Ed. Ronald, New York, 1961. v + 248 pp. Illus. $8.50.

Someone has spoken of modern biology as the "coming science." The designation has certainly been justified by the recent explosive and well-publicized advances in the elucidation of genetic coding, a "breakthrough" of knowledge that has been very properly characterized as one of the great scientific achievements. Lest any biologists think, however, that the opportunities for exploration have been reduced, I hasten to refer them to this timely volume.

The amazing profusion of reactions occurring within the cell is fully appreciated by today's biologists, many of whom have been engaged in discovering and characterizing these reactions. The contributors and the editor of this volume go a step further. They concern themselves with the question, "What regulates this complex system and keeps it functioning in an orderly way?" To be meaningful, they ask the question of parts of the cell, beginning with the nucleus and proceeding outward. Thus, the regulation of the activity of one