

AUTHOR'S INTRODUCTION

This is the history of the origins and development of a key scientific agency in our Federal establishment. It is also a study of the long-debated role of science in government, of science as an activity of the Federal Government, illustrated by focusing a magnifying glass, as it were, on a single such agency. By choice I have written the history from the point of view of the men who sought the establishment of a central agency dedicated to providing standards of measurement for the Nation, and of those who accomplished the first 50 years of that history.

In the early months of the undertaking some among the staff seniors questioned whether the history of the Bureau could be written. There was no possible way to cover in a single work, let alone do justice to, the thousands of research and investigative projects that have occupied the Bureau over a half century. And the flavor of the past, so important to those who had known it, was probably beyond recapture. The challenge, repeated at suitable intervals, was to prove a spur throughout the research and composition of the history. Color leaped to the eye out of the middle of blurred type-script. But it was inevitable that, considering the far-ranging research of the Bureau, some compromises had to be made.

The record of the scientific and technologic research at the National Bureau of Standards is contained in its more than 10,000 papers published since 1901. No attempt has been made to mention more than a fraction of them or of the investigators who wrote them. Only the outlines of that research and some of its highlights have been presented, for their reflection of the changing nature of Bureau research, and to set it in the framework of the scientific, social, and political history of the past half century as events have impinged upon the Bureau.

Some wonderful controversies have engulfed the Bureau from time to time. They were perhaps unavoidable, in view of the nature of the Bureau mission. I have been permitted a remarkable degree of freedom in setting down my judgment of these and other Bureau affairs as found in the historical records.

I have been immeasurably helped by the strong academic tradition that has been characteristic of the Bureau since its founding, and the sense of

so many of its members, renewed from decade to decade, that the Bureau was in the stream of the history of science and creating a history of its own. How else explain the extensive collection of memorabilia found in every section and division, handwritten and typed, and labeled "Save"?

The concern of the administration for historical documents of the Bureau was manifested formally in the spring of 1956 when all divisions were asked to locate historical materials in their possession and forward them to a central file. Many formal documents that were nowhere else available, as well as much that was informal, were thus brought together, and with other historical documents secured in the course of research, made part of the NBS Historical File that was set up as the project began.

I have also been fortunate in being able to interview or correspond with several score members or former members of the staff, the employment and memories of many of them spanning the administration of all five Bureau directors. Their names and those of others outside the Bureau who have furnished knowledge of the Bureau's past appear in the footnotes to the history.

The research and writing of the history was facilitated by the fullest possible cooperation of all members of the present staff, who have made their time, their files, and their information freely available, who have provided leads to material and clues to the meaning of some of that material, and who have patiently read and reread the sections of the history within their province or recollection.

Among the many present or former members who have kindly read the sections on research in their province and made contributions to its historical background or that of the Bureau, to whom I wish to express my particular thanks, are Franz L. Alt, William D. Appel, Howard S. Bean, Louis Barbrow, William Blum, Wallace R. Brode, Fay C. Brown, Edward W. Cannon, Raymond Davis, Hugh L. Dryden, William I. Ellenberger, Paul D. Foote, Irvin H. Fullmer, Roman Geller, Kasson S. Gibson, Raleigh Gilchrist, Clarence H. Hahner, Wilbur S. Hinman, Jr., John Hoffman, Dagfin S. Hoynes, Horace S. Isbell, Victor J. Johnson (Boulder), Deane B. Judd, Lewis V. Judson, Carl C. Kiess, Gordon M. Kline, William B. Kouwenhoven, Percival D. Lowell, A. G. McNish, William F. Meggers, Fred L. Mohler, Douglas E. Parsons, Vincent B. Phelan, Earle K. Plyer, Jacob Rabinow, Mrs. Ida Rhodes, Raymond L. Sanford, Frederick J. Schlink, Ralph W. Smith, Wilbert F. Snyder (Boulder), Wilmer Souder, Harold F. Stimson, Lauriston S. Taylor, J. B. Tallerico, George N. Thompson, Elmer R. Weaver, Samuel C. Weissburg, and Lawrence A. Wood.

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Despite the wealth of assistance that has been rendered it, the history inevitably reflects the final decision of the historian himself. Mine alone therefore is the responsibility for the ordering and weighing of the available facts and for the excesses of simplification of highly complex scientific research—an amiable contention from first to last with the specialists at the Bureau.

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