

Preface

THIS BOOK DESCRIBES the contributions of a single privately endowed American institution, the Massachusetts Institute of Technology, to the victory over the Axis powers. It is a record which will have been paralleled by others, and in that respect is typical of the assistance rendered the Allies by academic institutions. Technological emphasis of the recent war made the work of technological groups more prominent than in previous conflicts. In such a position the activity of a large technological institution was naturally extensive and significant.

Intended to be a history of the Massachusetts Institute of Technology during the war period, the book makes no effort to speak of the contributions of other institutions, which were frequently quite as important. Although I have taken pains not to overstate the part played by the Institute, I dare say there will be some to whom the text will seem boastful. I hope it is not that, but it is of course written from a single point of view. A fuller picture can certainly be obtained by reading kindred works about other institutions, of which there is no dearth.

The book does not seek to be a history of individuals. Research and development are almost always the work of teams these days. Teams have leaders, and the team leaders of this war would be the first to disclaim personal credit for the lion's share. Nonetheless, it is usually easier to tell a story in terms of individuals. I have accordingly not hesitated to talk more about single individuals than their total role, relative to that of others, would justify. But the reader who is interested in a single individual will often find the individual difficult to trace save through the index. The activities of a man are not placed in juxtaposition here, save as they concerned but a single job.

Some members of the Institute did war work which still

remains classified. Of such work this history can, of course, say nothing. Mention of a staff member in one capacity does not mean, therefore, that in others he did not do work of greater importance, while lack of any mention may mean only that the man's work is still classified.

The important decisions to be made at the outset were:

1. Not to write a history of alumni activity. M.I.T. alumni who appear in these pages do so because of some direct relation to the activities being described. Relatively few of all alumni who worked with distinction in the war will be met here.

2. Not to include the names of all the many persons from other institutions who joined hands with groups at M.I.T. and, working under M.I.T. contracts, made distinguished contributions. This decision was reached with the greatest reluctance for it must be admitted at once that there were few important projects at M.I.T. which were exclusively the product of M.I.T. people. It had to be made because of the very large number of such outsiders, especially in the Radiation Laboratory. Had they all been included, the book would have become a form of *Who's Who* and not a history.

3. Not to include staff activities which were of a normal civilian nature and in which all patriotic citizens indulged in greater or less degree. This refers to contributions to the blood bank, Red Cross activities, bond drives, Office of Civilian Defense, Selective Service administration, and the like.

Prior to my work on the book, Mr. J. J. Sharkey in 1945-1946, as the result of a questionnaire to the staff, collected such information on their activities during the war as the individuals would supply. Subsequently I have augmented this information in two ways; first, by personal conferences with those who I felt would offer the most useful expansion of detail; second, with the aid of Miss Beverly Brooks, by looking up individuals who we were certain had done something significant but, through modesty or otherwise, had failed to report. The material was reworked in terms of types of activity rather than in terms of the individuals. The text referring to each

individual was reviewed by him for errors of fact. Thus the staff will have to share with me, at least in part, the blame for errors of this sort. I cannot, however, escape personal blame for errors of emphasis or interpretation.

Clearly such a technique must result in some lacunae. I am sufficiently familiar with the general activities of the Institute and with the course of research and development during the war to feel reasonably confident that no important activity has been omitted. I cannot feel so certain that some individuals have not been overlooked; and to any who have been slighted, I apologize.

The greatest omissions of this sort are likely to concern those with active military records and those who have come to the Institute postwar, having served elsewhere before. In both cases the individuals were often not on the staff at the time of the first survey. The lacunae may be less serious than would perhaps appear because the history is primarily the history of research rather than of battle (the soldiers and sailors will have their full day elsewhere), and because we really should not claim credit anyway for the war activities of the newcomers.

The problem of citations was equally troublesome. Again a questionnaire was sent out; the citations listed are simply the grist from that questionnaire. It is almost certain that many important ones have been omitted. Since the history is not concerned with glory, the completeness of citations is perhaps not important. They have been used, not for glory, but to document my assertions that certain things were important by showing that others, too, thought so.

The greatest fault in the record is of a different sort. It is relatively easy to prepare an account of those who left the Institute for careers, glamorous or not, or of those who remained at the Institute to direct projects not in the ordinary line of things. But there was another group of the greatest importance, the group which kept the ship afloat when many of the officers and men had left for other duties. A list of these people starts with James Rhyne Killian, Jr., Vice President, and Horace S. Ford, Treasurer, whose energy, foresight, and skill guided

the Institute during the extensive absences required of Dr. Compton. It goes down through many other executive officers and embraces a large number of distinguished teachers who carried heavy overloads in order that their colleagues might range in other fields. It is out of the question to make any reasonable detailed statement as to these activities, and the attempt has not been made. Some, and all too few, of the individuals appear casually in the book in other connections, but most of them remain anonymous. It would be quite impossible to over-emphasize the nature of their contribution, one which left the Institute in a position to carry on into the peace with increased rather than diminished momentum.

In addition to the detailed review of parts by all the participants, I was especially helped by Dean Edward L. Moreland, Dean George R. Harrison, Professor Julius Stratton, and Mr. Nathaniel McL. Sage, each of whom reviewed the whole manuscript with great care. By their combined comments I have been spared many an egregious error.

Thanks are also due Edna Kempton, who transcribed the manuscript from very foul copy; to an always helpful colleague of many years, Margaret Hopkins, who made most of the checks of detail; and to Beverly Brooks, who did most of the final investigation and who saw the manuscript through the press. Finally, more perhaps than she knows, I am grateful to my wife, Marjorie, who listened to many more versions of the text than ought to have been imposed on anyone and who frequently has saved me from banality.

As a member of the staff of M.I.T., I am proud of the record made by my institution in this period of crisis. I hope I have portrayed it with sufficient modesty. If it can be taken in the spirit in which it was prepared, it may stand as an assurance that the private universities of this nation are equipped to do in the future as they have steadfastly done in the past. If this point is made, the book will have served its purpose.

*Cambridge,
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