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THE PRINCETON UNIVERSITY LIBRARY CHRONICLE

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The "Smyth Report"

BY H. D. SMYTH '18

On August 14, 1945, President Truman announced the end of the war between the United States and Japan. The city of Hiroshima had been destroyed on August 6th (Tokyo time)[1] by the first atomic bomb ever used as a military weapon. Three days later a similar bomb was dropped on Nagasaki, the last use of an atomic bomb for military purposes as far as is now known. By order of President Truman a full account of the secret development of these weapons by the United States Government was released for the use of radio and press on the weekend of August 11th and 12th. This account had been ready sometime before the bombing of Hiroshima but the decision to publish it was a radical one that had been vigorously debated by Mr. Stimson, then Secretary of War, and his advisers in the early days of August, particularly at a meeting on August 2nd. He decided in favor of publication, but since his advisers were by no means unanimously in favor of such a course he concluded that President Truman should make the final decision. At the time of the Hiroshima attack President Truman was still on the Atlantic Ocean, aboard the cruiser *Augusta*, returning from the Potsdam summit meeting.

By August 9, the President was back in the White House available for consultation. Accompanied by Vannevar Bush, James Bryant Conant, Major General Leslie R. Groves, George L. Harrison, and Secretary of State James F. Byrnes, Secretary of War Henry Stimson presented the case for publication to Mr. Truman. By that time the British had formally agreed although they had

[1] The news reached Washington during the evening of Sunday, August 5th, Washington time.

been somewhat reluctant.[2] After hearing the views of Secretary Stimson and his other advisers, President Truman approved immediate publication. His decision was carried out by releasing the approved document for radio use after 9:00 p.m. on Saturday, August 11, and for newspaper use on the next day, Sunday, August 12.

As everyone now knows, the project described had been one of unprecedented size and secrecy. Starting from a fascinating major scientific discovery it had grown into an industrial enterprise of enormous complexity. So it was not surprising that the packets given to the representatives of radio and the press that August Saturday differed considerably from the usual public relations handout. There was, to be sure, a one-page War Department announcement but there was also a 10½" x 7¾" book of some 170 lithoprinted pages bound in heavy cream-colored paper. Hardly adequate as a report of five years' work by thousands of people, this book was still unusual as a press release.

Its preparation had begun in the spring of 1944 when General Groves had asked me if I would be willing to undertake such a task. Of course, I had accepted without hesitation although it was not clear whether any part of what I wrote would ever be used at all, much less whether I or anyone else would appear as author. It is ironic that the book should have become generally known as the "Smyth Report," a fact noted on even the catalogue card in the Library of Congress.

In the last two or three years my attention has been called to items in various booksellers' lists under my name offering for sale at startling prices copies of the Smyth Report. It is not only the prices that are startling. Consider the following statement: "This advance issue was produced in circumstances of extreme security at the nuclear station at Oak Ridge, Tennessee. To ensure secrecy several mimeograph machines were used, the operator of each being given a series of totally unconnected leaves of the original typescript. The final collation of each copy was personally supervised by General Groves. . . ." The picture of General Groves

[2] Collaboration with the British on developing the atomic bomb has a complicated and not entirely happy history. Since early in 1944 Sir James Chadwick, a leading British physicist, had been in the United States as head of the British team, as the result of an agreement made between Roosevelt and Churchill at Quebec in August 1943. Chadwick and Roger Makins from the British Embassy had been at the August 2 meeting in Stimson's office.

spending the first few days of August 1945 hovering over the mimeograph machines at Oak Ridge has its charm but the statement smacks more of fantasy than of fact. Other descriptions are less fanciful but of the five such items I have before me, four contain errors of date or description so confusing as to make it difficult to identify exactly what book or pamphlet is being offered to the public. As a result of this confusion I have been urged to write a piece about the Smyth Report that may help clear up the situation.

Actually in 1947, two years after the release of the report, I was prompted to write such a piece by an entirely different set of circumstances. David Lilienthal was testifying before a Congressional committee which was considering whether he was or was not qualified to be Chairman of the newly established Atomic Energy Commission, a post for which President Truman had nominated him. Goaded by irrelevant or offensive questions from various senators and anticipating a confrontation with Senator McKellar, an old T.V.A. enemy of his, Mr. Lilienthal referred to the "Smyth Report" as "the principal breach of security since the beginning of the atomic energy project." Also about that time it was alleged that Bernard Baruch had said that General Groves had approved release of the report only after being "lambasted" by the scientists. I felt these statements should not go unanswered but that any comment would better come from General Groves or Dr. Conant than from me. Accordingly I wrote to General Groves and to Dr. Conant on February 4, 1947, suggesting that some statement should be made and enclosed a memorandum on the history of the "Smyth Report" dated January 10, 1947. I asked for comments on the general idea and on the accuracy of my memorandum. In my file there is an answer from General Groves from Florida, dated February 19, 1947, expressing interest and the intention to check his recollection against the files on his return to Washington. According to Mr. Lilienthal's diary, Dr. Conant did speak to him rather vigorously shortly after learning about his testimony. I, however, have found no letter to me from Dr. Conant. In any case what I wrote has rested quietly in my files since 1947. It seems to me to give the picture satisfactorily. Rather than trying to rewrite it after a lapse of thirty years I shall quote most of it, occasionally adding some corrections and some paragraphs having to do with bibliographic details.

MEMORANDUM ON THE HISTORY OF THE PREPARATION OF MY REPORT ON ATOMIC ENERGY FOR MILITARY PURPOSES

Prefatory Note: A great many of the most important decisions with reference to this report were made in conferences of which no record was kept because of security problems. Also, the question of final clearance and release for publication was decided at the highest level and my knowledge of how the decisions were reached and by whom is fragmentary and based on hearsay. Therefore the following memorandum is incomplete and only partially documented. It is based on my own recollection and what few documents and letters I have in my file.

Origin of the idea of the report: I began my association with the uranium project in January or February 1941. In the summer and fall of 1943 and the winter of 1944 I was acting first as associate director of the Metallurgical Laboratory at Chicago and later as consultant. During the summer of 1943 I spent most of my time at Chicago, but in the fall of 1943 President Dodds of Princeton felt that it was impossible to release me for more than half-time work at Chicago.[3] It was therefore arranged that I should spend alternate weeks at Princeton and Chicago. This made it impossible for me to discharge the duties of an associate director at Chicago in the real meaning of the title, so that I functioned largely as a consultant with a somewhat detached point of view. This detachment, coupled with the fact that I had been already closely associated with the two major phases of the work, isotope separation and the chain reaction, put me in a good position to write a general account of the work should it be wanted.

I do not remember exactly when the idea arose that a general report on the atomic bomb project should be prepared for eventual release to the public. As I recall it, I suggested the idea in a discussion with Dr. Arthur H. Compton,[4] who thought well of it. I then arranged to talk with Dr. Conant on one of his visits to Chicago. This talk occurred either in February or March of 1944.

[3] This was because all the other regular members of the Department of Physics at Princeton were engaged in war work, most of them away from Princeton, yet the University was committed to a very heavy load of teaching Army and Navy personnel, all taking physics.

[4] Dr. Arthur H. Compton, Professor of Physics at the University of Chicago and Director of the Metallurgical Laboratory there. The Metallurgical Laboratory was one of the major scientific centers for the Manhattan Project.

I believe that the idea I presented to Dr. Conant was essentially the one which was eventually carried out. I felt that the possibilities of atomic energy, and particularly of the bomb, were so important that the political decisions which would have to be made ought to be based on the widest possible dissemination of information. I felt that it would be extremely dangerous to leave these decisions in the hands of a small number of men without informing the people of the country what the significance of the discoveries was. This idea appealed to Dr. Conant and he told me that he would discuss the matter with General Groves and others in Washington. (I am not absolutely sure whether the original idea of the report came from me or from Dr. Conant, or whether it merely emerged from our conversation, but I believe that at least the rough idea was the occasion of my asking for an interview with Dr. Conant.) I heard nothing more about the proposal until sometime early in April when I was asked to come to Washington to talk with General Groves and Dr. Conant. They told me that they felt it was very desirable that a general overall report of the project should be prepared. It was, however, clearly understood that this involved no decision as to the ultimate use of the report. In other words, it was to be prepared with public release in mind, but the question of how much material, if any, should be eventually released was reserved for later decision.

I received a formal letter from General Groves dated April 17, 1944, asking me to undertake preparation of the report, and I replied on April 21, agreeing to do so. For security reasons, both of these letters are in such general terms that they make no reference to the actual nature of the job under discussion.

In preparing the report, I felt that it was necessary to make it as complete as possible, with the idea that later review could cut out material considered inappropriate for release. From this time on I was specifically working for General Groves in the preparation of this report. General Groves made all the arrangements necessary to give me access to the various laboratories and plants, and I had frequent conferences with him and Dr. Conant. It should be understood that I was at the same time continuing as chairman of the Department of Physics at Princeton and acting as a consultant at Chicago so that the preparation of the report was a part-time job.

I sent the outline of the whole report and a rough draft of about

the first half to General Groves on August 5, 1944. I do not have in my file any comment from him or anyone else on that draft. My recollection is that he and Dr. Conant felt the outline was essentially right and made relatively few suggestions at this stage. On February 23, 1945, I sent General Groves twelve out of thirteen chapters of what I still considered a preliminary draft. I discussed this draft with General Groves and with Dr. Conant in March and wrote a letter to General Groves on March 23 discussing their comments. There was still no decision as to whether this report would be used. On May 12, 1945, in anticipation of another conference with Dr. Conant and General Groves, I wrote General Groves a letter reporting that I had rewritten the first eight chapters along the lines of our previous conference, but was finding some difficulty in working without any idea of when and how the report might be used.

At the May 16-17 conference that followed, General Groves and Dr. Conant said that they did want to use the report and asked me whether I could have it in final form early in June. I think the date mentioned was June 10. I said that this would be impossible, so we settled on June 30 as the date which we would try to meet. By this time the report had been read, in whole or in part, by a number of the project leaders, but it was felt nevertheless that it should be officially circulated to them in final form before it was approved for release. We also realized that it was necessary to eliminate a good deal of the material that I had written on grounds of security and that I could not be expected to take the whole responsibility for judgment as to what should and should not be included. Either at this conference or at one shortly thereafter, it was agreed that Dr. Richard C. Tolman[5] should cooperate with me in censoring the report and that it was necessary to have a directive from General Groves as to the criteria to be used for including or excluding material. Dr. Tolman and I prepared a list of such criteria which we submitted to General Groves. After discussion he modified them somewhat and issued them as a directive to Dr. Tolman and me.

It was evident that it was necessary to edit my manuscript as well as censor it, but security made it impossible to use anyone with professional editorial experience. It was decided that Drs.

[5] Professor of Physical Chemistry and Mathematical Physics, California Institute of Technology. By a curious coincidence, I had worked for Dr. Tolman, then a major in the Chemical Warfare Service, in the summer of 1918.

Paul C. Fine and William A. Shurcliff,[6] both of whom were physicists working as technical aides to Dr. Tolman, should work with me on this job. The process of editing and censoring went on more or less simultaneously in the latter part of June and the first week or so of July. In fact, it was the necessity of making a final revision of the report that prevented me from going to the Alamogordo, New Mexico, test on July 16, 1945. About the middle of July the censored and edited text was mimeographed in Dr. Tolman's office in Washington under the supervision of Fine and Shurcliff. Couriers from General Groves' office then delivered and returned chapters of this mimeographed version to project leaders and a few others at Berkeley, Chicago, Columbia, Stanford, Los Alamos and elsewhere. Those consulted were asked to read the parts submitted to them and to sign a release testifying to the general accuracy of the work and to its conformity with the general instructions for security. I believe that in all cases releases were signed but often they were accompanied by suggestions for minor improvement or deletion. Tentative approval of publication was also obtained from Sir James Chadwick representing the British and Canadians.[7]

* * *

In the last part of July, I considered and in most cases incorporated the suggested modifications in a master copy, chapter by chapter. In my file I have a complete series of such chapters each labelled "Master Copy" including the final version of the preface and a typed copy of Chapter XIII. There is a note on each chapter except Chapter I giving the date of designation as master copy. These dates range from July 14, 1945, for the beginning chapters to July 30 for Chapter XIII. Obviously much retyping had still to be done and it is to this task that General Groves refers in his book when he says: "the report was completed on July 28 but not before we had had to fly some fully cleared MED [Manhattan Engineering District] stenographers up to Washington from Oak Ridge." It was presumably this retyped version which General Groves says was "ready for submission to the printer" on August 2nd.[8]

[6] Technical Aides, Office of Scientific Research and Development, National Defense Research Committee and Manhattan Project, Washington, D.C.

[7] This ends the 1947 memorandum.

[8] *Now It Can Be Told* (New York: Harper, 1962), pp. 349-50.

The retyping and lithoprinting were under the general supervision of Fine and Shurcliff and appropriate officers from General Groves' staff. During this period Dr. Tolman read over the final version with extreme care, marking all passages which might conceivably be questioned on grounds of security and citing justification for publishing them in terms of relevant parts of our guidance orders. He and I then went over those passages together and prepared a letter to General Groves discussing them. This letter is dated July 31, 1945, and marks my last action in the preparation of the report in its first published format. The date is consistent with General Groves' "ready for the printer" date of August 2nd.

The "printer" was in fact the facility for reproducing secret documents in the Adjutant General's Office in the Pentagon. I do not know when the first lithoprinted copies were produced. I believe one thousand copies were made. Whenever they were finished they were immediately slapped into the safe in General Groves' office in the Pentagon because their content was still classified TOP SECRET and remained so until August 11, when the whole report was made public by President Truman's order as I described in the introductory paragraphs of this article.

So much for the narrative of the preparation of the first format in which the Smyth Report was released to the public. In a subsequent article, Datus Smith, formerly Director of the Princeton University Press, will give an account of the publication in book form by that press. Before going on to his account there are several specific aspects of the report that may be of interest.

As is clearly stated in the report itself, the principal reason for its preparation was to inform the public. Let me quote the last sentence of the report: "The people of the country must be informed if they are to discharge their responsibilities wisely." This view was strongly held by most of the civilians in the project and more or less shared, certainly not opposed, by General Groves and his military associates.

On the other hand, General Groves and his colleagues, both military and civilian, recognized that there were many technical developments that should be kept secret. How was this to be done? Were the thousands of people who had worked on the project supposed to go back to ordinary civilian life and say absolutely nothing about what they had been doing in the great war? This would be asking the impossible. The best resolution of this dilemma appeared to be to say as much as possible in an official statement

carefully prepared and reviewed and then to instruct people on the project to say nothing more even after they had left the project.

Achieving this objective was the principal reason for General Groves' support of the report and its validity was certainly accepted by such civilians as Bush, Conant, Tolman and many others. I have always found it curious that two lines of reasoning quite opposite in the abstract led in practice to the same conclusion.

A bonus that came from the release of the report gratified General Groves particularly. He had been a tough taskmaster and knew it, so he was especially glad to see as much recognition as possible given to those who had worked so hard and long on the project. Only a few men could actually be named, but all could point to the published record and say this is what I did in the great war. Welcome as this consequence of publication may have been it was always a secondary consideration. I was dismayed when I read in a recent book, that whatever other reasons lay behind the issuance of the report, scientists were obviously anxious to have their various accomplishments acknowledged.

At the time of writing the report there was no pressure on me from the scientists for personal recognition. Such complaints as came in after publication were surprisingly few and were more concerned about questions of attribution to groups or laboratories than with individual reputations. Even the complaint from Los Alamos which I describe in the next section was clearly asking that elegant solutions of difficult problems should be reported so that they could be appreciated. This is very different from the desire for enhancement of personal reputation implied by the statement to which I have referred.

There were two quite different kinds of questions that had to be answered in deciding what should be in the report and what should be left out. In the first category were the normal questions that arise in writing an account of any large and complex enterprise: how technical to be, how much detail to include, how to be fair to the various groups working on different phases of the enterprise, what names to mention and so on.

Answering these questions was complicated by the compartmentalization imposed by the overall secrecy requirement which prevented one group from knowing what another group was doing, even when their fields of work overlapped. This also complicated

the basic question: How to ensure factual accuracy? However, these complications were trivial compared to some of the other consequences of secrecy.

Many of these were largely mechanical. My office in Palmer Laboratory, Princeton University, not only had its door to the hall tightly locked, but the doorway was blocked on the inside by a large safe whose combination was known only to me, my secretary, and the Manhattan Engineering District security officers. The windows of my office and the adjacent office were barred. Access to my office was possible only through the adjacent office occupied by my secretary and an armed guard. In fact there were three shifts of guards, so there was one present day and night. If I needed papers with me on a trip to see General Groves in Washington, I could not take them with me. They travelled separately by military courier.

It is easy to make fun of these arrangements now—for example, during a period of about a year every time I talked to myself I was breaking the secrecy rules by allowing the head of one group to speak to the head of another group—but rules were taken seriously at the time and I believe rightly so. Secrecy precautions certainly were taken seriously when one of the guards on the four to midnight shift shot himself, inflicting what turned out to be a fatal wound. He had been oddly considerate, waiting until after all the secretaries had left the building so that they would not be distressed. Naturally there were immediate security questions. Was the poor man a German spy or Japanese or Russian? Did he have confederates? Was there a conspiracy? Had he and the other guards been fully investigated? As far as I know his suicide turned out to be purely for personal reasons having nothing to do with security, but naturally it took a good deal of investigation to establish that fact.

Returning to the substance of the report: what should be revealed and what should continue to be kept secret. Until May of 1945, I had almost no formal guidance in answering this question. As I have mentioned, Dr. Conant and General Groves approved the outline I submitted to them in the summer of 1944; and I submitted drafts of various sections to appropriate people from time to time. Many of the typed chapters in my file have pencil notes "read by so and so on such and such a date." But there was no formal or informal board of reviewers or editors before June

1945. This was partly because everyone was so busy, but the chief reason was secrecy. I do remember raising with Dr. Compton the question of whether to leave out everything about plutonium. We decided that to do so would be to eviscerate the report to such an extent as to render it useless. I do not remember when this discussion took place.

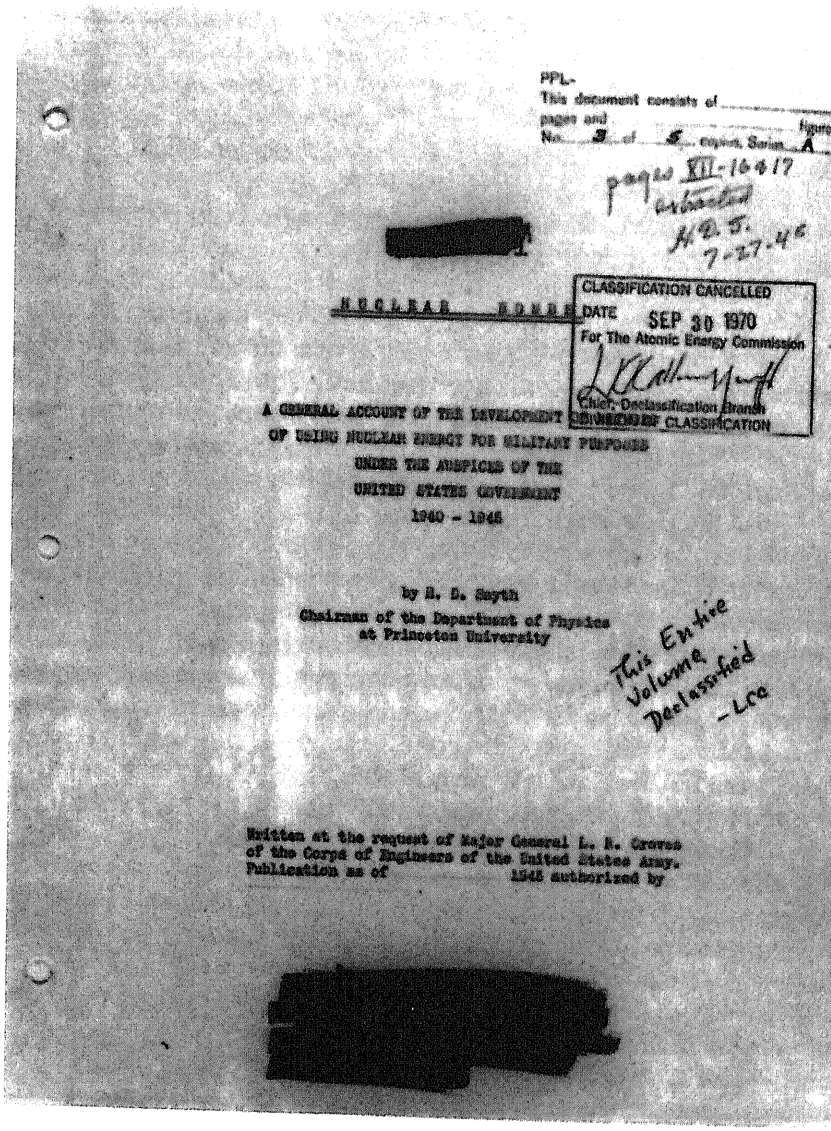
My policy, with one exception, was to include in the drafts as much technical detail as I thought desirable for intelligibility even if some of it had to be later deleted for security reasons. In the case of the bomb laboratory at Los Alamos, however, even my draft chapter left out much of the most interesting material since it was obviously too sensitive for publication. When this draft was submitted to Los Alamos they were so outraged that they sent to Groves a version of their own. It was far more interesting than my version, but unfortunately it violated the security rules that had been set up. This was one of the many occasions when I was grateful for Dr. Tolman's wisdom and good judgment. He read over the Los Alamos version, went through it with the red pencil of censorship, and concluded that what was left was no better than my version which was therefore accepted.

There are two causes for embarrassment in the title of the report or the lack of it. First, to a professional physicist the subject of the report was nuclear energy and nuclear bombs, not atomic energy and atomic bombs. Second, no author is likely to choose a 24-word title for something he has written. Obviously, the only title that appeared on the lithoprinted edition was intended as an explanatory subtitle. This cumbersome subtitle was carried over to the Government Printing Office version as the only title and similarly to the title page of the edition printed in London by His Majesty's Stationery Office.

What was the title supposed to be, and what happened to it? In the various drafts a title page appears for the first time in the typed version from which the mimeographed copies were made for circulation to laboratory directors for correction or approval. This title reads:

Nuclear Bombs

A General Account of the Development of Methods of Using Nuclear Energy for Military Purposes Under the Auspices of the United States Government, 1940-1945.



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pages XII-16 & 17 extracted
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[redacted]

NUCLEAR BOMB

CLASSIFICATION CANCELLED
DATE SEP 30 1970
For The Atomic Energy Commission
Chief, Declassification Branch
DIVISION OF CLASSIFICATION

A GENERAL ACCOUNT OF THE DEVELOPMENT OF METHODS
OF USING NUCLEAR ENERGY FOR MILITARY PURPOSES
UNDER THE AUSPICES OF THE
UNITED STATES GOVERNMENT
1940 - 1945

by H. D. Smyth
Chairman of the Department of Physics
at Princeton University

This Entire Volume Declassified -LCC

Written at the request of Major General L. R. Groves
of the Corps of Engineers of the United States Army.
Publication as of 1945 authorized by

[redacted]

Title page of typed version from which mimeographed copies were made for circulation.
Courtesy of Henry DeWolf Smyth.

At the next stage, in the master copy prepared for lithoprinting, the main title was changed to "Atomic Bombs" and "nuclear energy" was changed to "atomic energy" in the subtitle. This is also the way the title appears on the certificate of copyright. But that simple two-word major title did not appear on the lithoprinted edition. As I heard the story, General Groves was very worried about secrecy in spite of the security precautions surrounding the preparation of the lithoprinted copies which I have described. So he would not allow the tell-tale words "Atomic Bombs" to appear on the title page. He had a rubber stamp "Atomic Bombs" prepared and planned to have one of his officers stamp each copy before it was handed out. Apparently the stamp was made and used on the copyright deposit copies but not on any of the copies distributed to the press or public. One result of this omission was that the clumsiness of the title that did appear caused people to refer in self-defense to the lithoprinted version as the Smyth Report. They still do so, even though the Princeton University Press version has a reasonable title, *Atomic Energy for Military Purposes.*

As to the change from "nuclear" to "atomic," it should be remembered that in 1945 the word "nuclear" was either totally unfamiliar to the public or primarily had a biological flavor, whereas "atomic" had a definite association with chemistry and physics. Since in May and June, 1945, it became clear that the report was aimed at a wider audience than nuclear physicists, we decided that atomic was less likely to frighten off readers than nuclear. I believe General Groves suggested the change but I know I accepted it after a somewhat painful suppression of my purist principles. Looking back after thirty years I think the decision was probably right pragmatically. I still find it distasteful, and I welcome the gradual change that has occurred over the years so that the popular press now usually speaks of nuclear energy, nuclear power plants, and nuclear bombs.

While I am writing about titles, let me explain about the copyright. The whole purpose of the report was to spread information. We were glad to have all or part of the text copied and reproduced by anyone who wished to do so. But if we did not take out a copyright we feared someone else might. For this reason the lithoprinted version, the Princeton University Press edition, and those of the Government Printing Office and His Majesty's Stationery

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H. D.Smyth (Henry DeWolf Smyth)
Princeton University,
Princeton, N.J.

Title: Atomic Bombs. A General Account of The Development of Methods of Using Atomic Energy for Military Purposes Under The Auspices of The United States Government 1940-1945. By Henry DeWolf Smyth, of United States.

Printed or produced by The Classified Reproduction Center of the Adjutant General's Office, War Department, Washington, D.C.

Date of publication in the United States Aug. 10, 1945
Affidavit received Aug. 13, 1945 Copies received Aug. 13, 1945

(SEAL)

Sam B. Warner
Register of Copyrights

Copyright certificate for the Report.
Courtesy of Henry DeWolf Smyth.

Office all have in the front of the book the apparently self-contradictory statement: Copyright 1945 by H. D. Smyth (Reproduction in whole or in part is authorized and permitted).

This procedure and the fact that there seemed to be no simple way for the War Department to pay for the copyright has given me a certain amount of mild pleasure. When acquaintances imply that I must be wallowing in wealth as the author of a best seller I am able to state with painful accuracy that my financial balance from the Smyth Report is minus two dollars, the copyright fee.

A more serious bibliographic result of simultaneously copyrighting and giving blanket permission to ignore the copyright was that no one who wished to reprint or translate the whole report or any part of it was under any obligation to ask permission from anyone or even to notify the publisher or me. Consequently, the bibliography is very incomplete, but our objective of wide circulation has certainly been achieved.

As I have said repeatedly, my chief interest in this whole writing enterprise was to get as much information as possible to as many American citizens as possible as soon as possible. A thousand copies distributed to the press were only a beginning. Although the lithoprinted edition would presumably be reprinted in some form by the Government Printing Office, it was not clear at the time how soon this would happen and it was unlikely that distribution and sales would be pushed. So I thought the best route to wide circulation in a minimum of time would be publication by a big established publisher of technical or semi-technical books. McGraw-Hill seemed to fit the bill as well as any. Since I knew some of the people there, I went up to New York to see them. They said "Yes, yes, a fine idea, but in its present form the report is a bit dull in places and a bit difficult in places so why don't you recast it here and there and come back to us." This did not make much sense. The best thing to publish was an account approved by the U.S. Government. Furthermore it could be done quickly. And for obvious reasons I was in no mood to rewrite the report and again ask for the approvals that would be necessary.

Fortunately, Datus Smith, Director of the Princeton University Press, had already asked for the job but, not supposing that a university press could compete with a commercial house in speed and coverage, however well it might otherwise do, I had told him I wanted to try McGraw-Hill. But Datus was enthusiastic and per-

sistent. The Press had the great advantage of being small enough to catch the enthusiasm of its director for an unusual project and to be able to concentrate on it. What is more, its headquarters were in Princeton. So I gave the job to Datus, later getting the blessing of General Groves. That this was one of the wisest decisions I could have made will be evident from the story Datus Smith has to tell in the article following this one.

Thirty-one years have passed since those hectic days when the cooperative efforts of thousands of people were to culminate in the use of two nuclear bombs and the end of the war with Japan. These weapons were not only spectacular in their military effect but were only one of the possible uses of the energy released by nuclear fission. In the larger sense the whole great effort had been to develop the technology of using nuclear energy.

That development added a new category of questions to those arising inevitably in adjusting from a world of war to a world of peace. To quote again from the report: "These questions are not technical questions; they are political and social questions, and the answers given to them may affect all mankind for generations."

The Smyth Report was supposed to furnish material on which the discussion of such questions could be based. Did it do so? I believe it did. How well, it is impossible for me to judge. Of course there were errors of omission and of emphasis; and obscurities of presentation. I regret such faults but granted the subject, the enforced absence of competition and the limitation of time even a bad report would have been a success.

Quantity is easier to judge than quality. The report was reprinted in whole or in part in the newspapers beginning a week after the first bomb was dropped. Within three months thereafter about one hundred thousand copies had been sold in book or pamphlet form. In this early period copies were passed from hand to hand so that each copy had many readers or in some laboratories were duplicated for groups of readers. After November 1945 the Princeton University Press version of the Smyth Report carried official statements from the British and Canadians making clear their full participation in the development of the bomb. Therefore by the end of 1945 there was beginning to be formed a considerable body of citizens within the government and outside who could discuss the problems concerning nuclear fission now confronting the United States and other countries on the basis of fairly extensive information.

In the three years after the publication of the report the discussions that led to the establishment of the U.S. Atomic Energy Commission and those concerned with international control generated hundreds of pages of exposition and argumentation, crystallized to some extent in various committee reports, notably that of Acheson and Lilienthal. Yet, the Smyth Report had continued to function as a basic reference document. By the summer of 1948 much more information was available either as the result of further releases or of publication of new scientific data acquired in three years of work in the world's laboratories. New books began to be written simplifying or revising the treatment of atomic energy as a whole or various phases of it. The Smyth Report was no longer an essential reference book though it remained a convenient one. It had served its purpose and served it well.

"There wouldn't be any danger of his smashing the atom with this, would there?"

The New Yorker, December 8, 1945.
Drawing by Carl Rose; © 1945, 1973 The New Yorker Magazine, Inc.

The Publishing History of the "Smyth Report"

BY DATUS C. SMITH, JR. '29

SOMETIME in the early summer of 1945, probably in June, I had a telephone call from Dr. Henry DeWolf Smyth with a very odd question. I was at that time Director of Princeton University Press and Harry was a friendly professor of physics working on something that took him out of Princeton frequently, but of course I did not know at the time what it was. According to my memory, the dialogue went something like this:

HARRY: I have been wondering if you are going to close the Press down for two weeks this summer, as you did last year, instead of staggering vacations.

DATUS: I think we'll have to. Our departments are all so short-handed we would be absolutely shot if *anyone* were out. Why do you ask?

HARRY: I was just wondering . . . if the occasion should arise would you consider renting your whole plant to the U.S. Government for that period?

DATUS: Do you mean just the plant? None of our people?

HARRY: Just the plant.

DATUS: Well, if we could do it at all I think we would have to insist on having our maintenance engineer around.

HARRY: Maybe some special arrangement could be made for him, but the work would have TOP SECRET classification, and I'm not sure we could get that high a clearance for him soon enough.

DATUS: Do you know what equipment they would use?

HARRY: I don't know those technicalities, but I do know there would be only one thing printed—a kind of book in a quantity of about 5,000.

DATUS: Gosh, Harry, do you really mean that? It sounds crazy to print 5,000 copies of a TOP SECRET item.

HARRY: Well, I suppose it might be one of those funny cases where something is TOP SECRET one day and in newspaper headlines the next.

Discussion ensued about how we could be sure of getting back into our plant when our 75 or so printers returned from their vacations. That worried us not just in terms of administrative convenience but especially because of the legal and patriotic priorities on the jobs already in the plant. We feared that—no matter what the Government might have agreed to in advance—if they ran into production delays with an uncompleted TOP SECRET job inside the plant they would keep us out by *force majeure*, no matter what the lease agreement might say.

My colleagues and I decided that, in fairness to our priority customers, we just could not risk it; and I think I told Harry that informally. At any event the subject was not raised again, though I naturally kept wondering what it was that Harry had in mind.

In August of that year Dorothy and I and our two girls had planned on a one-week vacation—I believe our first since 1941—and we had reservations at Branford, Conn., on Long Island Sound. We had husbanded our gas coupons for months, and figured we could just make it there and back.

We got to Branford on a Saturday, and it was the following morning, Sunday, August 12, that I was lying on the beach going through that day's *New York Times* which carried the first published atomic energy information from what subsequently became known as the Smyth Report.

Suddenly everything clicked! I realized what it was that Harry and I had been talking about on the phone some weeks before, and it came over me that he had in his hands the greatest science story of the century.

My girls loaned me some of their Coke money and, in a wet bathing suit, I called Harry from a beachside phone booth. He agreed to talk with me that evening. I suspended my vacation and thumbed a ride into New Haven (we feared Dorothy would lack gas for getting the car home if she should drive me in) and after a trip of some hours involving a train mishap I got to Princeton that night.

When I talked with Harry at the Smyths' house that evening he explained that the Press did not need anyone's permission to go ahead with book publication of the Smyth Report. The copyright notice on the Manhattan District's lithoprinted typewritten edition in effect put the work in the public domain. It stated that reproduction in whole or in part was "authorized and permitted" in spite of the fact that—by General Groves' desire—

the work was copyrighted in Harry's name (to prevent anyone else from copyrighting it).

But both we in the Press staff as well as the Editorial Board members we had been able to consult felt that—especially because of Harry's Princeton connections—we should not go ahead unless he was prepared to let us treat the University Press book as "his edition." Harry stipulated, from the beginning, incidentally, that he should receive no royalities; and I have figured out recently that the royalty we would have paid him under the kind of contract we would have been willing to execute would have totaled $26,305 for the paperback and hardback editions together.

Harry was cordial from the start, but he felt that, as a matter of public duty, he had to test the interest of America's leading technical publisher, McGraw-Hill, which, according to the conventional wisdom, should have been able to achieve much wider circulation than would be possible for a university press.

Because Harry would not be reaching a decision until talking with McGraw-Hill on Thursday, August 16, I went back to Branford for two days with the family, and we were there at the time of the Japanese surrender and the V-J Day celebration.

On August 16 Jim Thompson, the McGraw-Hill president whom I did not know at the time but of whom I became a good friend later on, told Harry they did not want to do the book. He said they would be interested in a rewritten version of the Smyth Report for a popular audience, but they did not think publication of the Report as such would be justified. He also pointed out that the work was in the public domain, and that the Government Printing Office would be bringing out an edition at a price with which a private publisher could not compete.

I believe Harry phoned that evening when he got back from the McGraw discussion. In the meantime I had reached by phone most of the Board members of the Press (including Curtis W. McGraw, known as "Hack," treasurer of both McGraw-Hill and the Princeton University Press!) and gained their informal assent to a bypassing of our normal procedure for authorizing publication. (*Ex post facto* approval was formally granted at the next Board meeting on October 19. I might mention, also, that upon my request Harry secured from General Groves—via a letter written on his behalf by Lt. Col. William A. Consodine on August 25—the General's blessing on our publishing project. We were anxious to have that

because of Harry Smyth's double connection with Princeton and the Manhattan District.)

It was on Friday, August 17, that I received what we called "Harry's manuscript" (i.e. a copy of the lithoprinted typescript with hand markings and corrections Harry made for us). P. J. Conkwright, the Press typographer, had started designing the book from another copy of the manuscript several days earlier, so that end of the operation was finished before we knew we had the book! And Irving Updike, plant superintendent, and his assistant, Herbert Hinkel, had been phoning all over the United States trying to find idle plant capacity. The Press's own composing room and pressroom were overloaded with priority jobs which we could not honorably push aside.

Herb Hinkel, a native of York, Pa., found that the Maple Press there, with whom we had done occasional printing in the past, was moved by the history-making importance of this one book, and agreed to take on the job. (Hack McGraw was not amused when, after our book was out, he learned it had been manufactured by Maple which, according to Hack, was way behind on its McGraw obligations!)

I stayed up most of the night of August 17 copyediting the manuscript. There were a few queries for Harry, and I left the manuscript at the Smyths' house the morning of the 18th, while I went to the Princeton University Press Annual Outing, and picked it up there that evening. The manuscript went to York by messenger Sunday the 19th so that work could start first thing Monday morning. We asked Maple to put several operators and proofreaders on the job and to use messengers for delivery of proof.

Mary Smyth's diary shows that she and Harry read the first "take" of proof the night of August 23 and the last on August 26. I went to York the following day with the corrected galleys, and stayed at the Maple plant for several days to clear page proof and press proof to avoid transportation to and from Princeton. I also posted page numbers on the index slips I had prepared from the galleys, so the index was set right after I got the page proof. The index was printed as part of the last form.

It is difficult to recall, at this distance, the production troubles we all faced in those days, with both plant capacity and paper being in such short supply that needs had to be anticipated months in advance, and even then publishers' production schedules for

most books stretched to nine months or a year. We had finished reading galley proof on the whole book six days after production started!

Even after we had the Maple Press commitment to manufacture the book we still faced the ghastly problem of paper. The popular hyperbole at the time was that with luck you might find a few sheets of gold lying around but never a sheet of paper. That was the reason I made sure of going to the Princeton University Press Annual Outing on August 18 in spite of all the other pressures on my time. I knew that the officers of the Central Paper Co., one of our chief suppliers, always turned up on those occasions to socialize with our plant crew over beer, softball, and poker—in part for fun and in part for company public relations.

The Central Paper people were indeed there—Manny Relles, the president, and Leonard Relles, later vice-president but at the time assistant manager. I detached them from the poker table and told them the whole story of the Smyth Report and its meaning in history. I put it to them that the most memorable achievement in Central Paper's career could be delivery of thirty tons of paper to Maple Press in York, Pa., in twelve days. (I thought that would be the earliest we could conceivably have page proof okayed and the book ready to roll, though we and Maple beat that by three days.) Manny Relles thereupon agreed to give up *his* scheduled vacation until our paper problem was solved. He told me later that he believed he and Leonard had made something like a hundred telephone calls trying to track down uncommitted paper anywhere, even west of the Mississippi. They ultimately found a car of paper somewhere in New England. They delivered that to York, and those tons of paper were enough for producing about 30,000 books. We wanted to print 60,000, and Central finally discovered paper for an additional 30,000, but not soon enough to get the second shipment to York before the first lot had gone through the press. I was at the Maple plant as the last of the first shipment was going through, and I felt pretty certain that, once our forms came off the press, even Maple's great good will would not enable them to put our book back on press again for many days. So I pleaded with Maple and (after a friendly railway dispatcher determined that our incoming car was on the tracks not very far from York) Maple agreed to hold our main form on their 128-page Perfector press for three idle hours while our car completed the last few miles to the York siding

and the paper was unloaded and trucked to the printing plant. By the skin of our teeth we got paper in time for producing 60,000 books in two printings that were handled as one.

We held bound copies of the book in our hands on September 7—three weeks to the day after our receipt of the manuscript. Copies were delivered to booksellers on September 10 and publication was September 15.

The first three printings of the book were manufactured by Maple, but their oldest publishing friend and biggest customer (McGraw-Hill!) became more and more restive about the way Maple was indulging Princeton, and Maple finally had to ask us to please go away. So we got on the telephone again and called every printer we could think of east of the Mississippi. The Smyth Report printing plates became very well travelled. After the first three printings in York, the fourth was in Chicago, the fifth in New York City, and I do not remember where the remaining four printings were done. The last of the nine printings was in 1957. Incidentally, beginning with the 4th printing we added a 42-page supplement with statements by the Canadian and United Kingdom governments.

As far as we could tell, there were four typos in the first printing: two that were called to our attention by dozens of readers and two others that were noted, or at least mentioned, only by my 75-year-old mother. In addition there was an item that looked like a typo to many semi-informed readers—the word "photon" in Par. 1.44 which lots of people wanted to change to "proton," and which entailed so much correspondence that the wording was changed a bit for some later printings.

From the moment we knew we were going to publish the book, our sales manager, Norvell B. Samuels (later president of the American Book Co.) started spreading the word in the book trade. Any University Press staff member who was not under other compelling obligations became an ad hoc assistant on Sammy's staff. All of us phoned bookstores where we had personal connections, attempting to explain the book—scarcely any layman at that time understanding what atomic energy was, let alone guessing that "a government report" could provide the fascinating reading material that we knew the Smyth Report contained.

Sammy was fit to be tied as one after another of the largest bookstore buyers declined to order a single copy or—if moved to be courteous because of their liking for Sammy—said they would

"watch it carefully and perhaps order later on." The general attitude was like what Jim Thompson had expressed to Harry Smyth: that the public would not be interested in a government report on a technical subject. I recall that Scribner's was the only large New York store that saw the light quickly. Brentano's, New York, was not only one of the non-buying skeptics but berated Sammy for trying to argue with them. But our old friend Joe Margolies at Brentano's, Washington, F Street store performed as those who knew him would expect: he gave Sammy an instantaneous order for 1,000 copies and doubled it a few days later.

Little by little, as Sammy and his gang kept plugging, the news began to spread. Not only was the first printing sold out on publication date, but for two months we never had an unsold copy in the house. Because of booksellers' delays in catching on, and their consequent failure to stock the book, we had vastly more single-copy orders from individuals than with any normal book. Sammy set up a special operation that looked like Santa's workshop. The performance in handling unfilled orders set a mark for both speed and honorable dealings that I think few publishers with a runaway book could have equalled. We claimed that, with the exception of a couple of days, every order was acknowledged on day of receipt, with a postcard not only stating what the delivery date would be but also telling the customer that a much cheaper edition was available from the Government Printing Office.

The most interesting challenge for the sales department related to the potential customers in the "atomic energy cities" of Oak Ridge, Richland, and Los Alamos. No one in the New York book trade had ever heard of them, and those cities in Tennessee, Washington, and New Mexico are in areas that were traditionally "unbookstored" anyway. Sammy's indignation meter hit the top of the scale as he tried to stimulate jobbers and wholesalers to an interest in trying to tap those markets. I can still hear his imprecations upon returning from New York where he had talked with Harold Williams, vice-president of the American News Company, which at the time was the largest book jobber with nationwide outlets. Williams was unmoved by anything Sammy told him. When Sammy asked him to phone the Tennessee News Company (the branch nearest Oak Ridge), and finally offered to pay for the phone call, Williams said "No, I don't want to waste your money."

By good luck Sammy and I learned something that same evening

that gave a solution to the problem of sales in the "atomic-energy cities." Hugh Taylor, Chairman of Princeton's Chemistry Department, Press trustee, and one-time acting co-director of the Press with Hack McGraw during the interregnum between Joe Brandt and myself, supplied the key. Hugh put us in touch with a young Princeton chemist who had just returned from Oak Ridge and happened to know a lot about the administrative setup there. He told Sammy whom to call in order to enlist participation of the employee-welfare organization in the plant. Sammy arranged by phone to have the welfare organization act as our sales department in Oak Ridge, with posters, local advertising, stuffers in pay envelopes, sales booths in plant recreational areas, and on one occasion a sound truck. We sold about 8,000 copies in Oak Ridge and a couple of thousand each in Los Alamos and Richland through somewhat similar arrangements.

From beginning to end the book sold over 125,000 copies in the two bindings, with an almost equal division between paper and cloth editions. According to Press records, the figures from the beginning until the book went out of print in 1973 were as follows (with the figures for the first year by itself on an estimated basis, though the figures for the first and second years combined are actual):

Fiscal Year	*Paperback Edition ($1.25)*	*Hardback Edition ($2.00)*	*Total both edns.*
1946	55,000	48,000	103,000
1947	3,340	3,911	7,251
1948	1,811	2,886	4,697
1949	908	1,615	2,523
1950	854	1,618	2,472
1951	524	870	1,394
1952	175	1,018	1,293
1953	—	619	619
1954	—	501	501
1955	—	478	478
1956	—	369	369
1957-61	—	1,005	1,005
1962-66	—	462	462
1967-71	—	622	622
1972-73	—	155	155
Total	62,612	64,129	126,741

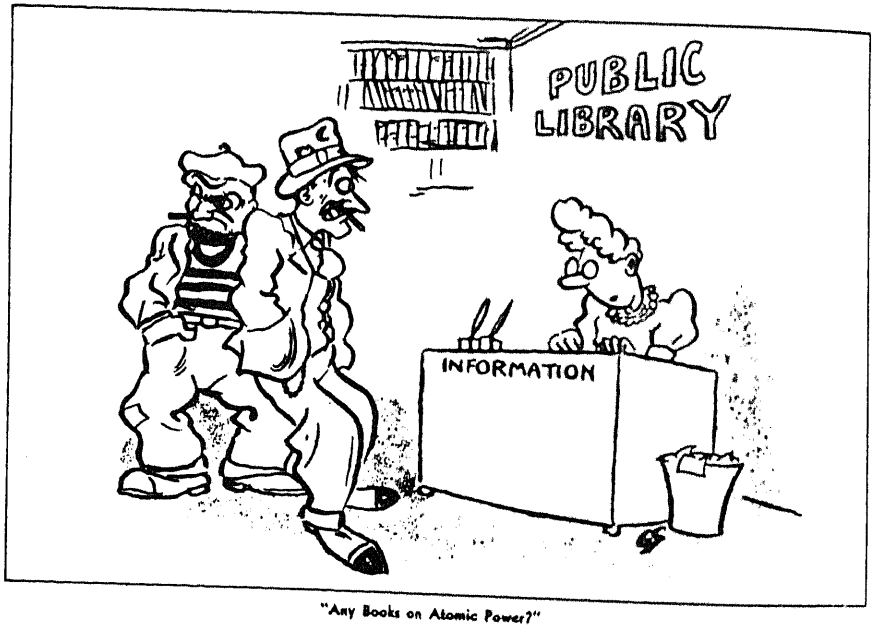
In retrospect—and I guess it seemed so even at the time—one of the most interesting aspects of the whole experience was the book's public-domain status. We had no copyright protection, and anyone who wished could bring out a perfectly legal rival edition. The only way we could preempt the field was by our own activity.

We learned from Colonel Consodine's letter that the *Infantry Journal*, which had become an important book publisher during the war, planned an edition of the Smyth Report. Assuming that was in ignorance of our own plans, we told their editor, our good friend Col. Joseph Greene, what we were doing. They immediately withdrew from the field without asking any *quid pro quo*. We were able to reciprocate the courtesy by offering them an edition of their own printed from our plates, and that is the way it was handled. As far as we know, the only other complete American edition besides that one and the official Government Printing Office book was a special issue (October 1945) of *Reviews of Modern Physics*.

The matter of translation rights, likewise, became peculiar because of the public-domain angle. The people who wanted to translate simply could not believe it when we responded to their requests with the information that they could translate to their heart's content without permission and without having to pay either Harry Smyth or the Princeton University Press for the rights. Because there were thus no contractual arrangements relating to translation, however, neither Harry Smyth nor the Press had any systematic way of keeping track of translated editions. I seem to recall that we had some kind of evidence of translations into about 40 languages. The late Dr. Vikram Sarabhai (sometimes called "India's Vannevar Bush") told me a few years ago that he thought there had been a translation of either sections or the full book in each of India's major languages.

I realize that the speed of the operation and the numbers in the sales figures are not as impressive now as they seemed to be at the time. But it nevertheless continues to look like quite an achievement to have got the book out that quickly at a difficult time, and to have sold that number of copies of a title with no copyright protection. And the achievement was by the Press as an institution. Because so much in the above account depended on personal recollections and records, the first-person-singular appears in the story with unattractive frequency. But my own part in the events would have been completely impossible without the tireless work

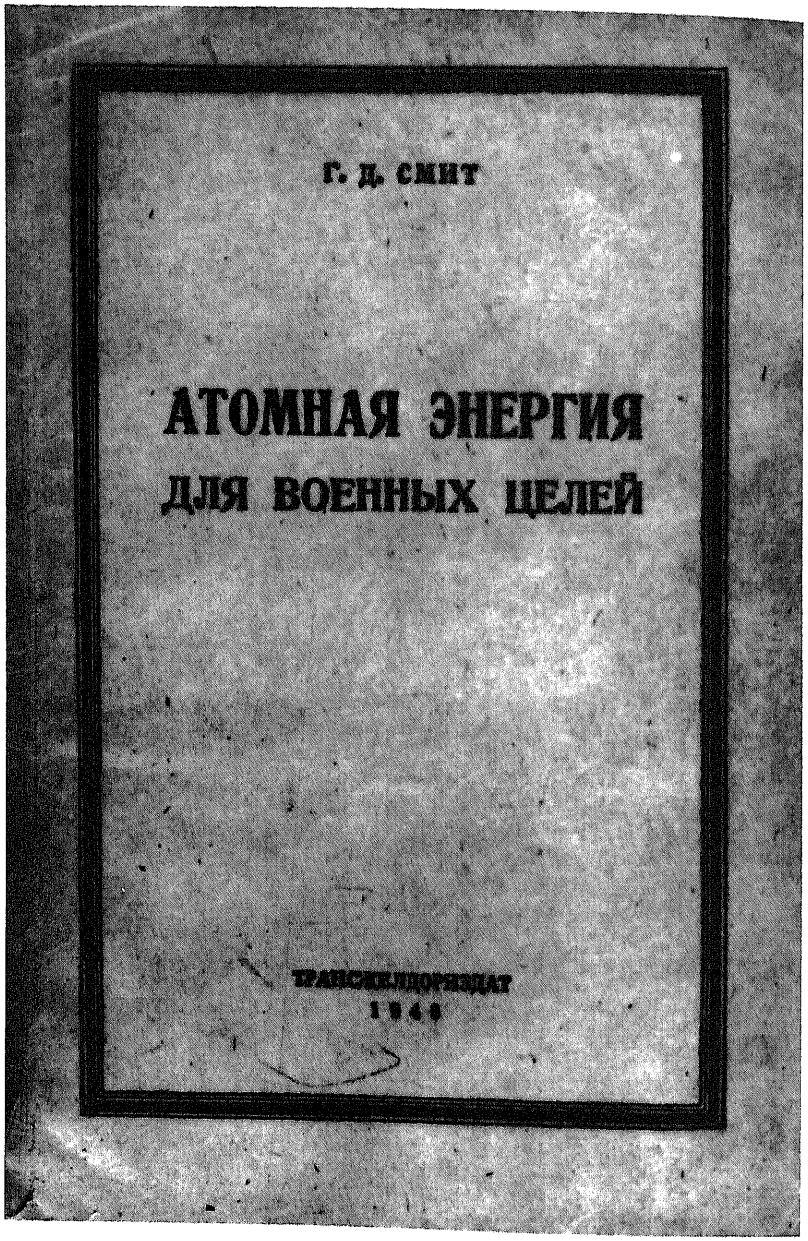
of all my colleagues. I have never seen finer teamwork in any publishing organization, and I want to end this statement with my warm salute to that whole body of people at the Princeton University Press.



"Any Books on Atomic Power?"

The New York Times Book Review, November 18, 1945.

Cover of the Swedish edition, Stockholm, 1946.
Courtesy of Henry DeWolf Smyth.



Cover of the Russian edition, Moscow, 1946.
Courtesy of Henry DeWolf Smyth.

原子能之軍事用途

美國政府主持下原子彈發展之官方報告

1940—1945

史邁斯著

普林斯頓大學物理系主任・美國陸軍工兵團曼哈登區顧問

《循美國陸軍部葛羅夫斯少將之請而編著》

方光圻譯

軍政部兵工學校

民國三十五年五月重慶初版

陸軍理工學院

民國五十三年十二月台北再版

Title page of the second Chinese edition, first published in Chungking, 1946; second edition, Taiwan, 1964.
Courtesy of Henry DeWolf Smyth.

The "Smyth Report": A Descriptive Check List

BY EARLE E. COLEMAN

Both Professor Smyth and Datus Smith have provided many details about the various editions and printings of the Smyth Report. It has been thought advisable to put some of their bibliographical information, together with a few other details, into check list format, so that collectors and others may more readily and certainly distinguish between the various printings and editions.

1. MIMEOGRAPH VERSION.

Copies of the mimeograph version or of the relevant parts of it were sent by courier to all the project leaders and a few other men of importance in the Manhattan District work. The covering memo, sent by General Groves, dated July 15, 1945, reads, in part: "These parts will be brought to you by Officer Courier, who will wait until you have read them and will then return them to me." In view of the security precautions taken at the time as described by Professor Smyth it seems highly unlikely that copies of the whole mimeograph version or even chapters of it could now be available. It should also be noted that Professor Smyth points out that the mimeograph version contained only twelve chapters. In addition, each chapter was prefaced by an outline. See pp. 212, 214.

2. DITTO VERSION.

A General Account of the Development of Methods of Using Atomic Energy for Military Purposes Under the Auspices of the United States Government 1940-1945 by H. D. Smyth Chairman of the Department of Physics of Princeton University Consultant to Manhattan District U.S. Corps of Engineers Written at the request of Major General L. R. Groves United States Army. Publication authorized as of August 1945 Copyright 1945 by H. D. Smyth (Reproduction in whole or in part is authorized and permitted.) [Washington, D.C., 1945]

[193] pp. 11" x 8½"
After the unpaged front matter, which is dittoed on one side of the leaf, each chapter has separate pagination and the pages of the Appendices are numbered A1-1 and so forth.
Single sheets punched and clamped at the side, with blue paper wrapper watermarked Hammermill MSS. The text is printed in ditto purple.

Partial memories of what happened more than thirty years ago and a lack of common understanding as to the designations of the various methods of near print reproduction leave us unclear about the priority of this version of the Smyth report. Professor Smyth has no recollection of having seen it before a copy recently came to light in the Princeton University Archives. Telephone calls to Drs. Fine and Shurcliff produced no recollection from the former, and what is believed to be some confusion between the mimeograph and ditto versions from the latter.

The text is the same, allowing for typists' errors and variations, as that of the lithoprint version, so it must have been produced just before or soon after the lithoprint. It seems plausible, and this is in accordance with Dr. Shurcliff's memory, that after all the corrections had been recorded on the master copy of the mimeograph version (which had been sent to the project leaders and others) copies were made by ditto from the master copy for the final approval of General Groves and any others he might wish to review the text before lithoprinting. On the other hand, copies might have been dittoed after the lithoprint because that edition was exhausted or for sending to the project leaders and others as a courtesy after release of the lithoprint to the press. Considering the difficulty in following the corrected master copy, with whole paragraphs deleted and added in some chapters, it seems more likely that the ditto version precedes the lithoprint.

Variations in the numerals clearly show that two typewriters were used to cut the stencil for this version. The two types of numerals, one set with serifs and the other without, are illustrated. In the one copy of the ditto version seen the following parts were typed on the typewriter with sans serif numerals: front matter, Chapters I-IX, XIII, Appendices 1-5. Chapters X-XII have numerals with serifs. In this version paragraph 12.50 is in the

middle of the page, while in the lithoprint it is at the top of the page, and there are at least nine other typographical errors not in the mimeograph that have been corrected in the lithoprint. See pp. 216-17.

This version has only the Preface dated July 1, 1945 and a Foreword by General Groves which appears in all editions.

3. LITHOPRINT VERSION.

A General Account of the Development of Methods of Using Atomic Energy for Military Purposes Under the Auspices of the United States Government 1940-1945 by H. D. Smyth Chairman of the Department of Physics of Princeton University Consultant to Manhattan District U.S. Corps of Engineers Written at the request of Major General L. R. Groves United States Army. Publication authorized as of August 1945 Copyright 1945 by H. D. Smyth (Reproduction in whole or in part is authorized and permitted.) [Washington, D.C., Adjutant General's Office, 1945]

[193] pp. 10⅜" x 7⅞"
After the unpaged front matter, which is printed on one side of the leaf, each chapter has separate pagination and the pages of the Appendices are numbered A1-1 and so forth.
Single sheets stapled, with cream-colored, textured paper covers, the following lithoprinted on the front: Released for Publication on _____.

At least one copy was bound with a black plastic spiral binder. In place of the lithoprinted legend on the front is typed Hon. Henry L. Stimson. According to Professor Smyth another copy like this was to have been prepared for himself but it was never delivered. Since Secretary Stimson apparently did not want his copy it was given to Professor Smyth.

It is apparent that gathering the leaves for binding was done in haste under the pressure of tight security precautions. Pages are lacking or repeated in several copies that have been seen.

As Professor Smyth states, the lithoprinting was done in the Adjutant General's Office in the Pentagon. The stencil from which this version was made was produced on the same typewriters as those used for the ditto version, but, it was not, of course, the same stencil. In the seven copies of the lithoprint version about which

we have information the following parts were typed on the typewriter with sans serif numerals: front matter, Chapters I, V, VIII-IX, XI, XIII, Appendices 2-3, Appendix 4 pages 4-5, Appendix 5. The following were typed on the typewriter with serif numerals: Chapters II-IV, VI-VII, X, XII, Appendix 1, Appendix 4 pages 1-3.

This version has only the Preface dated July 1, 1945.

One copyright deposit copy remains in The Library of Congress, specifically in the Rare Books and Special Collections Division. It was deposited August 13, 1945. The words "Atomic Bombs" underlined by two rules are rubberstamped in red on the front cover and above the long title on the title page. The time and date of release for publication are handwritten in blue ink on the front cover. No pages are missing or repeated. (We are indebted to Mr. William Matheson, Chief of the Rare Books and Special Collections Division, for the above information about the copyright deposit copy.) Illustrations on pages 214 and 215 are provided as an aid in distinguishing between the mimeograph and lithoprint versions.

4. PRINCETON UNIVERSITY PRESS. FIRST PRINTING.

Atomic Energy for Military Purposes The Official Report on the Development of the Atomic Bomb under the Auspices of the United States Government, 1940-1945 By Henry DeWolf Smyth Chairman, Department of Physics Princeton University Consultant, Manhattan District, U.S. Engineers Written at the request of Maj. Gen. L. R. Groves, U.S.A. Princeton Princeton University Press 1945

[i]-[xii], 1 - 264. 7¾" x 5⅜"
Bound in cloth, and yellow wrapper printed in black.
Imprint of Maple Press, York, Pennsylvania on verso of title page.

In the Preface is a statement dated September 1, 1945 saying that: "Minor changes have been made for this edition" and mentioning the variations. Appendix 6 was added to the Princeton University Press first printing as noted in this statement.

Advertised as "Just Published" in *The New York Times Book Review* September 16, 1945, paper bound and cloth bound. A copy was received by Princeton University Library September 22. The advertisement misleadingly states that "It was originally is-

sued in a small typewritten edition, which the Army reproduced by lithoprint." According to an advertisement in *The New York Times Book Review* for September 30 the first printing of 30,000 copies was sold out and the second printing was on the press. Except for two weeks the Smyth Report was on the *Times* Best Sellers list from October 14, 1945 until January 20, 1946, climbing from the bottom of the list to fifth place where it stayed for three weeks before dropping back down to fifteenth place.

PRINCETON UNIVERSITY PRESS. LATER PRINTINGS.

The fourth Princeton University Press printing is the earliest one seen with the printing designation and the numerical count (75th thousand) on the verso of the title page. It is dated 1945 on the title page. The Preface has only the statements dated July 1, 1945 and September 1, 1945 and does not have the paragraph dated November 1, 1945 stating that: "For this fifth printing . . . two new Appendices have been added—Appendix 7 giving the text of a statement by the British Information Service, and Appendix 8 giving the text of a release by the Canadian Information Service." Nevertheless, these Appendices are present in the fourth printing, and they are mentioned in red on the front of the dust jacket.

For the fifth Princeton University Press printing the numerical count was changed to 90th thousand and the date on the title page remained 1945. The verso of the title page bore the imprint of Carey Press Corporation, New York. This was the first printing to carry the added paragraph in the Preface dated November 1, 1945, but as noted above, was not the first to have Appendices 7 and 8. In *The New York Times Book Review* for December 2, 1945 was an advertisement reading: "Enlarged edition, including statements by the British and Canadian governments . . . now available . . . 90,000 copies in print. . . ."

For the sixth printing (115th thousand) the date on the title page was changed to 1946. The imprint of Carey Press Corporation, New York appeared on the verso of the title page.

No copy has been seen designated seventh printing, but a 1946 copy with no printing notice and with a dust jacket referring to the eighth printing might be a copy of the seventh.

The eighth printing had the title page dated 1948 and the imprint of American Book - Stratford Press on the verso of the title page.

5. GOVERNMENT PRINTING OFFICE.

A General Account of the Development of Methods of Using Atomic Energy for Military Purposes Under the Auspices of the United States Government 1940-1945 by H. D. Smyth Chairman of the Department of Physics of Princeton University Consultant to Manhattan District U.S. Corps of Engineers Written at the request of Major General L.R. Groves United States Army. Publication authorized as of August 1945 Copyright 1945 by H.D. Smyth (Reproduction in whole or in part is authorized and permitted.) For sale by the Superintendent of Documents Washington 25, D.C.

[i]-vii, 1 - 182 pp. 9" × 5¾"
Stapled and pasted into cardboard case, the title printed on the front which serves as page [i].
Includes only that part of the Preface dated July 1, 1945.

Listed in the "Monthly Catalogue" of United States Government publications for October 1945. The Library of Congress copy was received October 1, 1945. Probably published September 20 plus or minus five days. See p. 218.

6. INFANTRY JOURNAL.

No copy of this edition has been seen. It was advertised in *Infantry Journal* for October 1945; the Princeton University Library copy of this issue of *Infantry Journal* was received October 5, 1945.

7. HIS MAJESTY'S STATIONERY OFFICE.

A General Account of the Development of Methods of Using Atomic Energy for Military Purposes under the Auspices of the United States Government 1940-1945 by H. D. Smyth Chairman of the Department of Physics of Princeton University Consultant to Manhattan District U.S. Corps of Engineers Written at the request of Major General L. R. Groves United States Army Publication authorized August 1945. Published in the United States of

America by the Government Printing Office Reprinted by His Majesty's Stationery Office, London, 1945.

[1]-iv, 1 - [144]. 9⅝" x 6"
Stapled and pasted into wrapper printed in black and blue.

At head of title on front printed in blue: Atomic Energy. Includes only that part of the Preface dated July 1, 1945.
Listed in *The Times Literary Supplement*, November 3, 1945 among "Books Received."

8. REVIEWS OF MODERN PHYSICS.

Reviews of Modern Physics Volume 17 Number 4 October, 1945 Published for the American Physical Society by the American Institute of Physics Incorporated Lancaster, Pa., and New York, N.Y.

351 - 490 pp. 10¼" x 7⅝"
Bound in orange printed wrapper.

The entire issue contains substantially the text of the Princeton University Press first printing. The fourth printing of the Princeton University Press edition contains the "Canadian Information Service Statement August 13, 1945" which is not in the *Reviews of Modern Physics* edition. The *Reviews of Modern Physics* edition contains "Statements by the Prime Minister and Mr. Churchill Issued on Monday, August 6th, 1945" which are not in the Princeton University Press edition. Includes only that part of the Preface dated July 1, 1945.
Princeton University Library copy received November 23, 1945.

In addition to the differences between the Princeton University Press printings, the Government Printing Office, His Majesty's Stationery Office and the *Reviews of Modern Physics* editions noted above there are minor variations in the texts of all these editions, though all of them basically follow that of the first Princeton University Press printing. For example, the following have been noted:

5.32 Sentence mentioning Dr. Henry T. Wensel at end of paragraph G.P.O. only
8.67 End of paragraph: "portable instruments." PUP and RMP
"portable accurate instruments." GPO and HMSO

10.26 Beginning the 4th sentence: "At one time," PUP
"In particular," GPO, RMP and HMSO
10.41 Sentence: "The plant was built by the J. A. Jones Construction Company."
present in PUP, RMP, and HMSO
absent in GPO
12.18 Footnote for the final 3 sentences
present in PUP and RMP
absent with revised text in GPO and HMSO
PUP has none of the revisions
GPO has all of the revisions
RMP has one revision
HMSO has three revisions

Professor Smyth is unable to give a reason for the above anomalies. Since the only edition to have the September 1, 1945, prefatory statement about changes is the first (and later) Princeton University Press printing it seems possible that one corrected copy of the lithoprint version was used by Princeton University Press and another by the Government Printing Office. The Government Printing Office then made additions and corrections of its own and sent proofs only partly changed or in different stages of being changed to *Reviews of Modern Physics* and His Majesty's Stationery Office. Obviously, this is only a hypothesis but it is one way of explaining the above variations.

[redacted]

18

CHAPTER XII

THE WORK ON THE ATOMIC BOMB

CLASSIFICATION CANCELLED
DATE 9/19/61
For the Atomic Energy Commission
Jack H. Kahn for the
Chief, Declassification Branch

Outline

The Objective

History and Organization

State of Knowledge in April 1943
- General Discussion of the Problem
- Critical Size
- The Relfector or Tamper
- Efficiency
- Detonation and Assembly
- Effectiveness
- Method of Assembly
- Summary

The Work of the Laboratory
- Introduction
- Theoretical Physics Division
- Experimental Nuclear Physics Division
  - Experimental Methods
  - Detection of Neutrons
  - Production of Neutrons
  - Determination of Angles of Deflection
  - Determination of Number of Fissions
  - Detection of Resonance Capture of Neutrons
  - Some Experiments on Nuclear Constants
  - Some Integral Experiments
  - Summary of Results on Nuclear Physics
- Chemistry and Metallurgy Division

Summary

L. A. Changes from opps all made

J.B.C. suggests ∂ of last sentence of 12-18. Check with L. R. G.

Many minor corrections made

¶ 12.36 should be replaced by 3 P's from ... orig. as indicated. No question

This is master copy

H.D.S. 7-20-45

[redacted]

The mimeograph version: outline for Chapter XII.
Courtesy of Henry DeWolf Smyth.

A GENERAL ACCOUNT OF THE DEVELOPMENT OF METHODS
OF USING ATOMIC ENERGY FOR MILITARY PURPOSES
UNDER THE AUSPICES OF THE
UNITED STATES GOVERNMENT.
1940 - 1945

by H. D. Smyth

Chairman of the Department of Physics
of Princeton University
Consultant to Manhattan District
U. S. Corps of Engineers

Written at the request of Major General L. R. Groves
United States Army. Publication authorized as of
August 1945

The lithoprint version: title page.
Princeton University Library.

CHAPTER III

ADMINISTRATIVE HISTORY UP TO DECEMBER 1941

Interest in Military Possibilities

3.1. The announcement of the hypothesis of fission and its experimental confirmation took place in January 1939, as has already been recounted in Chapter I. There was immediate interest in the possible military use of the large amounts of energy released in fission. At that time American-born nuclear physicists were so unaccustomed to the idea of using their science for military purposes that they hardly realized what needed to be done. Consequently the early efforts both at restricting publication and at getting government support were stimulated largely by a small group of foreign-born physicists centering on L. Szilard and including E. Wigner, E. Teller, V. F. Weisskopf, and E. Fermi.

Restriction of Publication

3.2. In the spring of 1939 the group mentioned above enlisted Niels Bohr's cooperation in an attempt to stop publication of further data by voluntary agreement. Leading American and British physicists agreed, but F. Joliot, France's foremost nuclear physicist, refused, apparently because of the publication of one letter in the Physical Review sent in before all the Americans had been brought into the agreement. Consequently publication continued freely for about another year although a few papers were withheld voluntarily by their authors.

3.3. At the April 1940 meeting of the Division of Physical Sciences of the National Research Council, G. Breit proposed formation of a censorship committee to control publication in all American scientific journals. Although the reason for this suggestion was primarily the desire to control publication of papers on uranium fission, the "Reference Committee" as finally set up a little later that spring (in the National Research Council) was a general one, and was organized to control publication policy in all fields of possible military interest. The chairman of the committee was L. P. Eisenhart; other members were G. Breit, W. M. Clark, H. Fletcher, E. B. Fred, G. B. Pegram, H. C. Urey, L. H. Weed, and E. G. Wever. Various subcommittees were appointed, the first one of which had to do with uranium fission. G. Breit served as chairman of this subcommittee; its other members were J. W. Beams, L. J. Briggs, G. B. Pegram, H. C. Urey, and E. Wigner. In general, the procedure followed was to have the editors of various journals send copies of papers in this field, in cases where the advisability of publication was in doubt, either directly to Breit or indirectly to him through Eisenhart. Breit then usually circulated them to all members of the subcommittee for consideration as to whether or not they should be published, and informed the editors as to the outcome. This arrangement was very successful in

The mimeograph version, Chapter III, page 1.
Courtesy of Henry DeWolf Smyth.

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The lithoprint version: Chapter III, page 1.
Princeton University Library.

Comptes Rendus of January 30, 1939. From this time on there was a steady flow of papers on the subject of fission, so that by the time (December 6, 1939) Turner wrote a review article on the subject in the Reviews of Modern Physics nearly one hundred papers had appeared. Complete analysis and discussion of these papers have appeared in Turner's article and elsewhere.

General Discussion of Fission

1.54. Consider the suggestion of Frisch and Meitner in the light of the two general trends that had been discovered in nuclear structure: — first, that the proportion of neutrons goes up with atomic number; second, that the binding energy per particle is a maximum for the nuclei of intermediate atomic number. Suppose the U-238 nucleus is broken exactly in half; then, neglecting the mass of the incident neutron, we have two nuclei of atomic number 46 and mass number 119. But the heaviest stable isotope of palladium (Z = 46) has a mass number of only 110. Therefore to reach stability each of these imaginary new nuclei must eject nine neutrons, becoming $_{46}Pd^{110}$ nuclei; or four neutrons in each nucleus must convert themselves to protons by emitting electrons, thereby forming stable tin nuclei of mass number 119 and atomic number 50; or a combination of such ejections and conversions must occur to give some other pair of stable nuclei. Actually, as was suggested by Hahn and Strassmann's identification of barium (Z = 56, A = 135 to 140) as a product of fission, the split occurs in such a way as to produce two unequal parts of mass numbers about 140 and 90 with the emission of a few neutrons and subsequent radioactive decay by electron emission until stable nuclei are formed. Calculations from binding-energy data show that any such rearrangement gives an aggregate resulting mass considerably less than the initial mass of the uranium nucleus, and thus that a great deal of energy must be released.

1.55. Evidently, there were three major implications of the phenomenon of fission: the release of energy, the production of radioactive atomic species and the possibility of a neutron chain reaction. The energy release might reveal itself in kinetic energy of the fission fragments and in the subsequent radioactive disintegration of the products. The possibility of a neutron chain reaction depended on whether neutrons were in fact emitted — a possibility which required investigation.

1.56. These were the problems suggested by the discovery of fission, the kind of problem reported in the journals in 1939 and 1940 and since then investigated largely in secret. The study of the fission process itself, including production of neutrons and fast fragments, has been largely carried out by physicists using counters, cloud chambers, etc. The study and identification of the fission products has been carried out largely by chemists, who have had to perform chemical separations rapidly even with sub-microscopic quantities of material and to make repeated determinations of the half-lives of unstable isotopes. We shall summarize the state of knowledge as of June 1940. By that time the principal facts about fission had been discovered and revealed to the scientific world. A chain reaction had not been obtained, but its possibility — at least in principle — was clear and several paths that might lead to it had been suggested.

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1942 and by October 1942 was up to 700 pounds per day at Harshaw and 300 pounds per day at du Pont, the method of manufacture in both cases being the hydrofluorination of Mallinckrodt-purified dioxide.

6.14. As the result of this supply of raw materials to Westinghouse, and as a result of plant expansion, deliveries from Westinghouse had accumulated to a total of more than 6000 pounds by November 1942 and were expected to be at the rate of 600 pounds per day by January 1943. The purity of the metal was good, and the cost had dropped to $22 per pound.

6.15. Deliveries of acceptable metal from Metal Hydrides Co. were delayed for various reasons and were just beginning in November 1942. This company's production was supposed to reach a thousand pounds per week thereafter.

6.16. Neither the Westinghouse process nor the Metal Hydrides Process was entirely satisfactory. Intensive activity designed to accelerate metal production, and carried out independently by F. H. Spedding and his associates at Iowa State College at Ames, Iowa, and by C. J. Rodden at the National Bureau of Standards, resulted in the development of a satisfactory method. Production facilities were set up at Ames in the fall of 1942 and had already produced more than one ton by the end of November. The process was extremely simple, rapid and low cost.

6.17. Further research indicated additional changes that could be made to advantage, and by the middle of 1943 Spedding at Iowa and other producers who entered the picture were using the final production method adopted.

6.18. By the end of 1942 arrangements had been made by the Manhattan District to increase metal production by making greater use of the Mallinckrodt Chemical Works, the Union Carbide and Carbon Corporation, and the du Pont Company.

6.19. To summarize, almost no metal was available during most of 1942, a fact that seriously delayed progress as we shall see, but the production problems had been nearly solved by the end of 1942 and some 6 tons of metal were incorporated in the pile built in November 1942. The whole problem of procurement of metal was taken over by the Manhattan District at the end of the year, under the general direction of Colonel Ruhoff, formerly with the Mallinckrodt Chemical Works. From the point of view of the Metallurgical Project no further serious delays or difficulty have occurred because of metal shortages.

Page showing serif numerals in the lithoprint and ditto versions.

A GENERAL ACCOUNT OF THE DEVELOPMENT OF METHODS OF USING ATOMIC ENERGY FOR MILITARY PURPOSES UNDER THE AUSPICES OF THE UNITED STATES GOVERNMENT

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by H. D. SMYTH

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The Government Printing Office edition: cover title
Courtesy of Henry DeWolf Smyth

Tracking down a Herbert

BY ROBERT J. WICKENHEISER

THIS is an account of one small manuscript, significant as a rare specimen of a seventeenth-century autograph poem and one of the most difficult kinds of manuscripts to find, much less acquire. The route by which it recently found its way into the Robert H. Taylor Collection, housed in Firestone Library, is a circuitous one, and the story behind identifying its original recipient, the author of the poem, and the date of composition is fascinating, particularly since the poem, attributed to a "Mr Herbert" by a notation in a contemporary hand other than that in which the poem itself is written, was considered possibly to have been an early work by the great metaphysical poet, George Herbert.

The manuscript, along with its doubtful though exciting attribution to George Herbert, was first brought to the attention of Mr. Taylor and me on a visit to Seven Gables Bookshop in New York. According to Mr. Michael Papantonio, co-owner of Seven Gables, it was obtained in the fall of 1950 from the collection of Oliver R. Barrett, a noted collector of autograph material, both literary and historical, who lived in Kenilworth, Illinois, and most of whose collection was sold that year at the Parke-Bernet Galleries. The catalogue description for this sale merely described the item as a manuscript poem, not specifying whether it was in the hand of George Herbert or a contemporary copy. Another unidentified catalogue description, however, which accompanies the manuscript, provides the following: "HERBERT (George, Author of 'The Temple') Autograph Poem, 1½ pp. folio, 'At Mrs. Dorothy Hutton's Marriage,' *interesting specimen and extremely rare.*" From its purchase in 1950 until last year the manuscript remained virtually unnoticed on the shelves of Seven Gables Bookshop.

Had this epithalamium, composed "at Mrs Dor. Huttons marriage" according to the same contemporary notation that attributes the poem to a "Mr Herbert," been written by George Herbert, it would have constituted a rare find indeed, in part because of the nature of the poem and the public-oriented spirit of its verse (so unlike any of Herbert's other English poems), and in part because

of the associations connected with the families involved. It would have been an even rarer find had the poem been written in Herbert's own hand and sent directly to the bride, since the only poems which remain to us in the hand of George Herbert are two short collections of Latin poems (located in Dr. Williams' Library, London, and in a neat hand very unlike that of the present manuscript).

Neither the handwriting nor the poem itself, however, belong to George Herbert, and the connection with him was made perhaps more as a result of wishful thinking and a desire to read the notation as attributing the poem to him than as a result of carefully considering the handwriting, the persons involved, and the kind of verse this poem represents. Yet the manuscript remains nonetheless a valuable one. The rarest kind to survive (particularly from the seventeenth century) is one such as this, sent directly to someone on a special occasion and whose preservation has depended largely upon chance. Such a manuscript often offers the greatest challenge for accurately dating it and determining its author, but just as often the discoveries made are themselves unusually rich in their allowing us to recapture for a moment the flavor of an age gone by.

Although the poem is not Herbert's, it definitely belongs to the seventeenth century. It is written in a contemporary hand, probably that of the author, since it appears to have been sent directly to the bride's family and still retains portions of the original wax seal. The handwriting is a mixture of Secretary and Italian hand, reflecting the shift to a modern Italian hand that was occurring from the 1590's onward. But while Italian hand became common only in the mid-seventeenth century, educated persons, at least, would have been using this style of writing long before then. The notation, "M^{r} Herbert at M^{rs} Dor. Huttons marriage," located at the upper left hand corner on the folded side of the manuscript, was added by someone else, perhaps a member of the household or more probably an elder member of the immediate family intending to identify the author and occasion of the wedding message. This second hand, unlike that in which the poem is written, is more shaky and less precise, though still neat and legible. The reference to "M^{r} Herbert," implies, of course, that the author (and sender) of the poem was known to the family and

therefore needed no further identification, not even mention of his first name. Finally, the paper's watermark belongs to the period extending from about 1630 to about 1660, and this, together with the marriage date itself, firmly establishes the age of the manuscript.[1]

To identify the author of this poem one must first determine the person for whom it was composed. Throughout the seventeenth century several Dorothy Huttons appear in whose honor the present epithalamium might have been written. All evidence, however, points to the first of these chronologically, Dorothy Fairfax Hutton. She was the youngest of eight children born to Ferdinando, Viscount Fairfax of Cameron in Scotland and of Denton in York. Records in the chapel at nearby Steeton indicate that she was born on 4 June 1617; she died in 1687. The date of her marriage, crucial for establishing not only the date of the poem but also for determining its author, remained until recently difficult to fix. The poem mentions the rivers Wharfe and Ouse, rivers in York which flow by the village of Denton, and thereby identifies the location of the marriage; other sources point out that Dorothy Fairfax became the second wife of Richard Hutton. But standard genealogical and biographical sources fail to record the date of the marriage, and the chapelry of Denton in the parish of Otley, curiously enough, has no listing of the marriage in its parish register. It seemed almost impossible, therefore, to do more than simply conjecture that the marriage occurred (and hence that the poem was written) sometime in the 1630's, or at any rate before 1638 when the first child was born.

Since such a solution to the problem of dating this marriage-poem is as unsatisfactory as it is inconclusive, a further search was undertaken which led, through the generous assistance of several local authorities in York, to the fortunate discovery of a previously unknown record of the marriage license. According to registration accounts for Yorkshire, a marriage license was issued in 1635 to

[1] The examples in an album in the Graphic Arts Collection, Princeton University Library, bearing the spine title *Specimens of Paper with Different Watermarks, 1377-1840* and known to be from the library of Sir Thomas Phillipps (MS 15536), do not correspond in every detail to the watermark of this MS. Nonetheless, they indicate when this type of watermark became popular and when it declined; the period of ca. 1630 to ca. 1660, therefore, may be assigned as the period to which the present MS belongs.

"Richard Hutton, Esq, Nether Poppleton, and Dorothy Fairfax, spinster, daughter of Sir Ferdinand Fairfax, knight, Denton."[2] The date is firmly fixed then, and since George Herbert died in 1633, the marriage date alone makes it impossible any longer to consider the poem his.

Regardless, for the moment, of whom the notation "Mr Herbert" might refer to, the association of this manuscript poem with the marriage celebration of a Fairfax is itself noteworthy. But perhaps just as important, particularly from a twentieth-century point of view, is the fact that such a manuscript should have survived the turbulent times of the seventeenth century and over three centuries later turned up for sale in America. The Fairfax family was already important in Scotland late in the sixteenth century; during the course of the seventeenth it became one of the most prominent families in England as well.

Very little, unsurprisingly, is recorded about Dorothy, but history (both political and literary) has reserved a place for various male members of her family. Dorothy's grandfather, Thomas, 1st Baron Fairfax of Cameron, who died in 1640, was a Scottish diplomat whom Queen Elizabeth relied upon in her communications with James VI of Scotland. Her uncle, the poet Edward Fairfax, who died in 1635, provided the now classic translation of Tasso's *Gerusalemme Liberata.* Her father, Ferdinando, 2nd Baron Fairfax, who died in 1648, commanded the Parliamentary forces in Yorkshire during the Civil War, defending Hull in 1643 against King Charles and his army and gaining thereby an impressive first victory for the newly organizing revolutionaries. Her brother Thomas, 3rd Baron Fairfax, who died in 1671, became the commander-in-chief of the Parliamentary army in 1645 and that same year defeated Charles I in the important battle at Naseby, an event John Milton celebrates in his sonnet on Thomas Fairfax (Sonnet XV). Fairfax also sat in judgment of the King in 1649, though he had never openly favored executing the King and had by this time become disenchanted with the extremes to which the revolutionary cause was being carried. In 1650 he resigned his military command because he opposed the invasion of Scotland and in 1660 he joined George Monk in heading the commission dispatched to Holland to invite Charles II to return to England.

[2] . . . *Paver's Marriage Licences,* ed. J. W. Clay, I, 74, Yorkshire Archaeological Society Record Series, XL (Worksop, The Society, 1909).

A later descendant, Thomas, 6th Baron Fairfax (1692-1782) settled in America in 1747 as proprietor of the Fairfax estates in the Northern Neck of Virginia, entrusting to George Washington a year later the surveying and mapping of land owned in Shenandoah Valley. During the American Revolution Thomas remained, unlike his predecessors of a century earlier, a steadfast loyalist.

The Hutton family, into which Dorothy Fairfax married at the age of eighteen, was also a prominent family, though less so than the Fairfaxes and far more limited to the immediate vicinity of York itself. Richard Hutton, whom Dorothy Fairfax married, was the grandson of Matthew Hutton, Bishop of Durham in 1589 and Archbishop of York from 1595 to 1605. Archbishop Hutton left to his descendants not only a name respected throughout Yorkshire, but a large estate which solidified the family's standing in the area. About Richard Hutton, who died in 1648, and his wife, Dorothy Fairfax Hutton, little is known except for a few facts recorded by various local antiquaries concerning their continuing the lineage of the Fairfax and Hutton families (they had four sons and a daughter) and an epitaph attesting to their happy marriage and life in Poppleton.

If the present manuscript poem, which conveys fitting wishes to the couple in its solemn celebration of their nuptial feast, does not belong to George Herbert, who then is the "Mr Herbert" to whom the poem is attributed? As perplexing as this question may appear to be, since several Herberts seem likely possibilities, there are strong and convincing reasons for assigning the authorship of this poem to Sir Thomas Herbert, "son of Christopher Herbert, son of Thomas Herbert, merchant and alderman of York."[3] Like so many of his fellow countrymen at the time, Sir Thomas was not unknown in the literary world. As a young man, under the patronage of William Earl of Pembroke, he traveled extensively from 1626 to 1630 in Africa and Asia, and upon returning to England published accounts of these travels, particularly of his journeys into Persia and parts of the Oriental Indies. But Herbert is remembered today less for his literary achievements than for his record of Charles I's final years of confinement; and this after having first been a friend of the Fairfax family and identified with the cause of the Parliamentarians and only later—in a rather

[3] Francis Drake, *Eboracum: Or, The History and Antiquities of The City of York, From Its Origins to This Time* (York, 1788), I, 157.

dramatic turnabout resulting from his having been assigned to serve the King during Charles' last two years of imprisonment—with the royalists.

Sir Thomas Herbert's connection with the Fairfax family stems from "his father's intermarriage with the Ackroyds of Foggathorpe, in Yorkshire."[4] But he was also a friend of the family and in 1646 (before he had been knighted) he was appointed one of the Parliamentary Commissioners attached to the army of Sir Thomas Fairfax and entrusted with the responsibility of presenting to King Charles, then at Newcastle, the demands of Parliament. During this five-day meeting, as Herbert himself tells us, the King was requested, among other things, to dismiss his servants and to select others. The King chose Herbert to become his personal attendant and from this point on until Charles' execution in 1649 Herbert devoted himself entirely to serving the imprisoned monarch. In 1678, several years before his death, Herbert wrote a tender and detailed account of the King's last two years of imprisonment and of his execution entitled *Threnodia Carolina*; the testimony was later published at the request of Charles II. Charles had already rewarded Herbert, shortly after returning to England in 1660, for his service to Charles I by having created him a Baronet, with the title of Sir Thomas Herbert of Tintern, in Monmouthshire, where the family estate was located.

The Herberts of York had originally come from Monmouthshire and were therefore distantly related to the Herbert family from which George and his brother Edward, Lord Herbert, also descended. Perhaps this distant relationship explains why William Herbert, 3rd Earl of Pembroke, took Thomas Herbert under his patronage after the young man had attended Jesus College, Oxford, and why he supported his four years of travel abroad. Thomas' grandfather, also Thomas Herbert, had been an extremely successful merchant in his own right in York and had built up a sizable estate in the North Riding and elsewhere during his lifetime. But the family had hardly entered the ranks of the country gentry (having secured the grant of a coat of arms in 1614 shortly before the grandfather's death) when it met with financial disaster. Thomas' father, Christopher Herbert, had little business sense and

[4] See *The Fairfax Correspondence*, ed. George W. Johnson (London, 1848), I, 239. See also Wood's *Athenae Oxonienses* (1691-92), II, 690, for a late contemporary account of the life of Sir Thomas Herbert.

by the time of his death in 1625 he had lost the whole of his inheritance.

Because of his father's indigence, Thomas Herbert lost most of the lands his grandfather had accumulated for the family; in 1630 the death of the Earl of Pembroke ended his newly found patronage as well. Following a brief trip to the continent shortly after the Earl's death, he is reported to have "married and settled in his native country; where, says the Antiquary, he delighted himself more with the converse of the muses than in the rude and brutish pleasures which most gentlemen now follow."[5] However true this assessment may be, he was not unaffected by the concerns of the day. On the contrary, his growing friendship with the Fairfax family, apparent already in the early 1630's, led to a deep commitment, along with the Fairfaxes, to the cause of the Parliamentarians. This friendship with the family, as well as his admiration for them, is very much evident in the various letters Herbert wrote to Lord Fairfax, in his services to the family, and in his later account—interspersed throughout *Threnodia Carolina* and indicative of his continuing respect for the family—of Lord Thomas Fairfax's growing disenchantment with the army he was commanding and with the cause for which he was fighting.[6] After his dissociation with Parliament in 1646 (not unlike Lord Thomas Fairfax's ultimate break with Parliament a short time later) and after his two years of attendance upon Charles I, Herbert returned to York where he died on "March 1, 1681; in the seventy-sixth year of his age; and was buried in the Church of St. Crux, Fossgate, where a monumental inscription [affirming his devotion to the King] is put over him."[7]

Little need be said about the epithalamium Sir Thomas Herbert wrote in honor of Dorothy Fairfax's marriage to Richard Hutton in 1635, although the poem serves to remind us that the fashion for writing wedding songs remained popular in the seven-

[5] Drake, 157.

[6] See Herbert's letters to Lord Fairfax published in *The Fairfax Correspondence*, I, 238-39, 257-59. Likewise, throughout his *Memoirs of The Last Two Years of The Reign of Charles I* Herbert refers to Sir Thomas Fairfax's unawareness of the actions of his subordinates, to his having been "ignorant" of some of Cromwell's dealings with Charles, and even to his having been "surprised" by the decision to execute the King. In referring to Sir Thomas Fairfax as often as he does and always as favorably as possible, Herbert speaks about him as one would about an intimate acquaintance.

[7] Drake, 158.

teenth century. A facsimile copy of the manuscript is provided below, along with a transcription of the poem and several explanatory annotations. The verse, idyllic in its setting and very much adapted to suit the occasion, is pleasant enough in its simple and direct capturing of the solemnity and significance of the moment. The manuscript itself, in addition to being extremely rare, is remarkable for the associations it has with individuals who, just a short while after this joyful family celebration, figured prominently in the civil unrest and turbulent times of an age that was to change profoundly the character of England.

[EPITHALAMIUM: "AT M^rs DOR. HUTTONS MARRIAGE"]

Ringe out sweet bells the day is neare
thy ssoyled ffeete could winter Clere[1]
hence Thundringe winds Clowds leaue the skie
the brid getts vp, the Bridgroms nie
the sun beffore his tyme did rise
to see the Bride and hid his eyes
Aurora blusheth ffor to see
an earthlye wight more sweet then shee
Yee nymphs of wharfe com and Attend[2]
the ioyffull spousall of y^e ffrend
Com kiss her ffeet, her feet w^th clay
vnstayned till this hopefull day.
I know y^e sister nymphs of Ouze[3]

[1] The contrast established already at the outset of the poem between white and non-white, or bright and less bright, pure and non-pure, runs throughout the poem and is used, traditionally enough, to point up the superior beauty and virtue of the bride as well as to emphasize the holy state of matrimony into which she is about to enter.

[2] The river *Wharfe*, together with the rivers Ouse and Nidd, forms the boundary for the Ainsty of York, the country between the old city and Tadcaster, and the home of the Fairfaxes. According to Clements R. Markham, in his *Life of The Great Lord Fairfax* (London, 1870), "The Wharfe rises under the brow of Cam Fell, on moorlands 1,273 feet above the sea, passes through the lovely gorge of Bolton, where it narrows, at the *strid*, to a deep rushing torrent between masses of rock only six feet across, and thence flows in a broad rich vale, bordered by wooded slopes, to Wetherby. On the left bank is beautiful Denton, the seat of Lord Fairfax, with its woods and moorlands above" (p. 56).

[3] The river *Ouse* forms the eastern boundary of the Ainsty of York. Near its banks, according to Markham (p. 56), and nearer still to York "is Poppleton, where dwelt Master Hutton, the husband of Sir Thomas [3rd Lord] Fairfax's sister Dorothy." *masters spouse* in the next line refers, then, to Richard Hutton's bride-to-be, Dorothy Fairfax.

longe to behould ther masters spouse
and dauncinge downe ther Chanell Run
to aske of wharfe when was it done
Virgines Adorne the Virgin Bride
and whilst y^u sitt her Cheare beside
enuie nott att her garments gaye
you may haue like Another day
her Clothes are Cleane her lininge white
shee graceth them, they her, my sight
is dazeled such bright lights to see
but most her chast and modest eye
They leaue there Chambar and the aire
proude to behould this equall paire
a passage yealds in hope to kisse
the Brides whit hand, a Cordiall blisse
Perfume the way where shee shall goe
and all y^e proudest arras showe[4]
all though the Rose and lillies skantt[5]
her fface and hands supply y^e want
Sound musicke all y^e Cheireffull stringes
and keepe good tyme whilst the torkle singes[6]
lett nott a discord once be heard
for feare y^e Reliz sweeite be mard[7]
let all y^e notes be Chast and sweet
vnsoyled with lascivus ffeet
ffor he y^t is gardian of this day
Commaunds the sence run nott Astray
Behould an Angell Bright doth Bringe
of purest gould a nuptiall ringe
in it engrauen ffayth and loue
encheyned both not to remoue
Take her to the[e] thou galant swaine

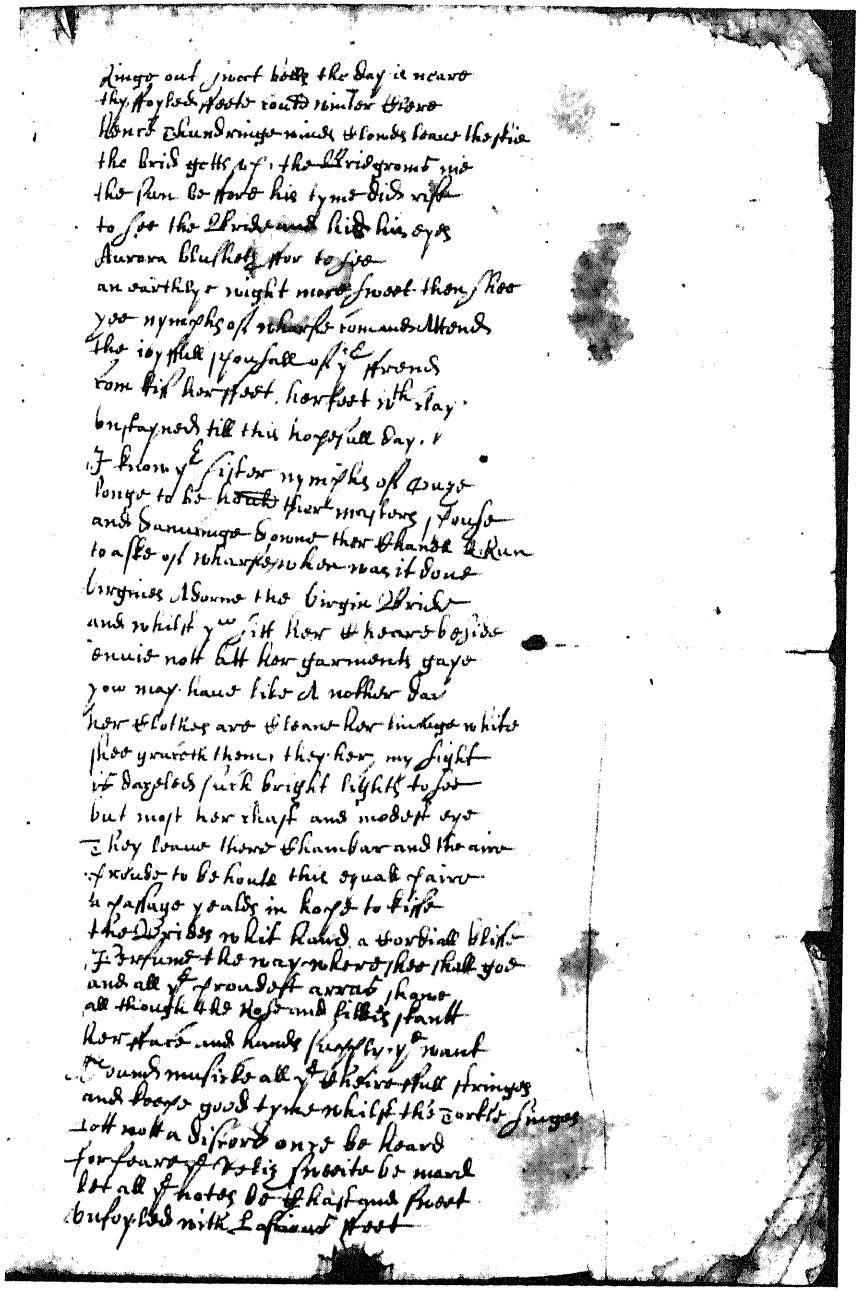
[4] That is, make a lavish display befitting the occasion. *Arras*, of course, means a rich, elaborate tapestry fabric, in which figures and scenes are woven in colors.

[5] *Roses and lillies*: Flowers traditionally appropriate to the occasion because of what they, and their colors signify. *skantt*: Archaic form "scant" (OED), now mainly literary, meaning insufficient, wanting. As this line suggests, the wedding may have occurred in winter. See also line 2.

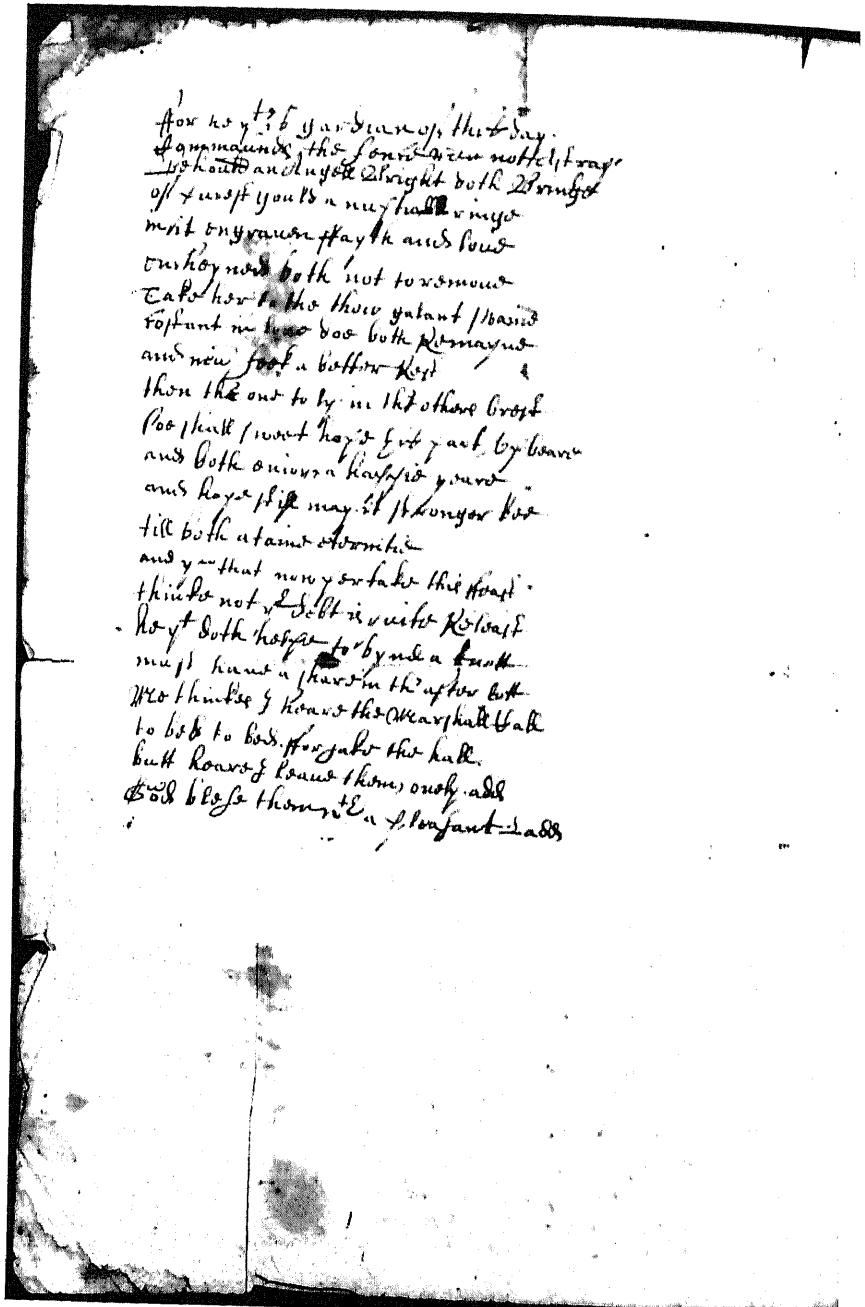
[6] *torkle*: That is, *tortle*, archaic form of "turtle" (OED); the turtle dove is often mentioned as a type of conjugal affection and constancy.

[7] *reliz*: A form of "relish," also "relice" or "relise" (OED), meaning the distinctive taste or flavor of the moment.

costant in loue doe both Remayne
and neu[er] seek a better Rest
then the one to ly in the others brest
soe shall sweet hope his part vpbeare
and both enioy a happie yeare
and hope still may it stronger bee
till both ataine eternitie
and y^{u} that now pertake this ffeast
thinke not y^{e} debt is quite Releast
he y^{t} doth helpe to bynd a knott
must haue a share in th' after lott
Methinkes I heare the Marshall Call
to bed to bed. fforsake the hall.
butt heare I leaue them, onely add
God blese them wth a pleasant Ladd



Recto of Sir Thomas Herbert's epithalamium for Lady Fairfax.
Robert H. Taylor Collection, on deposit,
Princeton University Library.
Reduced from 5¾ x 9 inches.



Verso of Herbert's epithalamium.

The Fat Lady of Cambridge

BY WILLIAM COULTER

In the collection of Mr. Robert H. Taylor there is a splendid letter of Charles Lamb, never before published. It contains the core of one of his slighter essays; it also shows us the relish with which Lamb enjoyed his visits to Cambridge—something made clear in the second of the Elia essays, where, for reasons known only to the whimsical author, the setting was changed to Oxford.

Lamb's letter is dated August 26th, [1819] and is addressed to his colleagues in the East India House. It begins:

> Dear Lads, how d'ye—I have had no time no [sic] scribble to you, scarce to think on you, so occupied in seeing Libraries, halls, museums, senate houses, & the devil knows what. I am in Cambridge, reading hard for a Degree, expect to see me when I return B.D. at least. *Bachelor* you have known me long enough, but, God knows, of any thing but *Divinity*.

The breathless pace suggested by this tale of sight-seeing is borne out by Mary Lamb's account of her visit with Charles to Cambridge four years earlier, when they fortunately encountered a willing undergraduate who conducted them about: "We made our meals as short as possible, to lose no time, and walked our young conductor almost off his legs."[1] On that occasion they had even given up their supper when they suddenly found they could see the portrait of Cromwell in Sidney Sussex College.

Lamb's feelings toward Cambridge were always warm, chiefly because of Coleridge and, later, the mathematician Manning. It was on this same visit in 1819 that he wrote the sonnet, forthrightly called "Written at Cambridge," in which he reflects on the pleasures which he has derived from imaginary studentship; and anyone reading the present letter together with the sonnet should include as well the paragraph from "Oxford in the Vacation" beginning "I can here play the gentleman, enact the student."[2]

[1] *The Works of Charles and Mary Lamb*, ed. E. V. Lucas (7 vols.: London: Methuen & Co., 1903-[12]), VI, 474.

[2] *Complete Works and Letters of Charles Lamb* (New York: Modern Library, 1935), pp. 10, 562.

The Taylor letter continues:

> And how is the Dodo? can he enter a pile of Tea notes yet as thick as Two muffins? then have I hopes of him. And how is Scrub? I mean *Chambers*, so called from rubbing & scrubbing himself—you understand—& how are all the Specials?

The Dodo and the Specials remain unidentified; the reader will find biographical notes on most of Lamb's co-workers at the end of this article.

The major part of the Taylor letter consists of a sketch, which I shall give without interruption:

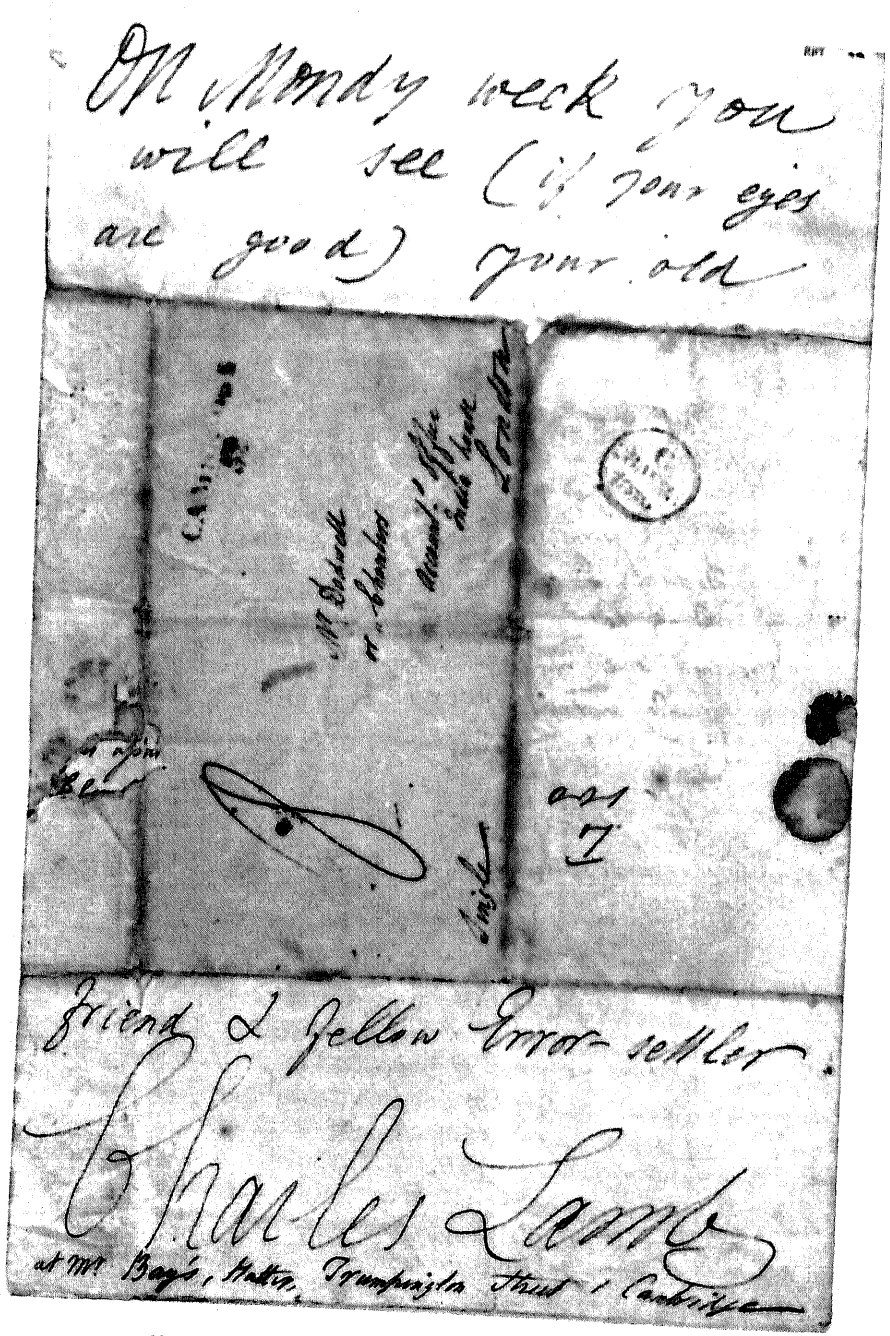
> Mrs. Smith of Cambridge, whose real name I shall conceal for delicacy under that of Clementina, is the fattest woman I ever saw in my life. She has given me a violent rheumatism & my sister a most desperate Toothache, so as to be confin'd to her bed one whole day, a fact I assure ye, with her fat. It seems a Paradox, but we feel her in all our joints. We play at whist with her, & Clementina is obliged (or she could n't support nature) to sit between Two windows open & two doors open, what you may call Two thorough Draughts—curse it, what a Twinge!—Clementina, I conceal her real name of Smith under that name for delicacy, is twice as round as Woodruff, once & a half as corpulent as Wissett, she is in short what our truly venerable Prince Regent would be in petticoats. *Petit*-coats! what a term to apply to the 20 yards of calico which she wraps round her. Clementina does not walk, how should she? nor ride, what would carry her short of a team? but she waddles every morning from Trumpington Street, to a Bench which divides Trinity from St. John's walks, where she what she calls SITS, that is, presses with a dreadful weight upon the Wood, there she sits & indulges herself in literary conversation, for Clementina is a *great* reader in more senses than one, with such of the resident fellows as happen to be left in College this vacation, prefer the delicacies of the mind to that of the Person. I heard the bench crack yesterday, and felt alarmed, till a Master of Arts assured me that it was not at all unfrequent, when Clementina sat there; that in fact there had been an amicable lawsuit between the colleges of Trinity & St. Johns at *whose* expence, when any of these little

> accidents happened, this common bench should be restored[.] St. John's was cast, because her 1st husband had been bursar to that college, and they keep an additional carpenter. It is now what they call vacation here, but while Clementina is resident I cannot but think the town seems full. Clementina has little care about any thing but how to endure her own corps—her shifts are endless for that purpose—N.B. by *shifts* I only mean *expedients*—She gets into grottoes & underground lurking places, last year she lived in a Cellar for 2 months, & speaks feelingly of some hot Wednesday that was some ten years since during the whole of which she retreated into an ice house. She reckons her epochs by hot days & such stifling events[.]

In the conclusion of the letter, Lamb turns his attention to his present East India House friends, complaining that his long absence has dulled his memory:

> Next to her the greatest curiosity I have seen in Cambridge is myself. But that's no news—
>
> How is dear C. Ryle? & pleasant Whalley, & goodnatured Rice, & finical Dowley, & Oglethorpe—& dainty Smith, the pride of Amwell's vale?
>
> Dodwell, I seriously shall be most glad to have a letter in your handwriting come upon the breakfast table Sunday morning, if it is but 6 lines, to say how you are &cc—
>
> I have almost forgot the names of my old associates, & how in point of rank they stood when I came away. As near as I remember
>
> | | |
> |---|---|
> | Accountant General | Mr. Friend |
> | Deputy Accountant | Mr. Johnson |
> | 1st Clerk | Mr. Walker |
> | 2 Clerk | Mr. Waghornn, with a salary of £50 a year as Dutch translator |
> | 1st Porter | Mr. Plumley |
> | 2d Porter | Mr. Wadd |
>
> 1st Firelighter, Mr. Patterson, 2d Firelighter Mr. J.C. Hyde I positively can go no lower[.]

Here Lamb was, according to information very kindly supplied me by Mr. S. J. McNally of the India Office Records, indulging in



Signature and address of Lamb's letter to his colleagues in the East India House.
Robert H. Taylor Collection, on deposit, Princeton University Library.
Reduced from 8¼ x 13¾ inches.

one of his little jokes. Friend was at that time almost the junior member of the office, and the last four names in the list were among the most senior clerks. The double "n" in Waghornn was Lamb's own contribution: the real Waghorn was never Dutch translator. Both Walker and Johnson had left the office some years before the date of this letter.

On the outside of the folded letter Lamb writes in a heroic hand:

> On Mondy [sic] week you will see (if your eyes are good)
> your old friend & fellow Error-settler
> CHARLES LAMB
> at Mr. Bay's, Hatter, Trumpington Street, Cambridge

It is tempting to conclude that the scale of the signature is in Clementina's honor.

Out of this letter grew an essay called "The Gentle Giantess," which was printed in the *London Magazine* of December 1822. By then, twenty-eight essays of Elia had appeared; although this one was identified in the magazine as being by him, it was not included in the collection published in 1823. For the reader attuned to the speech of Elia, this short piece comes as something of a disappointment, and it is likely that Lamb himself felt this and excluded it from the collection accordingly. I believe we can illuminate the essays as a whole by asking why "The Gentle Giantess" disappoints.

It has long been a commonplace that Lamb's best essays depend for their style on his familiar letters. In that correspondence we find, pre-eminently, energy and personality. By "energy" I mean Lamb's delighted noticing of all life's extravagances and oddities, as well as his ability to convey such things in vivid phrases and powerful images; by "personality" I mean both the eccentricities of Lamb's own character, and his remarkable ability to modulate his writing according to the correspondent he was addressing.

It is precisely the personality of Elia which impresses most readers on their first encounter with the essays, just as long-time admirers of Lamb's work remember with greatest pleasure not individual scenes and occurrences but the remarkable character through which they are experienced. Professor Lucas called Lamb's humor "whimsicality," and found it to be something sub-

stantially new in English literature.[3] He meant the making of humor out of one's self, changing the focus of writing from a situation to one's reactions to it. Such reactions may sometimes be so highly personal that they seem to the generality of readers merely bizarre; but if the projected personality is sufficiently unusual without ceasing to touch our own at most points, the result can be delightful.

The essays do not differ as the letters do, since they are not addressed to individuals; but they are like the letters in being *addressed*; that is, although no salutation appears at the head of the essays, they are written to Lamb's friends. There can be no mistake about this; the form of essay which Elia made his own is uniquely personal, and requires the same sense of a trusted and understanding audience that a letter does. The tacit honor which the essays pay to English prose-writers of the 17th century is a testimony to Lamb's sense of such an audience; for he could scarcely have known or expected, when he began writing as Elia, that his archaic flavor would find a wide welcome. He could only have written as he did for his friends and for himself.

Dividing "energy" from "personality" as I have done is clearly no more than a convenient fiction of analysis. The energy is a characteristic of, is subsumed in, the personality and helps to make it what it is. Yet I believe Lamb's observation of things and persons, which I have included under the heading of "energy," does merit mention on its own. He possessed a remarkable kind of binocular vision, one which with one eye saw things carefully and clearly as they are, while with the other eye it was enlarging them, blowing them up, expanding them to their limits. Punning is the purely linguistic form which this kind of vision sometimes takes—and of course Lamb, as Hazlitt said, always made the best pun of the evening.

This way of looking at things can be amusing; it can also be, and often in the hands of Lamb it is, deeply moving when it concerns itself with the contrast between the present and the past. This, after all, is another form of binocular vision; and as we read through Elia, we realize that mere fun, exaggeration, or whimsicality in its narrower sense cannot account for the strange power with which he holds us. Elia is a man whose world has changed;

[3] E. V. Lucas, *At the Shrine of St. Charles* (London: Methuen & Co., 1934).

who is not necessarily out of sorts with the present, but who remembers with energy and satisfaction certain things as they used to be. And so we all do. Lamb does not usually inflict mere sentimentalism on us, because he is not hopelessly stuck in the past: the G.D. who unaccountably walks into the river, the representatives of the "two races of men" all are indisputably alive. It is good to live in Elia's world, and yet it is good *to have lived* as well; the counterpoint between present and past, when it is presented in this way, is one of the things that gives human existence its particular richness.[4]

I am very much aware that the charm of Elia cannot really be analyzed, and that these remarks can only be of suggestive value. When we turn our attention to "The Gentle Giantess," however, we see that most of what I have here described as Lamb's characteristic strengths are missing. In substance the essay is not much changed from the letter, but in manner the difference is great. Whatever the elusive charm of Elia may be, it is not present in "The Gentle Giantess."

Lamb's gentle spirit is undoubtedly one reason: in a published essay, which might very well be read by Clementina or her friends, he would not say all that a letter allows. Hence, while the letter is amusingly tart, the essay is rather sweet, even sentimental, with its mention of the dainty singing voice, the mild character, and so on. Tempered in this way, the piece loses much of its energy, the sensation so powerfully conveyed in the letter of saying the most outrageous things possible about this curious sight.

A second reason is that Lamb's sense of proportion failed him here—perhaps fittingly, given the subject matter. Clementina makes an amusing sketch of about 300 words, but there is simply not enough to say about a fat lady to make an essay of three times

[4] Modern critics, who are reluctant to eat or sleep until they have explained everything in the most complicated manner possible, have found that Lamb's use of things as symbols to join present and past resembles the complexities which Keats wrought over his Grecian urn. Here, it seems to me, is a good deal of ingenuity expended in vain. Lamb wrote about things he knew, and his approach to all aspects of life was what I have called "binocular." Naturally, some symbol-making would result; as Blunden remarks, "Nobody excels Lamb in the power of perceiving the symbol or the outward sign of the inward or the visionary grace" (*Lamb*, p. 10). But surely that is all it is necessary to say. To set up "Old China," for instance, as one of the best of the essays *because* the teacups and their figures combine time and stasis, present and past, even as the figures on the urn, is to do Lamb no service.

that length. The character is never very well realized, and mere corpulence by itself will not hold our interest.

For Lamb's subject allows him nothing to say which might apply nearly to our lives. In this the difference between "The Gentle Giantess" and the Elia essays is marked: we do not need to have visited Oxford to share the emotions of "Oxford in the Vacation" —indeed, we may never have troubled ourselves about colleges, about missing or superfluous education, or about the eccentrics who cluster round these ancient halls; and yet the essay remains accessible to us, because we have all been conscious of missed opportunities, of the oddities of some fellow men, and of the respectability of great institutions. All these things come into play as we share Elia's meditations. But in "The Gentle Giantess" there is nothing of the sort: being excessively fat can scarcely be said to have anything to do with life as we live it.

Another failing of the piece is that it lacks Lamb's double-vision. In the letter we get at least some sense of that from the puns—a *great* reader, her *shifts* are endless—but in the essay the verbal play on two levels has disappeared, and there is none of the historical double-vision, so animating in the other essays, to take its place. No connection is made between Mrs. Blacket and the buildings of Oxford, nor is she linked in some sense to the life of the past, as is the whist-playing Mrs. Battle. She simply lives, and is fat. The essay takes place all on one plane, with nothing to catch at the imagination the way "the cook goes forth a Manciple" does.

It is worth noting, in this connection, an additional felicity of the letter, namely its phrasing in the matter of Lamb's rheumatism. In "The Gentle Giantess" it is made clear that Elia's faceache was caused by sitting in her multiple draughts; but in the letter there is at least the suggestion that the rheumatism might be acquired sympathetically, just by contemplating that mass of flesh and the strain it must put on the bones. This sort of gleam in the eye, which invites the reader to take a statement two ways, characterizes the surface of all Lamb's best prose; it is particularly evident in his use of quotations, which are always apt but frequently apt in unlooked-for ways and which occasion a spreading delight as they expand themselves in the reader's mind. This is precisely the kind of sparkle "The Gentle Giantess" lacks.

Finally, it is evident from Lamb's treatment of the scene on the bench that humor is enhanced by the right kind of specific illustration. In many respects the funniest part of "The Gentle Giantess" is the picture of an Oxford student peeping at the widow from afar off, then choosing to continue his ambulations by another route. The image is lively, and puts into the minds of Lamb's readers a distinct notion of the impression which this fat widow makes on others. There are few touches of this kind in the essay, but the letter is well-supplied with them. It may be that immediacy was lost in the process of toning down the letter to make an acceptable essay; but it is more likely an indication that by the time he wrote the essay the subject had little appeal to Lamb's imagination. For when the imagination is fired, it strikes off touches of this sort without effort.

I have not picked this essay to prove that Lamb had off days. The fact of its omission from the *Essays of Elia* is proof enough that Lamb knew that himself. Instead, I have attempted to show how this vigorous and entertaining letter is related to the more successful Elia essays, and how just the most vital qualities got left out when Lamb worked it up into an essay. We should be very grateful that the letter is now made public for the first time, for it permits us to know more deeply one of the most delightful figures in English literature.

CLERKS OF THE ACCOUNTANT GENERAL'S OFFICE*

PATERSON, GEORGE. Appointed 1 May 1771. Salaried from 1 May 1776. Deputy Accountant General 1799. Retired 2 May 1821, died 5 May 1831.

HYDE, JAMES CHICHELEY. Appointed 7 April 1780. Salaried from 7 April 1784. Retired 8 April 1825, died 25 March 1838. Familiarly known as "Old Jemmy Hyde," he claimed to be descended from Lord Chancellor Hyde. (A)

DOWLEY, THOMAS. Appointed 13 April 1791. Salaried from 13 April 1794. Retired 11 April 1832, died 19 September 1833. Ainger thinks

* The full names and dates of these men were very kindly supplied by Mr. S. J. McNally of the India Office Records, whom I would like to thank warmly for his help. Some of the facts cited are taken from Canon Ainger's notes to Lamb's letters, and are indicated (A). Others are from the E. V. Lucas edition of the letters, indicated (L). I should also like to thank, at this time, Mr. Robert Taylor for his generosity in letting me see the letter, and Professor Carlos Baker for his help and advice.

The clerks are listed in order of seniority.

Lamb had him in mind when he spoke of a certain D——— who did nothing in the office except read the newspaper. (Modern Library edn., p. 823.)

DODWELL, HENRY. Appointed 26 April 1797. Salaried from 26 April 1800. Retired 21 March 1826, died 1 February 1837. He is mentioned by name in the letter cited under Dowley as being a reader of newspapers and (by implication) not much of a worker. In Lucas, vii, 586 (December 16, 1822) Dodwell is described as willing but slow, and Lamb says that Dodwell's pile of tea notes, compared to his own, is as a molehill to Olympus. He is also the recipient of another letter from the country in which Lamb professes to have forgotten his usual surroundings. (Mod. Lib., p. 809; mentioned but not printed by Lucas, vi, 490.)

WADD, HENRY. Appointed 3 April 1799. Salaried from 3 April 1802. Retired 31 March 1830, died 22 October 1834. Said to be the son of a Rev. Dr. Wadd (A). He is mentioned (Mod. Lib., p. 823) as quarreling with Plumley about a kneebuckle of Hyde's, in the course of which disagreement he was struck by Plumley. He is also said to have accidentally discharged a pen-full of ink in Lamb's eye. (Lucas, vii, 587-8.)

PLUMLEY, WILLIAM DAWSON. Appointed 22 August 1804. Salaried from 22 August 1807. Retired June 1834, died 20 August 1848. The son of a silversmith on Ludgate Hill (A).

RICE, VINCENT. Appointed to Transfer Office 1 October 1806. Retired 20 November 1839, died 1 March 1845. A portion of letter 707 omitted as "indecipherable" by Lucas is given by G. L. Barnett, in *Modern Language Quarterly* 9 (1948), and in it Lamb laments the fact that none of his friends can make a proper bow. He describes their attempts: "Rice like a crocodile on his hind legs . . . Smith sputters and stutters. Wadd halters and smatters."

CHAMBERS, JOHN. Appointed 3 April 1805. Salaried from 3 April 1808. Retired June 1834, died 3 September 1862. According to Ainger, Chambers was one of Lamb's most intimate friends in the office. He is also called "Scrub" in the letter cited several times above (Mod. Lib., p. 823; mentioned but not given by Lucas, vi, 518), where it appears that he suffered from some kind of skin disease or itch, which Lamb refers to as "that damn'd scorbutic." He says that Chambers "might play Scrub in the *Beaux' Stratagem*."

WALKER, HENRY. Appointed 8 April 1807. Salaried from April 1810. Dismissed 31 December 1811.

WHALLEY, FREDERICK DANIEL. Appointed 22 June 1808. Salaried from 22 June 1811. Retired 11 April 1832, died 23 July 1872.

RYLE, CHARLES. Appointed 11 October 1809. Transferred to Home Audit Office 25 July 1821. Home Auditor 24 February 1830. Retired 31 March 1852, died 19 August 1867. He remained a friend after Lamb's retirement: in a letter of 10 May 1834, Lamb says " 'Tis but a short week since honest Ryle and I were lamenting the days gone by of Manning and Whist." (Mod. Lib., p. 1021; noted but not given by Lucas, vii, 931.)

JOHNSON, GEORGE. Appointed Extra Clerk 13 June 1807. Established Clerk 1 May 1810. Salaried from 6 August 1811. Died 14 July 1817.

SMITH, CHARLES WILLIAM. Appointed 21 April 1812. Salaried from 21 April 1815. Retired December 1834, died 18 March 1873. Mr. McNally suggests that Lamb's tag "the pride of Amwell's vale" probably refers to Smith's address, which must have been in that part of Finsbury, slightly northwest of the City, now commemorated by Amwell Street.

FRIEND, GEORGE. Appointed 23 August 1815. Accountant General 1858. Retired 5 February 1866, died 16 October 1873. He became chief clerk "when the company passed into the hands of the Government" (A).

OGILVIE, JOHN. Appointed 13 June 1817. Retired 27 October 1852, died 9 June 1874. "Oglethorpe" in the letter must be an error, or lapse of memory.

WAGHORN, JAMES. Appointed 1 July 1818. Clerk for invoices and export accounts in 1851. Retired December 1858, died 15 November 1865.

In addition there are two names cited by Lamb in his attempt to describe the fatness of the widow. These are Robert Wissett, Clerk to the Committee of Warehouses, and Thomas Woodruff, Chief Clerk of the Accountant General's Office. Such were their positions at the time Lamb went to the East India House (1792), and at that time Wissett was just over 40 and Woodruff about 50. It is likely, therefore, that both were long gone when Lamb wrote the present letter, and we may conclude that their fatness was legendary. See S. McKechnie, *Notes & Queries*, 2 November 1946.

Library Notes

THOMAS MANN EXHIBITION

On October 10, 1975, the Library marked the centenary of the birth of Thomas Mann with a public lecture and an exhibition. Erich Heller, Avalon Professor of the Humanities at Northwestern University, addressed an invited audience in McCormick Hall on the subject "Thomas Mann in Venice: Observations on Autobiography and Literature." Following his lecture, a reception in the main Exhibition Gallery of Firestone Library opened "Thomas Mann: A Retrospective, 1875-1955." The gathering of Mann's novels, short stories, essays, letters, and numerous family photographs was extracted principally from the collection of the late Caroline Newton, recently bequeathed to the Library, but important additions to the exhibition were on loan from several of Mann's friends: Lily Kahler, Allen Shenstone, Victor Lange, Hans Rosenhaupt, Charles Neider, and Frederick Morgan.

From 1938 until 1941, Thomas Mann resided in Princeton and gave lectures and seminars at the University at the invitation of President Dodds and the Department of Modern Languages. While living at 65 Stockton Street, he finished work on the novel *Lotte in Weimar* (published in the United States as *The Beloved Returns*), completed the retelling of an Indian legend, *The Transposed Heads*, and began the final volume of his tetralogy, *Joseph and His Brothers*.

Three days after the opening, the Library published a commemorative volume of six essays, *Thomas Mann: 1875-1955*, written by Professors Stanley Corngold, Victor Lange, and Theodore Ziolkowski of Princeton's Department of Germanic Languages and Literatures. Copies are still available at $3.00 at the Publications Office, Firestone Library.

A TRIPLE VOLLEY—PRINCETON IN THE REVOLUTION

An exhibition commemorating the national Bicentennial opened in the Library's main gallery on January 5, 1976. Organized by Alfred L. Bush, Associate Curator of Manuscripts and Curator of the Princeton Collections of Western Americana, the exhibition illustrates Princeton's various roles in the Revolution as battlefield, national capital, and a school for statesmen. The title, "A Triple Volley—Princeton in the Revolution," is taken from a Philadelphia newspaper report of Princeton's first celebration of America's declaration of independence. With Nassau Hall brilliantly illuminated, independence was proclaimed on the evening of July 9, "under a triple volley of musketry, and universal acclamation for the prosperity of the United States, with greatest decorum."

On display are over sixty manuscripts, thirty-five maps, fourteen prints, several paintings, books, drawings, and other objects assembled from the rich materials in American colonial history held by the University. Loaned especially for the exhibition by the Scheide Library, a private collection housed in the Firestone Library, are copies of the first printing of both the Declaration of Independence and the Constitution.

The first cases of the exhibition contain ample evidence of Princeton's early contributions to the growing movement for American independence. An early patriotic oration delivered before the American Whig Society is shown as well as a copy of the printed version of the commencement poetic dialogue for 1771, "The Rising Glory of America." The poem is the work of Hugh Henry Brackenridge and Philip Freneau, the latter honored in following years as "the poet of the Revolution." Also illustrated is the important role of President Witherspoon in agitating American furor against the English.

The second theme, the Battle of Princeton, is developed by the display of a contemporary account of the battle by an English soldier, and several related letters by Princeton residents at the time. Also displayed are numerous prints of the battle and a carefully detailed painting of the scene by James Peale. The Peale painting, according to one authority, presents us with as nearly contemporary a depiction as we are likely to receive, since, on the one hand, evidence suggests that James Peale possibly served in the battle and, on the other, the painting was done in the studio of his brother, Charles Willson Peale, an eyewitness to the battle.

In the closing hours of the war in 1783, Congress convened at Princeton. Several manuscripts tell of the hospitality of the towns-

people and the accommodations in Princeton for the Congressional delegates. The main assembly room in Nassau Hall was deemed especially comfortable for winter meetings, since it had two fireplaces. More than enough warm rooms were found among the homes in town as lodgings for the delegates. Finally "Mr. Lawrence and Col. Morgan will undertake to supply the best of Wines at the most reasonable rates." Twenty-seven members of the Continental Congress were graduates of the college, and coming to Princeton was indeed a return to familiar surroundings.

In the final exhibit cases, the work in the executive and judicial branches of the new government by such Princeton men as James Madison, Aaron Burr, Oliver Ellsworth, and others, is made plain through the use of original letters, portraits, and associated memorabilia.

(SF)

New & Notable

RECENT ACQUISITIONS IN RESTORATION PLAYS

In the Winter 1973 issue of this journal,[1] an article by Gerald Eades Bentley outlined the Princeton holdings of Restoration plays and discussed our needs for improving what he then described as "a very good collection." He also outlined what he saw as necessary for our attaining one of the best such collections for the Princeton University Library.

Not wishing to repeat suggestions already ably put forth in the Bentley article, I would like to bring our readers up to date on the additions to the collection since 1973. While we remain a considerable distance from owning the best Restoration play collection in this country, the twenty titles received in the last three years have certainly not only made the collection larger, but better.

Of the five additional plays by major Restoration dramatists listed by Bentley at the bottom of page 132, we have acquired the 1672 edition of Thomas Shadwell's adaptation of *The Miser*, first produced at the Theatre Royal very early in the same year. Shadwell, who succeeded Dryden as Poet Laureate in 1689, disliked heroic tragedy and the early comedies of the Restoration. Rather, he preferred the works of Ben Jonson and of his own French contemporary Molière. We have also acquired another new Shadwell edition, *The History of Timon of Athens, the Man-Hater*, printed in 1678 and produced at the Dorset Garden Theatre, probably in January of that year.

Professor Bentley continued with a list of 89 editions of the works of minor dramatists lacking at Princeton, but which he believed we ought to seek out. Indeed, we now own five of these: William Davenant's *The Cruelty of the Spaniards in Peru* (1658), *The Roman Brides Revenge* (1697) by Charles Gildon, *The Politician Cheated* (1663) by Alexander Greene, Thomas Porter's *The Villain* (1663), and *Tunbridge-Wells* (1678) by Thomas Rawlins.

Using the 1945 bibliography by Gertrude L. Woodward and James G. McManaway, *A Check List of English Plays 1641-1700*,

[1] *Princeton University Library Chronicle*, XXXIV, No. 2 (1973), 131-139.

as a guide, Bentley cautioned that a number of listings in that volume are not truly Restoration plays. Hence we find a number of editions published in the two decades before the Restoration began, as well as Restoration editions of the works of earlier playwrights. I shall briefly note a few of these which may be of some general interest and which are now located at Princeton University Library.

There are seventeenth-century editions of two Beaumont and Fletcher works, *Rule a Wife, and Have a Wife* (1697), and *Philaster*, issued in 1652. The popularity of Beaumont and Fletcher's plays continued even after the closing of the theatres in 1642, and *Philaster* may be of some special interest to students of the drama in that it was the earliest play specifically for the King's Men, having been written about 1608. After the death of Elizabeth I in 1603, the Chamberlain's Men—one of the companies with which Shakespeare was affiliated—had changed their name to the King's Men.

At Princeton it is now possible to use the translation of *Il Pastor Fido*, or *The Faithful Shepherd*, printed in 1676. This edition was translated by Richard Fanshawe from Giovanni Battista Guarini's pastoral tragicomedy, first produced to great acclaim at Mantua in 1598. This work considerably influenced the pastoral and romantic literature of the seventeenth century in the north of Europe.

We have acquired another 1669 edition of John Dryden's *Secret Love*, listed in Woodward and McManaway as number 447, and a 1670 edition of *The Indian Emperour*, also by Dryden, number 417 in that bibliography. Also available are a 1677 issue and a 1685 edition of *The Rival Kings* by John Banks, numbers 18 and 20, respectively, in Woodward and McManaway. Each preceded by its *Check List* number, the remaining new acquisitions are:

366	D'Ouvilly, George Gerbier. *The False Favourit Disgrac'd*	1657
790	Massinger, Philip. *The City-Madam*	1659
952	Randolph, Thomas. *Poems, with The Muses Looking Glass and Amyntas. Whereunto is added, The Jealous Lovers*	1643
1018	Scott, Thomas. *Thyestes*	1674
1187	Suckling, Sir John. *The Works*	1676
1224	Taubman, Matthew. *Londons Great Jubilee*	1689

Although there can be no question but that the purpose of building collections of uncommon—and expensive—materials in a repository such as the Rare Books Collection of Princeton University Library must be to provide research tools for the serious student, and while some of these recent acquisitions may appear to be without Gerald Eades Bentley's scholarly suggestions, they do in fact enhance our holdings. For while, by way of example, *Londons Great Jubilee* by Matthew Taubman may be of dubious value to students of the Restoration stage, it could be of interest to other historians of the period. I dare say it would be difficult to find someone not charmed by this description of a 1689 festivity in honor of the Lord Mayor of the City of London, complete with four pageants plus speeches and songs. Not all of the works acquired, then, are properly in the category of drama perhaps, but all are surely theatrical. This would seem to me to be most relevant to a period when theatricality was introduced with a new awareness and greater mechanical inventiveness than ever before in the history of the stage.

—MARY ANN JENSEN
Curator, Theatre Collection

Friends of the Princeton University Library

THE COUNCIL

The Winter meeting of the Council was held in the Robert H. Taylor Collection of Firestone Library on December 12, 1975.

The Council approved the transfer of $6,000 from the free balance of the Operating Account to the Acquisitions Committee Fund, all of which is to be designated for general purchases, as well as a transfer of $1,000 from the free balance to establish a fund in memory of Lawrence Heyl. At the time of his retirement in 1962, Mr. Heyl was Associate Librarian of the University. Of paramount interest to the Friends was his service as their Treasurer for twenty years and as a member of the Editorial Board of the *Chronicle* from its inception in 1939 until 1962.

Mr. Huber, Chairman of the Membership Committee, reported a slight decrease in the number of members, the active membership as of December 1, 1975, standing at 1233.

Mr. Bentley, Chairman of the Publications Committee, announced that three projects are underway: an edition of four early plays by F. Scott Fitzgerald; an edition of *College As It Is*, written by Christian Henry Scharff and James Buchanan Henry, members of the Class of 1853; and a recording of harpsichord transcriptions in the recently purchased Hall Handel Collection. The latter is likely to be ready in the fall of 1976.

The balance of the meeting was devoted to an informal report by our new Librarian, Richard W. Boss, on his continuing discussions with the entire Library staff, large numbers of the faculty, and approximately 500 students regarding their suggestions for improving any aspect of the Library and its services.

After dinner in Prospect, the Council was addressed by Professor Robert J. Wickenheiser of the Department of English on the subject "A Neophyte in Book Collecting."

FRIENDS OF THE PRINCETON UNIVERSITY LIBRARY

The Friends of the Princeton University Library, founded in 1990, is an association of individuals interested in book collecting and the graphic arts and in increasing and making better known the resources of the Princeton University Library. It has secured gifts and bequests and has provided funds for the purchase of rare books, manuscripts, and other material which could not otherwise have been acquired by the Library.

Membership is open to those subscribing annually fifteen dollars or more. Students may join for five dollars. Checks payable to Princeton University Library should be addressed to the Treasurer.

Members receive *The Princeton University Library Chronicle* and occasional publications issued by the Friends, and are invited to participate in meetings and to attend special lectures and exhibitions.

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