

# The Documentation Strategy Process: A Model and a Case Study

LARRY J. HACKMAN and JOAN WARNOW-BLEWETT

**Abstract:** How might the archival community strengthen its ability to analyze documentation needs and address these needs more efficiently? Is there a general approach to analysis and action that can help guide such work? This article describes a model addressing these goals and provides a case study illustrating the model at work.

First the authors outline the case for broad, ongoing analysis of the adequacy of archival documentation and for coordinated action to improve the identification, retention, and treatment of records of enduring value. In the second section, Hackman presents an analytic model for an Archival Documentation Strategy Process, describing the development, refinement, and implementation of documentation strategies. The model suggests broader analysis, increased communication and coordination, and more active use of a range of sources of influence to shape archival selection policies and programs. As the archival community evaluates the feasibility and potential effectiveness of documentation strategies, it may be especially useful to consider a case study of an institution that has already employed many aspects of the model. In the third section, Warnow-Blewett reviews the motivations that led the American Institute of Physics to design an initial documentation strategy in the 1960s and outlines the refinement, extension, and effectiveness of that strategy during the past twenty-five years. In the closing section the authors outline some of the implications of the documentation strategy process for established archival theory and practice, and call for discussion and testing in other areas of documentation.

*About the authors:* Larry J. Hackman, a fellow of the Society of American Archivists, is State Archivist of New York and chair of the New York Historical Records Advisory Board. He was the first director of the historical records program of the National Historical Publications and Records Commission and held several positions at the John F. Kennedy Library. He has served on the SAA Council and Executive Committee, chaired the 1982 Boston annual meeting program committee, and was deputy chair of the Task Force on Goals and Priorities.

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Joan Warnow-Blewett is Associate Director of the Center for History of Physics of the American Institute of Physics; she has been on the staff since January 1965. Warnow-Blewett served as chair of the Joint Committee for Archives of Science and Technology and is currently a member of SAA Council.

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## Introduction

FOR THE ARCHIVAL COMMUNITY, the past several years have been a period for assessing archival conditions and needs; for reviewing the community's performance in addressing these needs; for examining archivists' relationships with other parties, including resource allocators, whose cooperation is essential; and for clarifying the role of archives and archivists in society. Recent studies confirm that archivists face difficult challenges in fulfilling their mission "to ensure the identification, preservation, and use of records of enduring value."<sup>1</sup> These challenges include the information explosion, the computer revolution, a presentist culture, and insufficient financial and other resources for archival work. From the studies it is evident that the archival community and its allies have not been fully successful in meeting these

challenges or in otherwise achieving their mission. In fact, the archival community's first comprehensive attempt to consider archival conditions and to establish explicit goals and priorities acknowledges how much remains to be done to meet these goals.<sup>2</sup>

During recent years archivists have suggested a variety of strategies to improve the effectiveness of archival work in the United States. Most frequently these include more and better research and evaluation, improved planning and coordination, greater cooperation among programs, increased use of modern technologies, expanded information sharing, and much stronger public awareness and advocacy programs.<sup>3</sup> Archivists have been discussing and testing these strategies more vigorously than ever before, as readily demonstrated merely

<sup>1</sup>*Planning for the Archival Profession: A Report of the SAA Task Force on Goals and Priorities* (Chicago: Society of American Archivists, 1986), vi.

<sup>2</sup>*Ibid.*, 8-30. Among the recent studies are Committee on the Records of Government, *Report* (Washington, D.C.: Council on Library Resources, 1985); *Documenting America: Assessing the Condition of Historical Records in the States*, ed. Lisa Weber (Albany, N.Y.: National Association of State Archives and Records Administrators, 1984); and the reports from statewide assessment projects sponsored by the National Historical Publications and Records Commission in more than forty states.

<sup>3</sup>See F. Gerald Ham, "Archival Strategies for the Post-Custodial Era," *American Archivist* 44 (Summer 1981): 207-16; and David Bearman, "Towards National Information Systems for Archives and Manuscript Repositories: Problems, Policies, and Prospects" (paper delivered at Society of American Archivists National Information Systems Task Force Conference on Archival Information Interchange, March 1983).

by listing several recent Society of American Archivists' task forces: Archives and Society, Goals and Priorities, National Information Systems, Automated Records and Techniques, and Institutional Evaluation.

This article draws on these strategies to build an analytic model that addresses a goal vital to carrying out the archival mission: the identification and retention of records of enduring value. In the words of the Task Force on Goals and Priorities (GAP):

The selection of records of enduring value is the archivist's first responsibility. All other archival activities hinge on the ability to select wisely. Two basic activities are required to meet this goal. First, archivists must educate themselves about the records of contemporary society and improve archival practice accordingly. Appraisal techniques and collecting strategies must be developed to coordinate records selection and retention. Second, archivists must educate creators about the importance of retaining records of long-term importance and inform the general public about the essential work of the archival profession, so they will influence and support records creators in records preservation.<sup>4</sup>

The documentation strategy process model explained below may help the archival community to better meet this goal and to achieve adequacy of archival documentation.<sup>5</sup> A documentation strategy is a plan to assure the adequate documentation of an ongoing issue, activity, function, or subject. The strategy is ordinarily designed, promoted, and in part implemented by an ongoing

mechanism involving archival documentation creators, records administrators, archivists, users, other experts, and beneficiaries and other interested parties. The documentation strategy is carried out through the mutual efforts of many institutions and individuals influencing the creation and management of records and the retention and archival accessioning of some of them. The strategy is regularly refined in response to changing conditions as reflected in available information, expertise, and opinions. Strategies may be developed at levels ranging from worldwide and nationwide to statewide and communitywide.

This article consists of four parts. First, the principal characteristics of current approaches to the selection and retention of archival documentation are described. Second, a model for the development and implementation of documentation strategies is presented. Third, the American Institute of Physics (AIP) Center for History of Physics' documentation program is presented as a case study. Finally, some of the implications of documentation strategies for archival theory and practice are suggested.

## Present Condition and Practices

Determining the degree to which the archival community is collectively achieving its first responsibility—to select records of enduring value—is difficult for several reasons.

Archivists have not yet developed an accepted method for evaluating the state of archival documentation for functions or subjects. In fact, there are only modest

<sup>4</sup>*Planning for the Archival Profession*, 8.

<sup>5</sup>Adequacy of archival documentation as used here is synonymous with achievement of the first goal according to GAP, the identification and retention of records of enduring value. Although "all" is not used in its goal statement, "all records of enduring value" was GAP's intention. The identification and retention of all archival records, however, is an unattainable target that can nevertheless guide the collective efforts of archivists, repositories, and other concerned parties. Ideally, adequacy would include the identification and retention of all records of enduring value to the creator and to others who might benefit from using them or from their use by others.

indications that the archival community believes either that such evaluation is important to improve its documentation efforts or that archivists and archival repositories have collective responsibilities for documentation of subjects, functions, or types of institutions within a political subdivision, locality, region, or for the nation as a whole.

In addition, when the archival community, or particular segments of it, seeks to assess the status of the identification and retention of archival records of a certain sort, much of the data needed is not readily available. For example, those who attempt to assess the adequacy of archival documentation of the arts in the United States, or any geographical or political subpart of it, would ideally want to know what kinds of records are created; which are already being retained regularly and where and why they are being retained; which appear to have only temporary worth and which enduring value; which are presently being archivally administered and are available to use; which are used and to what end; and which are wanted or needed by potential users. Only as archivists develop broader data bases and conduct special studies and surveys will they have reliable answers to more of these questions. Without better answers, it will be difficult to assess adequacy from a perspective beyond a single repository and its direct constituency.

Finally, even with more information and a stronger desire to use it to assess and improve the state of archival documentation, the archival community presently lacks both established mechanisms, with the incentives and resources to carry out such analyses, and influence to bring the results effectively to the attention of those who should act.

Even though archivists presently lack both a developed analytic framework and established mechanisms for evaluating

the identification and retention of archival records, most members of the archival community will recognize certain prevailing characteristics. Overall, these characteristics indicate that the selection and retention effort in the United States is highly decentralized and uncoordinated in its attempts to identify and select archival documentation. The effort is highly reactive and incremental; it is generally passive in its approach to influencing records creators and others who might in turn influence records creators toward appropriate documentation decisions; and it is equally passive regarding the need to create archival programs. There is also much duplication in retention and accessioning, especially in accessioning archival records beyond those vital to their creator and in the analyses leading to these actions. Overall, the present system is both less effective and less efficient than it should be. Although the absence of evaluative frameworks beyond the individual repository limits conclusive assessment, several observations on conditions and practices within the United States attest to the accuracy of this description.

First, the archival community has not established guidelines or principles explaining how a repository establishes a responsible and carefully considered acquisition policy which takes into account either the archival documentation needs of the repository's clientele or the broader community of institutions sharing a role in the archival documentation of the same subject, function, geographical area, or political subdivision. Literature on establishing a sound acquisition policy is among the skimpiest areas within archival writing. It is not surprising, then, to find competition and duplication of effort in many functional and subject areas and little or no effort in others, even in regions with numerous collecting programs.



Second, there are very few systems and networks within the archival community which have as an explicit, ongoing function the shared assessment of archival documentation and systematic cooperative efforts to improve it for a subject, function, or geographical area. Consequently duplication, competition, and unevenness of documentation continue to exist.

Third, most retention/appraisal/acquisition decisions are made without ready access to, or vigorous efforts to obtain, reliable information on who has retained similar records and why, what use is made of the records in other settings, and the extent to which this retention and use elsewhere might warrant the destruction of records in a similar setting. Although the development of shared data bases holds great promise for the exchange of such information, presently there appears to be duplication both in analysis and retention.

Fourth, most archival repositories make their appraisal/acquisition decisions without substantial and systematic consultation with records creators, users, other experts, and especially parties whose interests might be affected by disposition decisions. In effect, most decisions continue to be made unilaterally by lone appraisers each operating largely in a vacuum.

Fifth, many archival appraisal/acquisition decisions are made when the creator needs an early decision because of space needs or some other emergency; others are made when the creator has ceased to function. Decisions often are made after related documentation has been destroyed or cannot be reviewed. Often it is difficult to assess the records in the overall context or environment in which they were created.

Sixth, at present there is no systematic consultation or joint decision making among the three levels of government—

national, state and local—especially between the former two. Consequently, duplication of analysis and records retention is certain. This is particularly critical for two reasons: government records document many, many functions and subjects; these records also document the activities of private entities that are required to report information to governments but whose own records are not as immediately accessible as governmental records.

Finally, perhaps the most serious deficiencies relate to the administration of the records of many of the most important private organizations in society. Four characteristics are worth noting: (a) Many such organizations neither have an inhouse archival program nor deposit their papers in an archival repository. Furthermore, the archival community has no organized, effective way to influence the creation of archival programs or the development of depository relationships, nor even to prevent the destruction of highly important records. (b) Many important organizations that have an archival component retain only records of direct long-range value to the creating institution. The archival community has no organized, effective method to influence such organizations to consider broader archival documentation needs. In part this is because archivists have not aggressively articulated the broader importance of such records. Presently the archival community's main approach to influence institutional policies is through the archivists within these institutions; these archivists are often unable to bring the necessary influence to bear. (c) The archival community has no established guidelines suggesting when a records creator should create an archival program, join with other institutions to do so, or establish an ongoing relationship with a collecting repository. (d) Finally, the archival com-

munity also lacks generally acknowledged guidelines on the minimum acceptable elements and mutual obligations in an ongoing relationship between a creator of archival records and a collecting repository. Present practices do not ensure carefully considered, far-sighted action by both partners in these important relationships.

A variety of recent archival activities confirms that the archival community is beginning to recognize the need for broader evaluation and better coordination of the retention and selection of archival documentation. For example, the mid-1970s project that produced the *Directory of Archives and Manuscript Repositories in the United States* called upon repositories not only to summarize their holdings but also to make explicit (for some, to write down for the first time) their acquisition policies.<sup>6</sup> At least one statewide archival network has begun not merely to divide up the pie geographically but also to analyze collective strengths and weaknesses of holdings in order to improve cooperatively future acquisition efforts.<sup>7</sup> Seven state archives are participating in a project to exchange archival appraisal information through an automated data base. Although early project work has produced mixed results, such efforts may ultimately help to avoid

duplication of analysis and lead to joint decision making.<sup>8</sup>

Some especially strong advances have been made in developing strategies in the sciences. The work of the Joint Committee on the Archives of Science and Technology (JCAST) represents an effort by archivists to consult actively with subject experts, records creators, and users to assess conditions and needs and to recommend initiatives and sound overall approaches to better document activities central to modern life.<sup>9</sup> Finally, and especially useful as prototypes for the future, are the discipline history centers. As the oldest of these, the Center for History of Physics at the American Institute of Physics presents ample evidence of the feasibility and effectiveness of the proposed model. Since its initial strategy, designed in 1960 and based heavily on traditions in the physics community, the challenges and opportunities of documenting modern physics have changed greatly, requiring the AIP Center to continually refine or extend its strategy. More recently established discipline history centers in chemistry, electrical engineering, and information processing are also formulating strategies with many of the characteristics of the documentation strategy process model developed below.<sup>10</sup>

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<sup>6</sup>National Historical Publications and Records Commission, *Directory of Archives and Manuscript Repositories* (Washington, D.C.: NHPRC, 1978).

<sup>7</sup>The statewide archival networks, unfortunately, have not fulfilled their potential for broad analysis of documentation conditions and needs and for coordinated efforts to address these needs. Most have not gone beyond the initial step of dividing up the state geographically. As reported by Richard Cameron, "No network now has in operation a written, system-wide collection policy or strategy" (Richard A. Cameron, Timothy Ericson, and Anne R. Kenney, "Archival Cooperation: A Critical Look at Statewide Archival Networks," *American Archivist* 46 [Fall 1983]: 425). An encouraging project is the Wisconsin Area Research Center Network's work to assess collection strengths and weaknesses throughout the network and to use this analysis as a basis for more directed work in the future. The analysis, however, is limited to materials already held by the network.

<sup>8</sup>The state archives in Alabama, California, Minnesota, New York, Pennsylvania, Utah, and Wisconsin will share information through the Research Libraries Information Network.

<sup>9</sup>*Understanding Progress as Process: Documentation of the History of Post-War Science and Technology in the United States: Final Report of the Joint Committee on Archives of Science and Technology*, ed. Clark A. Elliott (Chicago: 1983, distributed by the Society of American Archivists).

<sup>10</sup>For example, the 1984-85 annual report of the Center for the History of Information Processing of the Charles Babbage Institute (CBI) outlines plans to develop a national documentation program for the

Taken together, these efforts and a variety of recent writing indicate a desire among some archivists and other interested parties to improve analysis and avoid duplication of effort.<sup>11</sup> They are

only a beginning, however; their implications have not been fully analyzed nor carefully explained in a model and a case study that might have more general application.

## A Model for Assessment and Action

LARRY J. HACKMAN

Considering the general conditions described above and the objectives recommended by the GAP Task Force within the identification/selection goal, how might the archival community strengthen its ability to analyze documentation needs and bring to bear resources to maximize effectiveness and efficiency in addressing these needs? The following discussion is a beginning effort to grapple with these questions by offering a model that can be tested, critiqued, refined, and—hopefully—sustained because it proves useful.<sup>12</sup>

The Documentation Strategy Process Model described below consists of a preliminary stage and five additional in-

teractive stages (see Figure 1). The preliminary stage is Documentation Area Definition and Preliminary Analysis. This stage is distinguished from later steps in that it draws most heavily on the existing knowledge and views of those who have come together for initial discussion and assessment. The five continuing stages (see Figures 2 and 3 and Tables 1-3) are Documentation Strategy Drafting, Strategy Implementation by the Documentation Group, Strategy Implementation by Other Parties, Documentation Reporting, and Documentation Area Reconsideration. To better examine the model, readers may find it useful to envision a potential documentation area such

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history of information processing which will include a "major, multi-phased program to assemble the necessary information for establishing an effective collecting strategy that will involve a national network of prominent archivists, curators, historians, and computer scientists" [p.3].

<sup>11</sup>See Francis X. Blouin, Jr., "An Agenda for the Appraisal of Business Records," in Nancy E. Peace, ed., *Archival Choices: Managing the Historical Record in an Age of Abundance* (Lexington, Mass.: Lexington Books, 1984), 61-80; Susan Grigg, "A World of Repositories, A World of Records: Redefining the Scope of a National Subject Collection," *American Archivist* 48 (Summer 1985): 286-95; F. Gerald Ham, "Archival Choices: Managing the Historical Record in an Age of Abundance," *American Archivist* 47 (Winter 1984): 11-22; Fredric Miller, "Documenting Modern Cities: The Philadelphia Model," *The Public Historian* 5 (Spring 1983): 75-86; James M. O'Toole, "Things of the Spirit: Documenting Religion in New England," unpublished; and Helen W. Samuels, "Ring Around Route 128: A Conjectural Documentation Strategy," paper delivered at the annual meeting of the Society of American Archivists, Washington, D.C., September 1984. Andrea Hinding provided a provocative introduction to many of the issues explored in this section in an October 1981 presentation to the Association of College and Research Libraries. A copy of Hinding's paper was brought to the attention of the authors as this article went to press; see "Toward Documentation: New Collecting Strategies in the 1980s," *Options for the 80s: Proceedings of the Second National Conference of the Association of College and Research Libraries*, ed. Michael D. Kathman and Virgil F. Massman, *Foundations in Library and Information Science*, vol. 17 (Part B) (Greenwich, Ct: JAI Press, 1982), 531-38.

<sup>12</sup>The perspectives reflected in this model and in much of the introductory and concluding sections derive largely from my experience at the National Historical Publications and Records Commission, 1975-1981. The review of hundreds of prospective applications and formal proposals and discussions with many archivists and other records custodians indicated a lack of rigorous thinking about the values of records. Almost always missing were a comparative or cooperative framework for the documents to be treated and a plan to apply maximum leverage to improve the future practices of records creators—either directly or by working with other archivists or through other interested parties. Encouraging applicants to give attention to these matters pushed me to try to place them in a broader framework.

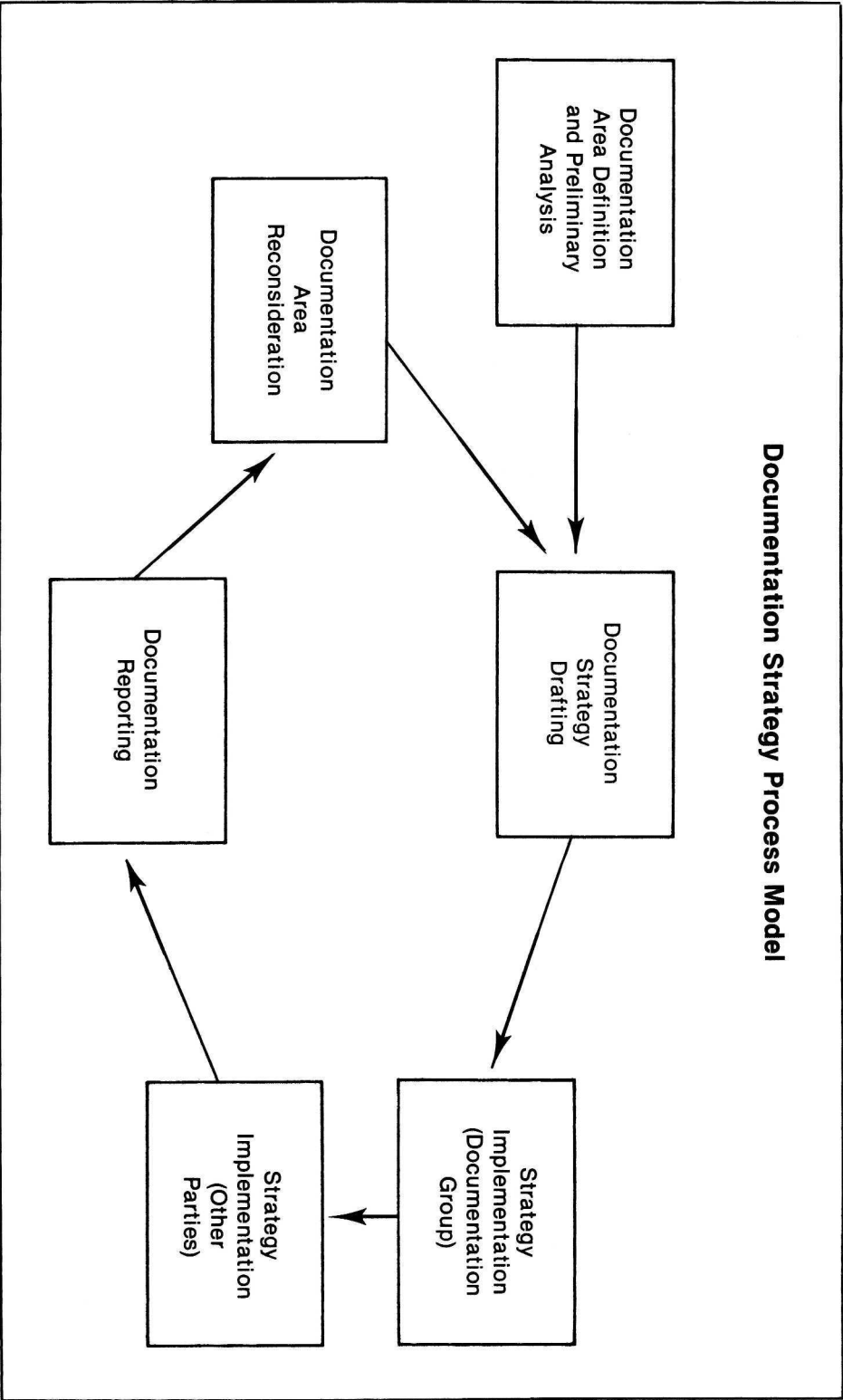


Figure 1

as labor in New York State, the arts in the Southwest, or banking and finance in Chicago.<sup>13</sup> The accompanying case study explores the model in terms of a specific documentation area—modern physics in the United States.

Because the implications of this model may initially seem overly sweeping and ambitious, several caveats are in order. (a) The model outlined below is not a model for centralizing archival decisions. Rather, it is aimed at broadening participation, at sharing expertise and information, and ultimately at sharing the burden of appraisal and acquisition decisions. The model is meant to be inclusive, not exclusionary, and to be useful at the most local level as well as at broader levels. Use of it should promote greater interaction between local and broader mechanisms and bring the perspective of the lone arranger into an ongoing dialogue with others. (b) The model is not a grand theory of appraisal but is rather an instrument to improve identification, selection, and retention of archival records. Implicit in this model is the belief, as argued by Gerald Grob, that archivists cannot construct a grand theory of appraisal.<sup>14</sup> We need, instead, more organized methods and participatory systems for analysis based on the best information and expertise available at any given point in time. Archivists need then to take coordinated action in line with recommendations derived from this analysis. (c) The model is not designed to decrease the influence of archivists in documentation decisions but rather to make archivists' appraisal

expertise more fully apparent to others, to strengthen archivists' existing abilities by broadening the information and knowledge on which they are based, and to make their views more influential by making them more widely known and by bringing them directly to the attention of key decision makers. (d) Finally, the model is not designed to increase the resources needed by individual repositories to carry out their work but instead to increase the results achieved with the same or fewer resources. The model is based on the fact that shared analysis, improved communication, and increased cooperation can reduce expensive duplication of effort in both appraisal analysis and in the retention and accessioning of similar records where such records are not vital to the future needs of the records creator. This more effective appraisal and accessioning should reduce costs to every repository by avoiding the arrangement, description, and preservation of records that need not be accessioned at all. The same resources then can be used for work on other archival records or for influencing decisions at earlier points in the life cycle.

### **Documentation Area Definition and Preliminary Analysis.**

The first stage in the development of an archival documentation strategy is Documentation Area Definition and Preliminary Analysis. Interested individuals initially come together, with the aim of assessing and improving documentation of a functional or subject

<sup>13</sup>In fact, a pilot labor records documentation strategy is already being developed for metropolitan New York City, and plans are being made to extend this statewide. This work is sponsored by the Wagner Labor Archives at New York University in cooperation with the Labor-Management Documentation Center at Cornell University and the George Meany Center in Washington. The work is partially supported by the National Historical Publications and Records Commission and by a special New York State legislative appropriation obtained through the efforts of organized labor.

<sup>14</sup>Gerald N. Grob, "Archivists and Historians: Problems of Appraisal," paper delivered at the annual meeting of the Society of American Archivists, Boston, 20 October 1982.

area or in a geographical area.<sup>15</sup> This process can begin whenever a group of concerned individuals assembles to assess and improve documentation conditions. Ideally the initial group will include archivists, subject matter experts, and representatives of both users and creators. Theoretically, any of these can define a documentation area and begin preliminary analysis. In this first stage the parties seek to define the documentation area more precisely, share impressions of current conditions, and decide how to proceed further. The group discusses what it presently knows about the structure and evolution of the institutions, groups, and processes that create, retain, use, and benefit from the use of records within the general documentation area. It also considers which other parties should be involved in subsequent stages of the development of the documentation strategy. The primary purposes of this preliminary review are to enable the group to state as clearly as possible the scope and boundaries of the documentation area in which an initial documentation strategy will be drafted and to initiate that process. Based on these preliminary discussions, the proto-documentation group decides who will be involved in drawing up an initial documentation strategy statement, where that process will be based, who will sponsor it, and what information and expertise will be essential for formal analysis and drafting. Having successfully carried out this step, the initial group proceeds as expeditiously as possible to set in motion the work necessary to formulate a first

documentation strategy, to issue a statement based on this analysis, and to foster implementation of the strategy. It is hoped, though far from certain at this early stage, that the analysis-statement-implementation process will become continuing.

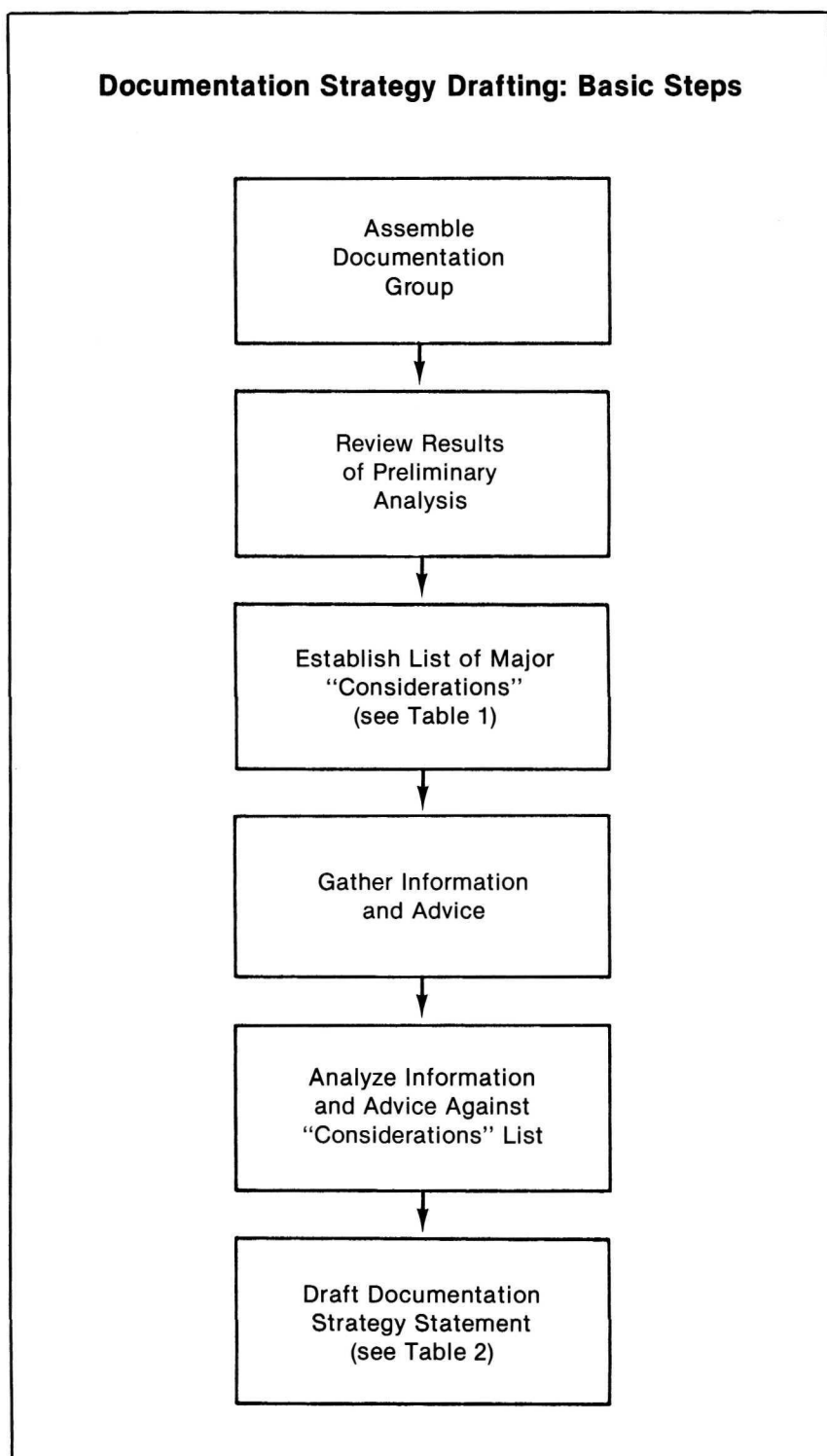
### Documentation Strategy Drafting.

Following the area definition and preliminary analysis, a documentation group is formed and begins to prepare a formal Documentation Strategy Statement (see Figure 2). The statement serves as an important, although not the only, way to report to all interested parties on current documentation conditions and needs, to assist them in their archival documentation decisions, and to encourage the reporting of information that will enable the documentation group to develop and foster implementation of better documentation strategies in the future. To prepare a documentation strategy, the documentation group ideally will draw on a variety of information for analysis.<sup>16</sup> Useful information includes a profile of the way in which records are created, used, and administered by the organizations and individuals operating in the documentation area, including both institutional archives and ongoing depository agreements; data on the acquisition policies of collecting programs for the particular type of documentation; data on records previously accessioned into archival custody; data on the use of archival and related documentation by users other than the records creators; evidence of in-

<sup>15</sup>For example, several archivists and health policy experts might invite several hospital and health plan administrators to discuss documentation of health care in a particular geographical area. Or leaders of performing arts organizations might call together archivists and historians of the performing arts to begin discussing documentation of the performing arts in the United States.

<sup>16</sup>See Joan K. Haas, Helen W. Samuels, and Barbara Simmons, *Appraising the Records of Modern Science and Technology: A Guide* (Cambridge, Mass.: Massachusetts Institute of Technology, 1985) for an example of the type of analysis needed. Another example is the American Institute of Physics' project examining the records practices of national laboratories. Francis X. Blouin discusses the type of analyses needed for business records in "An Agenda for the Appraisal of Business Records."



**Figure 2**

terest in or concerns about archival documentation from present and potential beneficiaries; and any special studies in progress relating to the documentation area. The documentation group should draw on as many of these types of information as possible when evaluating conditions, projecting needs, and suggesting actions. The group should note areas where information is not available, and recommend ways to expand and improve the information base for future analysis.

When analyzing available information in order to draft a documentation strategy statement, the group especially will seek to answer the following questions: What kinds of records are generally archival because they are vital to the future needs of records creators? What kinds of records are archival because they are important to the interests of other groups in society? What types of archival records lend themselves to sampling, either through the selection of certain records or of certain records creators, and what selection approaches seem most feasible, effective, and efficient? Who are the key groups and individuals who can most persuasively convince records creators, administrators, archival repositories, and others to consider the recommendations of the documentation strategy statement or who can provide highly visible examples of desirable documentation practices? How can these groups and individuals be persuaded to assist in implementing the strategy? What additional information is needed to improve future analysis of documentation conditions and needs and how might this be obtained? What needs of records creators and others presently are not being met because certain types of records are not being created at all? How might records creators be persuaded to create such records? Can the information needs

be met retrospectively in some other way, such as oral history or survey research? The major considerations in this analysis are summarized in Table 1.

Based on the consideration of such questions as practical at a given point in time, the documentation group issues a documentation strategy statement summarizing its findings; describing the information, analyses, and opinions drawn upon; and suggesting the general practices and specific actions most needed to improve documentation conditions. (See suggested format in Table 2.) The statement indicates recommendations for both an initial period during which the documentation strategy is considered especially applicable (perhaps two to five years) and for the indefinite future.

### **Strategy Implementation by the Documentation Group.**

Having developed a documentation strategy statement, the documentation group turns its attention to implementation of the strategy. This stage can be described usefully from two vantage points: the actions to be taken by the documentation group itself and the actions others are to be encouraged to take. These implementation activities are portrayed in Figure 3. Actions to be taken by the documentation group, like activities in all other stages of the documentation strategy, will be determined by available resources. Ideally, however, action by the documentation group itself includes the following activities, all of which are grounded in the documentation strategy analysis and are consistent with its recommendations: (1) using information and persuasion to convince records creators to create, retain, and appropriately administer and dispose of archival documentation vital to the creator and to others;<sup>17</sup> (2) using similar tech-

<sup>17</sup>Creation can be influenced, for example, by advocating governmental policies specifying the documentation of certain activities supported by government funding or required under government laws or regulations.

**Documentation Strategy Drafting Considerations**

1. What are present records practices for this function/subject/type of record within the geographical area or political unit of interest?
  - (a) What records are already available in repositories?
  - (b) What records are being regularly accessioned by repositories on a systematic basis? For what reasons?
  - (c) What records are being sought by archival programs but are not being accessioned regularly? Why are they being sought? Why aren't they being accessioned?
  - (d) What records are being scheduled for retention or otherwise regularly retained by their creators but not sought by archival programs? Why?
  - (e) What records are being regularly destroyed? Why?
2. What are past, present and projected uses, and benefits from these uses, of records in this documentation area?
3. For this subject/function/type of record:
  - (a) What categories of records are clearly archival from the perspective of typical creators of the records?
  - (b) What categories of records are clearly archival from the perspective or interests of other parties?
  - (c) What categories may be of substantial interest from the perspective of the public welfare of future generations?
4. What archival or potential archival records most readily lend themselves to retention through a coordinated selection from among the records or their creators?
5. What records cannot yet be evaluated for potential archival status:
  - (a) Without knowing more about the status of records creation, administration, retention, accessioning, or use within the geographical region or political unit?
  - (b) Without knowing more about these factors beyond the region or unit?
  - (c) Without knowing more about the relationship of such records to other forms of related information?
6. Who are the major established and potential parties interested in documentation of this function, subject, or type of record? What are their views on the current condition of archival documentation in this area?
7. What present policies and practices seem most detrimental to better creation, identification, retention, and treatment of archival records in the documentation area?
  - (a) By records creators?
  - (b) By archival programs?
  - (c) By other parties?
8. What new policies and practices would be most likely to improve the future condition of archival documentation?
  - (a) By records creators?
  - (b) By archival programs?
  - (c) By other parties?
9. How can records creators, existing repositories, and other parties be influenced to act individually and collectively to refine present policies and practices in appropriate ways?
10. Which of these actions can be most effectively fostered during the next several years, and which must await attention at a later time?
11. What other steps need to be taken to further analyze archival documentation conditions before drafting an initial documentation strategy statement?
12. What ongoing process/mechanism would be most effective to analyze needs, share information, foster appropriate documentation decisions, and monitor conditions in this documentation area?
13. How can such a process be developed, tested, refined, and sustained?
  - (a) Who are the key parties to involve for advice, credibility, and influence?
  - (b) What existing examples/experience can be drawn on?
  - (c) Who can most effectively provide the leadership and sponsorship that are needed?
  - (d) What additional technical expertise is needed?
  - (e) How can needed information be obtained?

Table 1

Documentation Strategy Statement: Sample Format\*

Elements of Statement\*\*

- 1. Subject/functional area of strategy:
- 2. Geographical scope/political unit:
- 3. Documentation Group (Key organizations and individuals participating in analysis and drafting):
- 4. Information and opinions drawn on (describe each)
  - (a) data bases:
  - (b) written surveys and studies:
  - (c) on-site surveys and studies:
  - (d) meetings and discussions:
  - (e) special analyses:
  - (f) other sources:
- 5. Information and opinions desired but unavailable:
- 6. Summary of findings on major matters considered:  
(Follow list of considerations agreed upon by documentation group)
- 7. Recommended actions/practices for period covered by statement:

<u>Actions/Practices</u>	<u>Suggested Actors (creators, repositories, government associations, etc.)</u>	<u>Proposed Role of Documentation Group</u>
Action #1		
#2		
etc.		

- 8. Major actions needed beyond period covered by statement:
- 9. Actions most needed to improve effectiveness of documentation group in future:
- 10. Related documentation areas or groups with which communication/coordination is needed:
- 11. Date this statement issued:
- 12. Target date for next revision:

\* This same format can also be helpful as a checklist/guide during the less formal and extensive Preliminary Analysis stage.

\*\* A full statement may range from a few pages to a lengthy document with a summary and appropriate appendixes. Elements 6 and 7 will vary especially greatly depending on the subject, scope, and resources available.

Table 2

niques to convince records creators to develop archival programs or to develop sound depository agreements with collecting programs; (3) encouraging collecting repositories to refine their acquisitions policies and practices and to cooperate with other repositories and institutional archives to ensure more effective and efficient accessioning in the documentation area; (4) urging existing institutional archives to take similar actions; (5) asking records creators and repositories to report appropriate documentation policies, practices, decisions, uses, benefits, and needs so that documentation strategies may be improved overall and useful information is provided to other archival creators, archivists, and other interested parties; (6) informing interested parties of conditions and needs in the documentation area so that they are aware of and may support the recommendations from the documentation strategy and may report on their actions and viewpoints; (7) similarly informing the general public; and (8) seeking resources needed to sustain and improve the documentation strategy process. Throughout this stage, the documentation group acts directly when practical and works through intermediaries when such an approach seems more effective.<sup>18</sup> A continuing objective is to strengthen the documentation strategy process itself so that those employing it become more capable of playing the full role envisioned in this model.

### **Strategy Implementation by other Parties.**

Actors beyond the documentation group should also implement the

documentation strategy through various activities. Such actors include records creators, archives and collecting programs and other interested parties (see Figure 3).

In carrying out a documentation strategy, records creators refine internal guidelines and systems governing the creation and filing of records, refine retention and disposition schedules, and improve practices for the treatment of archival records prior to their formal disposition. If no inhouse archival program exists, creators establish one, perhaps in cooperation with other records creators, or establish a depository arrangement with a repository. Creators also actively influence peers—both organizations and key individuals—to take similar actions and to report on these actions. Finally, creators support, seek effective representation in, and work generally to improve the documentation strategy process.

Archives and collecting programs are key actors in the implementation of a documentation strategy. They refine acquisition policies and appraisal priorities and methods in reaction to the documentation strategy statement. They cooperate formally with other archives and collecting programs in the development and implementation of these policies and priorities. They also report on their policies and activities, and support, seek effective representation in, and work generally to improve the documentation strategy process.

A variety of other actors and interested parties support, participate in, and seek to improve the documentation strategy process. They primarily act as advocates

<sup>18</sup>Intermediaries include individuals and groups beyond the direct participants in the documentation group who might effectively influence records creators, archival programs, and other interested parties (see Figure 3) to act in accord with the recommended documentation strategy. For example, in implementing a documentation strategy for business records in a given state, effective intermediaries might include the state business council, the state's Department of Commerce, the editors of journals and newsletters widely read in the business community, the annual meeting program chairperson for a key statewide business group, and important individual business leaders who might convince their peers to take desirable actions.

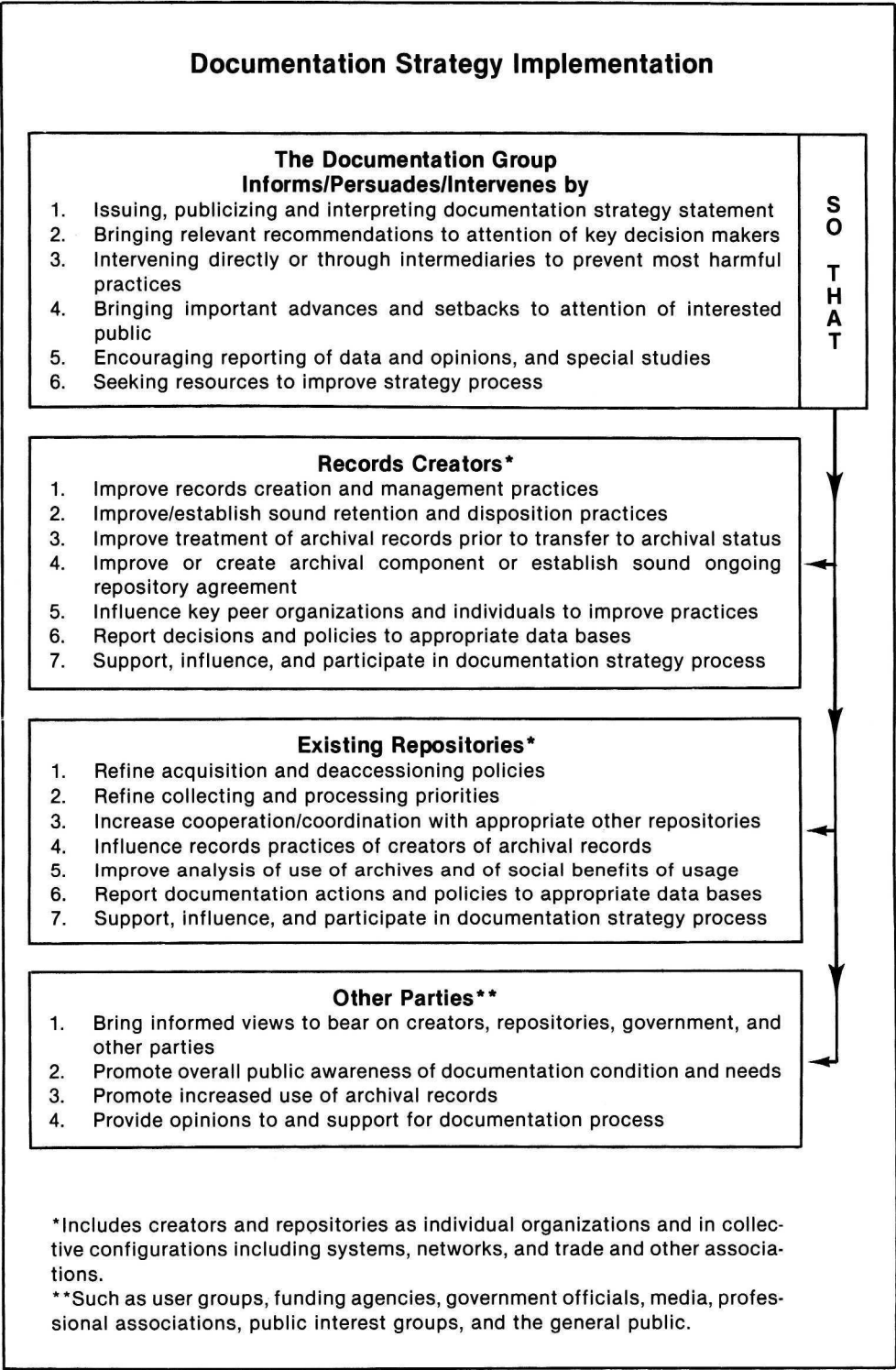


Figure 3



in the public policy process and other forums, helping to accomplish the documentation strategy and to increase the awareness of both special interest groups and the general public about archival documentation needs and the importance of adequate archival documentation.

**Documentation Reporting.**

Although the reporting of information most useful to the documentation group in analyzing and reanalyzing archival documentation conditions and needs is described as a discrete stage in the Documentation Strategy Process, reporting must take place at all stages. The model does not presume that the documentation group itself will formally administer data bases or clearinghouses to obtain and make available any of these categories of information. Since the group is interested in obtaining information for analysis, it will encourage the reporting of such information into systems accessible to the documentation group and others who need it. The group will generally encourage the development of data bases, clearinghouses, and exchange formats to improve information about archival documentation and will

draw on this information to refine the documentation strategy. Documentation reporting includes the reporting of concerns and opinions, as well as hard data, on policies, procedures, and documentation actions. The documentation group itself will be directly involved in seeking such qualitative reporting from as wide a range of interested parties as possible.

**Documentation Area Reconsideration.**

This stage is identified as a separate element in the Documentation Strategy Process primarily to emphasize that changing conditions in the documentation area and related areas, new information and studies, and the changing parties represented in the documentation group continuously affect the very definition of the contours of the documentation area that is the focus of the process (see Table 3). A responsive process will regularly redefine the area of concern to suit these changing conditions and viewpoints and will communicate clearly the factors that led it to do so. Interaction among documentation groups and knowledge of related documentation areas should enrich the overall effort to provide adequate documentation. If reconsideration indicates the need for substantial

Documentation Area Reconsideration: Key Questions	
1.	Do documentation group experiences, changing documentation conditions, or other factors suggest that for the existing documentation area: (a) The definition of the subject/function is unclear? Is too narrow or too broad? (b) The geographical/political unit scope is unclear? Is too narrow or too broad? (c) Documentation efforts or interests in related subjects/functions/regions/political units warrant a consolidation or redistribution of documentation areas?
2.	If the factors considered above suggest the need for substantial redefinition: (a) What is an appropriate redefinition of the documentation area? (b) How should this affect the makeup of the documentation group? (c) What steps should be taken to refine the definition and the makeup of the group prior to drafting a revised documentation strategy? (d) Is a preliminary analysis stage needed before proceeding to drafting of a new strategy statement?

Table 3

redefinition, there may be need for a stage very similar to Documentation Area Definition and Preliminary Analysis before drafting a new documentation strategy statement.

### **A Dynamic Model.**

The stages outlined above comprise the core elements in an ideal, continuing Documentation Strategy Process. These elements are drawn together in Figure 1. In practice, all of the desired information, analytical capacity, participation, and other resources will not be available at a given time. The process can begin, however, whenever a group of concerned individuals comes together with an interest in assessing documentation conditions and improving the adequacy of ar-

chival documentation. The goal is not a one-time exercise in analysis, prescription, and use of influence to implement recommendations. This model is valid only if it can be sustained as a process for improving the analysis and the information on which the analysis is based and for implementing the recommendations in the current documentation strategy statement. Success in any of the continuing elements in the model is likely to reinforce all of the others and, thereby, make this truly a dynamic and organic process. In a broader sense, the model also is dynamic because it continually holds up archival selection practices for general reexamination within the archival community and in dialogue with parties outside of this community.

## **Documentation Strategy Process: A Case Study**

JOAN WARNOB-BLEWETT

The program over the past twenty-five years of the Center for History of Physics at the American Institute of Physics (AIP) parallels in many ways the documentation strategy process model presented above. It was not developed with such an explicit model in mind, but the group of physicists gathered together by the Institute in the early 1960s did consider how to match ends with means with a minimum of waste; in doing so they incorporated a number of the elements, recognizable today under other names, offered in the model. Over the years the AIP efforts have involved many of the kinds of analysis and implementation steps suggested in the proposed model. At the same time, the model is not a perfect fit. The following explains where the model seems to apply and also where it does not.

The first part of this case study details the formative years of the documentation program and links the language of the period with that of the model. The second section argues on behalf of the dynamics of the model in somewhat different ways: by describing how key strategy elements—the documentation group, strategy implementation, and reporting—have evolved and by illustrating benefits of documentation area reconsideration. The last section details how archival field research has been essential in addressing major challenges to the strategy. In closing, the case study summarizes the characteristics of the strategy for documenting modern physics and how they coincide with or differ from those of the model.

## The Formative Years, 1960-1965

### Documentation Area Definition and Preliminary Analysis

A casual observer in the late 1930s might have concluded that American science was being adequately documented: historians of science and archivists had formed their own respective professional societies and, since science was so clearly of central importance in the twentieth century, one could expect that it would claim significant attention from both historians of science and archivists. Such, however, was not the case.

It was not until twenty years later that a few physicists had become concerned about how scholars and the general public would understand the individual and collective endeavors and contributions of twentieth century physics to society.<sup>19</sup> One reason for this concern was that such major physicists as Albert Einstein and Enrico Fermi had died without having been interviewed at length by a historian. Another factor was the belief that history contributed to the training of physicists and that there was the need "to provide physics teachers in colleges and universities with materials for the better teaching of the historical development of physics. . ."<sup>20</sup> These individuals were particularly distressed by the almost total neglect of physics in modern history textbooks. This, in fact, seemed to underline the need to bridge what C. P. Snow was calling the "two cultures" of the sciences and the humanities.<sup>21</sup> A bridge might be built, these physicists conjectured,

through a lengthy process of communication with historians of science knowledgeable about physics, general historians, and, finally, the public-at-large. These physicists realized that to make this process effective, documentary source materials—including published and unpublished written records, photographs, and apparatus—must be preserved and made available.

Among this group of concerned physicists was Elmer Hutchisson, director of the American Institute of Physics. The AIP had been created in 1931 as an umbrella organization for a number of professional societies of American physicists, to provide a unified front and generally to carry out those activities best done by one central organization rather than by each of the individual societies. In 1959 Hutchisson set up an ad hoc Committee on History and Philosophy of Physics with physicist Gerald Holton of Harvard University as chair; the committee—composed of physicists, some of whom were doing serious historical research—was charged to investigate the state of modern physics documentation and to recommend an appropriate role for the AIP.<sup>22</sup>

The committee found an almost entirely bleak situation: (1) physicists thought their technical publications offered a sufficient record of their activities and ignored or destroyed their manuscript materials; (2) archival programs, where they existed, avoided dealing with papers and records of modern science; and (3) only a handful of individuals—all trained

<sup>19</sup>Regarding the documentation of science and technology in the early 1960s, see Charles Weiner, "Sources for History of 20th Century Science: Progress and Problems," in *Human Implications of Scientific Advance: Proceedings of the XVth International Congress of the History of Science, Edinburgh, 10-15 August 1977*, ed. E.G. Forbes (Edinburgh: Edinburgh University Press, 1978). See also the activities of the 1961 Conference on Science Manuscripts published in *Isis* 53, no. 171 (March 1962): 1-157.

<sup>20</sup>"A Proposal for a Project on the Recent History of Physics in the United States," submitted to the National Science Foundation, January 1961.

<sup>21</sup>C.P. Snow, *The Two Cultures and the Scientific Revolution* (New York: Cambridge University Press, 1959).

<sup>22</sup>Elmer Hutchisson, "Manuscript History of the American Institute of Physics," ca. 1970, AIP.

as physicists, not historians—were studying the history of twentieth-century physics. After reviewing its findings, the AIP committee stated categorically that unless immediate and drastic action was taken, the documentation needed for understanding modern physics would be lost. By the end of 1960, the committee drafted a plan for nation-wide action aimed to document modern (essentially pre-World War II American) physics, to be based at the AIP with professional staff and guided by an advisory committee. Funding for a two-year Project on Recent Physics in the United States was requested in January 1961 from the National Science Foundation (NSF).<sup>23</sup>

In the language of the proposed model the ad hoc committee is clearly the initial group of concerned individuals, although less diverse than the ideal; and the proposal to the NSF can be viewed as a proto or partial documentation strategy statement, even though it clearly did not address all of the “considerations” in the model (see Table 1) or cover all of the elements in the proposed format for a strategy statement (see Table 2). Despite these differences, to which we will later return, the initial group was sophisticated in terms of records creation and, to some extent, records use. Since physics was generally considered the basic science of the twentieth century with impact on other scientific disciplines and on national and international science policy-making, the initial group felt certain that historians and many others should use (or benefit from the use of) the records. The initial group addressed the issue of how best to influence records creators and existing repositories. It determined that the documentation strategy process should

be sponsored by and based at the American Institute of Physics in New York. In this location project staff would be convenient to the physics community and in a position to be both visible and responsive. In addition, the AIP was in a “strategic position to call upon individual physicists and institutions for their help . . .” and to develop “. . . an interest among physicists in the preservation of historical materials.”<sup>24</sup> The initial documentation group would be somewhat modified. First, the affiliation with the AIP made the group more formal and added AIP staff working in the area of physics education. In addition the initial group projected the need for a professional historian to lead the project, thereby adding another component to the documentation group.

### **Designing the Initial Plan: Documentation Strategy Drafting**

The physicists who designed the basic plan for the documentation strategy for modern physics had no archival models to follow. In retrospect, it is clear that they had other traditions that served them in good stead. Based on their experience in physics research, they brought to their new documentation efforts an international perspective and an appreciation that there are no grand final solutions to basic problems, but rather evolving understanding of and approaches to addressing them. The documentation plan that resulted was national in scope and was expected to be flexible in response to changing circumstances. The group also benefited from the bureaucratic structure and traditions in place at the AIP that, among other things, required advisory committees.

<sup>23</sup>The Project on Recent Physics in the United States began in July 1961; the Niels Bohr Library for History of Physics, which would house the broad range of materials, opened in September 1962; and in July 1965 the project and the library were joined into a line division of the AIP named the Center for History of Physics.

<sup>24</sup>AIP proposal to the National Science Foundation, January 1963.

The transfer of experience from physics to the design of a documentation strategy may well have been an unconscious process. For example, the idea that the AIP would guide the documentation of modern physics at appropriate institutions (rather than collecting voluminous archives at the AIP itself) may have been a natural extension of the existing relationship between the Institute and its member societies in which the AIP limited its activities to those best done by a central organization.

The initial goals of this documentation effort are stated most clearly in a 1962 paper by project director W. James King, addressed to physicists.

The major objectives of the project . . . are these: (1) To locate documents of potential significance for studying the development of physics, both as a research discipline and a profession. . . . (2) To take steps toward the preservation of documentary materials. The project staff will recommend to the institution where the research was originally carried out, that primary source material, either manuscripts or apparatus, be preserved and catalogued. If that institution should not be interested in taking active steps towards its preservation, recommendations will be made to appropriate libraries or museums. . . . (3) To make and record interviews with physicists associated with some of the more fundamental discoveries made in the United States. . . . (4) To organize a biographical-bibliographical collection of data on American physicists and to organize a locator file of historical materials in physics in the United States. (5) To assist physics instructors, historians of science, science museums and others interested in

studying or presenting the history of physics. . . . (6) To encourage and initiate the use by scholars of archival material at the American Institute of Physics.<sup>25</sup>

AIP leadership, communication, and cooperation were viewed as central to effective implementation of the strategy. The AIP would take a national approach to documenting the discipline, cutting across the peculiar interests of individual repositories. Cooperative ties between AIP, archives, and physics institutions had to be long-term in order to improve procedures for preserving documentation. Physicists would be encouraged to support the program through historical articles in physics journals and historical sessions at their professional meetings. AIP would issue appraisal guidelines and provide specific appraisal advice, frequently on-site, to assist both physicists and archivists in retaining the most useful documentation. In order to attract historians of science, the Institute would promote history of modern physics in relevant professional journals and at professional meetings, and would encourage use of the AIP's information files listing the location and content of manuscript collections.

This original plan was extraordinarily innovative for its time and, although the term was not yet coined, these physicists had set in motion a process that would move toward a fully developed national documentation strategy. As we shall see, the preliminary analysis, partial documentation strategy statements, and initial documentation plan described above would lead to a continuing documentation group and provide the impetus for broader and deeper analysis and for coordinated action.

<sup>25</sup>"Source Materials for the History of Recent Physics," *Physics Today* 15, no. 2 (February 1962): 44-47.

### Strategy Implementation and Early Refinements

The scope of the AIP's first plan of action was large: to take the steps necessary to secure an adequate record of the important work in physics in American academia, industry, and government between 1890 and 1940. The initial task of the first documentation project was to identify significant physicists and institutions where physics had flourished. The major emphasis was on individuals because most work in physics before World War II was done by individuals working alone or perhaps with a few others. Identification of the most productive physicists involved historical and statistical research based on a knowledge of the community's reward system. A number of criteria were used, including individuals assigned a "star" by *American Men of Science*, the number of papers accepted in the *Physical Review*, elected offices held, and honors received.<sup>26</sup> The result was an initial list of 1250 individuals—not a large number considering the total number of American physicists working during the period but large enough to confirm that the task of preserving their papers could not be done by AIP alone.

The identification of major institutions where basic physics had flourished prior to 1940 involved similar, but simpler, procedures. First, a review of the 1250 selected physicists showed that most were in academia, clustered at approximately ten universities; the remainder were primarily in industry, again clustered in a

few key firms; only one government laboratory, the National Bureau of Standards, was prominently involved in basic physics research. Moreover, physicists generally agreed where the important work was being done. Thus the analysis not only identified key institutions but underlined the fact that academic institutions had the greatest impact on the growth of basic physics before World War II.<sup>27</sup>

The project staff next gathered and analyzed information on existing source materials and potential repositories, to determine immediate needs and actions. Letters, including program brochures and appraisal guidelines, were sent to the 1250 physicists or their surviving families and colleagues, to leading academic physics departments, and to selected research libraries and other repositories. Because of the make-up of the group of selected physicists, there was a decided focus on physics in academia. This focus seemed to offer immediate opportunities because of the many archival programs already in place in colleges and universities.<sup>28</sup>

In addition to seeking information on existing source materials, these mailings were educational, for physicists had to be taught that their correspondence and other manuscript materials could be valuable to future scholars. A final purpose was to ask selected physicists and academic physics departments to write autobiographies or institutional histories; soon after, a few individuals were asked to participate in a program of oral history interviews.<sup>29</sup>

<sup>26</sup>These criteria illustrate tools available at that time for physics; additional tools such as *Science Citation Index* have since appeared. Other fields have similar publications and rewards that could assist in the identification of significant individuals.

<sup>27</sup>Elitist sampling was used to select from the entire community of physicists.

<sup>28</sup>But the 1961 Hamer guide showed that the papers of only one twentieth-century physicist, Enrico Fermi, were known to be in a repository (U.S. National Historical Publications Commission, *A Guide to Archives and Manuscripts in the United States*, ed. Philip M. Hamer [New Haven: Yale University Press, 1961]).



The analysis of the information gathered through these letters and subsequent site visits and surveys provided enough disaster stories to refuel the sense of urgency and suggest adjustments in the strategy. A second proposal to NSF in 1963 shows some refinements stemming from the early findings.<sup>30</sup> "Sectional consultants," concerned physicists, were called upon in each region to watch for the impending destruction of papers or apparatus and to contribute to the project's contacts with local libraries, museums, and other possible repositories.<sup>31</sup> Survey results also made it clear that the most difficult area to document was physics in industry; a historian was commissioned to visit selected industrial laboratories to identify locations of significant records and to assess the corporation's receptivity to an archival program.<sup>32</sup> There were also serious obstacles to documenting academic physics. For example, project staff were surprised to find that archivists needed to be educated about the cultural value of physics documentation and encouraged and assisted in appraisal of these materials; strategy plans were adjusted accordingly. As an outreach program toward all these groups, the AIP initiated a newsletter in 1964.

The most positive finding of the survey was that a significant number of the physicists (or their families) responded to the need to preserve their papers. In addition, a few leading repositories were receptive to acquiring physics collections, including the Library of Congress, the University of Chicago, Cornell University, and the University of Illinois.

Refinements of a strategy for achieving the initial goal of documenting prewar physics continued; by the mid-1960s striking advances had been made. This progress can be measured by reviewing the project's activities and findings in relation to the elements of the model's documentation strategy statement (see Table 2). The first three elements—the subject area of the strategy, its geographical scope, and the documentation group—were in place from the outset. Knowledge of the activities of the records creators, of the records being generated, and of their potential usefulness—important considerations in the strategy drafting stage of the model, as outlined in Table 1—were strengths of the documentation group from the beginning. Concrete knowledge of the extent to which strategy recommendations for action could or would be implemented by others, however, was unavailable in 1961. The early work and strategy were based on information gathered through informal discussions and a few site visits. Gradually the information base was expanded to include mail and on-site surveys and studies, soon a data base on archival collections, and later an increasingly formal file of information on institutional policies.

During the formative years the documentation group communicated with physicists, historians, and archivists as though the strategy process at the AIP were ongoing and permanent. Their in-house efforts to make this concept a reality were realized in mid-1965 when the AIP Governing Board changed the group's status from an NSF-funded pro-

<sup>29</sup>The AIP group had decided at the outset that it was necessary to create materials that would supplement the usual written documentation in order to provide an adequate record of modern physics.

<sup>30</sup>The modest but significant shifts can be seen by comparing the 1962 article by W. James King, "Source Materials for the History of Recent Physics," cited above and a second paper by King, "The Project on the History of Recent Physics in the United States," *American Archivist* 27 (April 1964): 237-43.

<sup>31</sup>This formal extension of the documentation group withered naturally within a decade once the AIP Center's direct links with archivists had been firmly established.

<sup>32</sup>See John Beer, "Why Look Back?" *Research Management* 9, no. 2 (1966): 101-07.

ject to a line division of the Institute, renamed the Center for History of Physics. One of the earliest programs of the new Center was a long-range planning study to determine how the AIP might be of maximum use to individual scholars and academic institutions.<sup>33</sup> In general this study—which involved archivists, librarians, physicists, university administrators, scholars, and educators—confirmed the soundness of the basic strategy and the importance of AIP leadership. The study also urged the AIP to place greater emphasis on scholarly oral history as a supplement to the written record.<sup>34</sup>

### **Dynamics of the Documentation Strategy Process for Modern Physics**

Once a documentation strategy is established as an ongoing process, change and evolution are inevitable. A review of the documentation strategy process for modern physics provides evidence of the reality and the importance of the dynamics inherent in the proposed model. The case study, for example, shows ways in which the documentation group, strategy implementation, and reporting have evolved and illustrates the benefits of documentation area reconsideration.

#### **The Documentation Group**

The documentation group for modern physics consists of the AIP Advisory Committee on History of Physics and the

professional staff of the AIP Center and its supervisors. Since the formative years, the advisory committee has provided a crucial link in the continually evolving documentation strategy. One of the committee's most significant contributions is its position that the AIP take an anticipatory role in its documentation efforts, actively studying the history of its field rather than relying on existing scholarly research. In its role as monitor and guide, the committee meets annually (although there are informal contacts as well) to review progress in the broad range of the group's documentation activities and to set priorities for future efforts such as the focused projects discussed below.<sup>35</sup>

Over the years the composition of the advisory committee has matured to include more users of archival materials; however, the core membership was and still is made up of representatives of various fields and institutions of physics. These creators of the records are chosen as much for their recognized leadership within the community as for their concern for physics history; this choice can help influence records creators to upgrade their records-keeping policies and practices. To balance its make-up, the committee has always encouraged the formation of special advisory groups to help monitor specific projects and studies, thereby extending the documentation group to include other records creators, academic disciplines, archivists, records managers, and policy-makers that may be needed for a given program. The most extensive of these advisory

<sup>33</sup>Long-range planning studies also came to the documentation group through the scientific community. Although the AIP used these studies originally to foster change in its publishing branch, long-range planning is now routinely expected in all divisions.

<sup>34</sup>Co-authors Warnow and Hackman first met as participants in a meeting of the Oral History Association in the late 1960s, one trying to document physicists and one trying to document the life and presidential administration of John F. Kennedy.

<sup>35</sup>In its early years the committee also had to protect the fledgling program. The most serious event took place in the early 1970s, a period of financial recession for the physics community, when the advisory committee successfully fought a movement in the AIP Governing Board to terminate the program.

groups was associated with the archival study of Department of Energy National Laboratories discussed below.

Changes in the Center staff have corresponded with the growth of its programs and institutional support. Until 1974 the staff had only one professional historian and one professional librarian; neither had formal archival training. Today there are two positions for professionally trained archivists and a permanent postdoctoral position for a second historian of science. Although some of these staff devote more of their time to maintaining and servicing the Center's library than to implementing its documentation strategy activities, this growth gives strong evidence of the widespread acceptance of the program by leaders of the physics community.

### **Documentation Area Reconsideration and Refinement: Projects to Document Subfields of Physics**

While a concern to secure endangered papers of physicists in all fields has continued to be an important part of the documentation strategy, its focus since the late 1960s has been extended through a series of projects to document particular subfields of physics chosen by the documentation group.

The arguments for adding projects on subfields of physics to the documentation strategy began with the idea of greater efficiency. Focused historical research in a particular subfield would make the selection of significant individuals and appraisal of records more effective; the preparation for oral history interviews would not have to start from scratch for each physicist. Very soon, an additional advantage was recognized: if the selected subfield of modern physics was one little

studied by historians, a project in that field could initiate an entire new area of historical research.

This refinement and expansion of the documentation strategy into subfields was partly inspired by the success of the Sources for History of Quantum Physics Project, conceived by physicist John Wheeler and others in the early 1960s.<sup>36</sup> Wheeler's group and the AIP group worked in concert: both were funded by National Science Foundation grants to the AIP, project staff shared findings, and the two project advisory committees overlapped. Furthermore, after the quantum physics project staff dispersed in the mid-1960s, the AIP Center was the base for follow-up work in this subfield. (All too often documentation efforts are treated only as projects, by definition not ongoing. Preservation work and other activities that may need to extend over decades are not carried out, and the experience of the project is not built into ongoing efforts.)

The quantum physics project set out to document a major revolution in theoretical physics dominated by such giants as Niels Bohr, Albert Einstein, and Werner Heisenberg. A massive oral history program and searches for documentation were conducted. The documentation proved to be rich, extensive, and typically in private hands; the project team concluded that microfilming was necessary to save and make accessible the record. (Their interest led, actually, to the deposit of many collections in repositories.) The final product of this project was the Archives for the History of Quantum Physics, a set of almost 300 reels of correspondence, other manuscript materials, and oral history transcripts.

<sup>36</sup>See John Wheeler, preface, in *Sources for History of Quantum Physics: An Inventory and Report*, by Thomas S. Kuhn et al. (Philadelphia: American Philosophical Society, 1967), v-ix.

In designing projects to document other subfields of physics, the documentation group for modern physics has not duplicated the full quantum physics project model. While the focused studies have employed oral history interviewing and in some cases have microfilmed inaccessible papers and records, they have emphasized the preservation of original source materials at appropriate repositories.

The choice of subfields generally has been based on the importance of the area to both physics and society at large and on the more practical issue of the availability of at least one expert historian to assist in carrying out the work. Thus far, the documentation projects have included nuclear physics, astrophysics, solid state physics, and, in cooperation with other documentation groups, laser science. Recently the definition of focused projects has been expanded to include such areas of activity as the role and activities of physicists in science policy. Geophysics is a top priority for a future project.

These special projects are extensions and refinements of the ongoing documentation strategy—efforts to extend the range and effectiveness of the work and to keep ahead of and attract researchers. The projects are often guided by special advisory panels, and the work may be concentrated in a three-year period with one or more grant-funded professionals. Efforts of this magnitude, however, require many subsequent years of attention by the AIP Center to meet project commitments, such as the completion of oral history processing and assistance to repositories and to donors with later deposits of papers. These follow-ups on special projects soon become indistinguishable from the overall documentation strategy.

### **Implementation by the Documentation Group and by Others**

The clearest responsibility of the documentation group for implementation of the strategy for physics has been maintaining a national approach to analyzing needs while working as far as possible through others to meet those needs. To play this leadership role in analyzing needs for the selection and retention of archival documentation, the group must first and foremost maintain an understanding of the community of American physicists; this enables the documentation group to assist in identifying significant individuals, programs, and institutions whose contributions to modern physics should be documented and to develop appraisal guidelines based on knowledge of the activities generating the records and the information content of those records.

The ways in which the documentation group has been able to analyze national need and work through others to meet those needs has changed considerably over the decades. As explained above, from the beginning the documentation group for modern physics took the position that, whenever possible, papers of physicists should be placed at the institution with which they were most closely associated, and that the AIP should serve only as a repository of last resort. This was a revolutionary policy at the time. The group went even further when it later stated that whenever an institution initiated an archival program, the AIP would return any pertinent collection to its “home.” This policy, which has been put into practice with a number of collections, has been effective in strengthening archival programs. Most importantly, these policies have greatly enhanced the AIP’s credibility as a leader and honest broker, roles that are central to a documentation group.

During the 1960s and 1970s such policies helped the documentation group deal with some recalcitrant academic institutions of great significance to physics. A few, such as Harvard University, had archival programs but no interest in modern science materials, while others, such as the California Institute of Technology and the Massachusetts Institute of Technology, had no archival program whatsoever. In such cases, the documentation group responded not only with policies but with every tactic the physics community could muster—from gentle persuasion to dangling the existence of important collections that would be lost to them and from downright shaming in terms of their institutional responsibilities to encouragement in terms of potential benefits. The institutions used as illustrations all now have solid programs to document their institutional histories, including the contributions of distinguished physicists. The documentation group has used other more subtle means to encourage institutions to initiate archival programs. For example, by providing archival storage materials to institutions without archival programs, the group encouraged permanent security for significant documentation. In some important cases, such as the Lick Observatory in California and the Niels Bohr Institute in Denmark, support of this kind seems to have led directly to permanent archival programs. Finally, the documentation group has tried to direct “homeless” collections to repositories that collect papers on a national, regional, or subject basis.

Overall, the documentation group’s links with archivists and repositories have deepened over the years. For example, when seeking to save papers of a physicist, the group has kept its action as invisible as possible by working through the institutional archivist and letting the local archival program take center stage.

Furthermore, archival programs—particularly those at major scientific settings—have become increasingly knowledgeable about the records of science and technology. During recent years archivists at some of these programs have worked so closely with the documentation group for physics that they have become frequent colleagues if not informal members of the group.

The documentation group has tried to influence other interested parties. It has played a supportive or leadership role in related documentation projects, notably the Joint Committee on Archives of Science and Technology. Perhaps the greatest long-term impact has come from the group’s actions to encourage and assist other disciplines of science and technology in forming discipline history centers and initiating their own documentation strategies.

### Documentation Reporting

Since its earliest actions to survey selected physicists, institutions, archives, and other repositories, the AIP Center for History of Physics has been seeking and sharing information through what the proposed model calls Documentation Reporting. Although the model does not prescribe it, the physics documentation group formally maintains a data base with information on the contents of manuscript collections and records around the world and with information on destroyed documentation and records in situ. Most of the data have come to the AIP through correspondence with archivists and are shared through reports in the Center’s *Newsletter* and catalogs. Over the years the quantity of new deposits has increased, and more and more reports have come to the AIP without being solicited. The documentation group now plans to make the entire data base, the International Catalog of



Sources for History of Physics and Allied Sciences, more widely available through the Research Libraries Information Network (RLIN). Files at the AIP also include data on policies, procedures, and documentation actions of specific repositories, archives, and history programs. For more than a decade the Center's *Newsletter* has included feature articles on such programs to bring this information to a broader audience.

The AIP staff and the advisory committee at its annual meetings have always considered data on collections and institutional policies, but their analyses have been rather informal. In part this will change when full computerization of the data base permits efficient manipulation. Until recently, the knowledge of the community coupled with an informal review of the general patterns of conditions and needs has been adequate to identify priorities for the special studies of modern physics discussed above.

The most intense documentation reporting has taken place in the focused studies. In addition to AIP correspondence with records holders, there is considerable on-site work with physicists, archivists, and others. In fact, the more subtle the information on conditions and needs that was sought, the more likely it was that the documentation group for physics made certain that most of the data came from its own field work. Physicists, in particular, needed to be personally convinced that some of their files—no longer of use to them—were of substantial value to others. Even the most sophisticated archivists have benefited from open and detailed communication about the benefits to their program of documenting a specific subject. In the process the documentation group has obtained subtle information and opinions on needs and conditions that not only served that particular focused study but, in turn, could be used to illustrate needs

of the whole field of physics and allied sciences.

By the early 1970s the documentation group had gained enough understanding of needs and conditions that it could not turn away from the challenge of documenting post-World War II physics.

### **Major Extensions—Substantial Redefinition of the Strategy**

Implementation of a documentation strategy may be obstructed by such massive ignorance that significant investigation and analysis is necessary to assemble and field test an essential aspect of the strategy. The model anticipates this situation with the provision of a stage of strategy redefinition, which is very similar to documentation area definition and preliminary analysis, and the subsequent drafting of a new documentation strategy statement. In order to carry out its responsibilities, the documentation group must know the community it is charged to document and must understand the community's activities, the records generated by those activities, and the potential value of those records to their creators and other users.

The physicists who shaped the documentation strategy were concerned initially with physics prior to World War II. Their intimate knowledge of that community, its style of operation, and the resulting documentation made it possible for the strategy process to begin on a sound footing for the prewar, largely academic arena. The documentation group, comprised of the Center staff and its advisory committee (including supplementary advisory groups), could carry out its earliest projects on subfields of physics without major adjustments in its mode of operations because most of the key figures and institutions in these particular subfields were also in the academic arena and rooted in the prewar



style with which the Center was familiar.

The first major challenge to the documentation strategy came in the early 1970s when the documentation group extended its concern to post-World War II physics and particularly to the nonacademic institutions where much of the important research was being conducted. A new term had been coined to describe science in this period and setting: "Big Science"; Big Physics was at the forefront.<sup>37</sup>

With its charge to document modern physics, the documentation group could not ignore such significant activities. A representative from the Center visited a variety of the institutions leading in this work, including industrial and government laboratories and federally-funded research and development centers. The contrast between this new world of physics and its predecessor—where the documentation group worked primarily with individual physicists and archivists—was overwhelming; however, a few patterns in the problems common to these laboratories emerged from the site visits. First and foremost, there were no archivists. Instead records managers (if anyone at all) were trying to cope, for the most part unsuccessfully, with enormous backlogs of unscheduled and unappraised records. Second, the content and format of postwar scientific records had changed. Some types of familiar records needed reappraising; for example, postwar correspondence was more apt to consist of sanitized reports or to cover routine matters. Entirely new types

of records, symbolized by magnetic tapes, needed consideration. Thus the documentation problems relating to these nonacademic laboratories appeared to stem primarily from the lack of both in-house archival programs and appraisal guidelines.

While the site visits and discussions revealed that many archivists and historians at the National Archives and elsewhere were concerned, there were no ready answers to the many unknowns of documenting postwar science and technology. No one knew in any detail the kinds of records being produced or the quality of information contained in those records. There were no expert archivists or historians to help address these issues. Most, if aware of the problems at all, felt that they were insoluble and that any attempt to deal with them was futile.<sup>38</sup>

When a community has changed this drastically, a documentation group can find itself in the untenable position of understanding neither the community's activities nor the records created by those activities. By the mid-1970s, in striking contrast to the first documentation strategy for physics, the documentation group lacked knowledge of the activities of the records creators, of the records, and of their potential usefulness to both the records creators and others.

To remedy these deficiencies, the AIP conducted an archival research project at the Department of Energy (DOE) National Laboratories.<sup>39</sup> The DOE laboratories were selected because of

<sup>37</sup>Many so-called postwar phenomena—computers, voluminous records, and the like—had entered physics during the war, particularly at government laboratories developing the atomic bomb and radar.

<sup>38</sup>This investigation was carried out during the early 1970s, prior to many of the substantial advances in the latter part of the decade: the initiation of an archival program at the Massachusetts Institute of Technology, the formation of the Joint Committee on Archives of Science and Technology, and the beginning of other discipline history centers in science and technology.

<sup>39</sup>The DOE National Laboratories are a complex of federally-funded research and development centers established after World War II by the Atomic Energy Commission to provide large research facilities too expensive for individual universities or industries. The laboratories are used by scientists from all over the world and have enormous scientific importance because of both their unique research facilities and the work accomplished therein.

their importance to physics and because the problems involved in documenting these laboratories seemed representative of those in other postwar nonacademic laboratories. In addition, the possible payoff in terms of impact on documentation practices seemed enormous, for the DOE system included scores of highly important installations across the country.<sup>40</sup> Further, research at DOE would make it possible for the Center to examine the implementation of federal records policies in such settings and possibly to suggest revisions in the federal system.

To achieve the necessary refinement and subsequent implementation of the strategy, three initial objectives of the DOE research were identified: development and field testing of a methodology for a laboratory initiating an archival program; development of appraisal guidelines for DOE laboratory records; and preparation of recommendations to DOE headquarters for changes in the system necessary to achieve adequate documentation of laboratory activities. In the last year of the work, another objective was added: design of a training program for secretaries and files administrators. Field work began in late 1977 and was completed in 1981.<sup>41</sup>

One of the most critical elements in achieving this major extension of the strategy was the selection of and input

from members of the documentation strategy sub-group. Special skills were needed to gain hard evidence from field work, and expert advice was needed to interpret that evidence. It was necessary to carefully select the individuals and institutions that should be involved in order for proposed recommendations to have the greatest impact. A special blue ribbon advisory group, the AIP Advisory Committee on the Documentation of Postwar Science, was assembled. Policy makers from both the DOE and the National Archives were included. Because of the quantity and type of records to be appraised, it was particularly important that the project speak with authority about the research value of the laboratory records. Academic scholars composed half of the advisory committee. They were charged to represent the future interests of their disciplines—the histories of science, physics, technology, science policy, economics, American institutions, and the sociology of science. The committee helped write the study's final recommendations to the Department of Energy.<sup>42</sup>

The DOE project called for substantial participation by the laboratories in the form of part-time support staff and consultants, including past directors. Individuals with long-term oversight responsibilities formed laboratory history committees. The field workers, including

<sup>40</sup>In 1978 the DOE reported consisting of 225 research and development programs or 61 research and development field facilities. See John M. Deutch, forward, in *DOE Research and Development and Field Facilities* (Washington, D.C.: U.S. Government Printing Office, 1979), v.

<sup>41</sup>Funding for the project was provided by the AIP, the National Science Foundation, and the Department of Energy. Project publications include Joan N. Warnow et al., *A Study of Preservation of Documents at Department of Energy Laboratories* (New York: American Institute of Physics, 1982); Joan N. Warnow and the AIP Advisory Committee on the Documentation of Postwar Science, *Guidelines for Records Appraisal at Major Research Facilities* (New York: American Institute of Physics, 1982, rev. 1985); and Jane Wolff, *Files Maintenance and Records Disposition: A Handbook for Secretaries* (New York: American Institute of Physics, 1982, rev. 1985). Interim reports on four laboratories and on records-keeping at other federal scientific agencies are also available from AIP.

<sup>42</sup>Broader participation by the National Archives and the DOE was welcomed, and additional members with expertise in archives and records management were appointed. One of these, Prof. Margart Gowing, Historian of the United Kingdom Atomic Energy Authority (UKAEA), had set up an efficient, high-quality system for records keeping and appraisal at UKAEA laboratories.

a project historian and a project archivist, spent approximately eight man-years on site at four national laboratories; the Center surveyed records-keeping and appraisal practices at forty other DOE facilities and studied other similarly organized federal scientific agencies. The evidence from the field was hard and extensive.

The DOE study's basic methodology was first to understand the activity and then to seek the related documentation—whatever its type, format, or location. Two questions—What should this institution's archives look like? What information should it contain?—were foremost, whether dealing with current or noncurrent activities. Instead of an archival review of all backlog materials, an approach based on the development of an institutional chronology was used, involving interactive research in contemporary and review literature, numerous discussions with key scientists and administrators, and searches for documentation. This approach encouraged project staff to think in terms of information content rather than types of records and to cultivate close contact with significant and influential records creators, who frequently assisted in the identification and retention of important files. The development and use of a chronology to identify information that should be in the institution's archives was tested through probes, or complete searches, for records generated by a variety of significant programs or events. By first understanding the activity and then seeking the best documentation, the project staff could more easily identify flaws in the records management system that impeded the retention of information and could identify other parts of the records system that had become outmoded.

The DOE study achieved its goal to provide the information and analysis needed to extend the documentation

strategy for physics into the postwar nonacademic sector. This knowledge was achieved only through a close, first-hand understanding of the activities and of the meaning of adequacy of documentation in these circumstances, and through the development and testing of a methodology for identifying the small fraction of materials of long-term value. With this understanding the AIP Center, as the principal agent of the documentation group, has been able to provide informed advice to other large postwar research institutions, outside the DOE, interested in initiating or expanding archival programs, and to help scientists, administrators, archivists, and others who request assistance in appraising postwar records.

While working on the DOE study, other phenomena were encountered that present unresolved documentation problems. The most interesting and challenging problem is that posed by multi-institutional teams, one consequence of the rise of national and other major research facilities in the postwar period. These teams may be composed of individuals from several—and sometimes many—institutions that join together for a period of five or more years to design an experiment and eventually carry it out at an off-site research facility. Such multi-institutional configurations result in scattered and potentially endangered documentation, posing new challenges and perhaps leading to major changes in the documentation strategy for physics.

As in any dynamic discipline, the documentation group for modern physics will continue to identify many more problems and opportunities. Changes in the records may require revision of appraisal guidelines. New scientific methodologies and new institutional configurations may require adjustments and major extensions of the documentation strategy.

## The Case Study and the Model: A Summary

The documentation strategy process for modern physics is consistent with the proposed model in important ways even during the formative years of the early 1960s. Most of the differences are minor; some of these, in fact, serve to highlight the aims of the model or to emphasize that the model is an analytical construct meant to guide action, not to straight-jacket it.

An example of an apparent difference that highlights the aims of the model is the fact that the physics group has not shared its informational data base as publicly as the model suggests; access has been limited to those who know about the AIP Center. The documentation group recognizes this barrier to analysis, and the AIP is currently taking steps to share its International Catalog through RLIN. The principle of sharing information as widely and effectively as possible is the crucial issue in the model. Technological advances like MARC AMC only make this sharing and analysis of documentation conditions more efficient and do not alter this principle.

Some of the goals offered by the model have not been fully met in the case study. In particular, participation by records creators in the documentation strategy process—such as refining records practices, influencing peers, and reporting actions—has only been fully achieved with those institutions that have archival programs. The initiation or upgrading of such programs is an important goal in the implementation of the strategy by the AIP documentation group.

A more substantial difference may relate to the model's proposal that a documentation group should persuade records creators to create certain types of records to meet needs of the group and those of others. While the documentation

group requests selected physicists to create biographical or institutional histories or to participate in oral history interviews, it has not formally suggested the creation of records. The importance of this difference with the model need not be stressed. Records creation is not a major goal of the model. In addition, bureaucracies in the postwar physics community have required the creation of many useful new kinds of records, such as long-range planning studies.

The physics group has actively promoted documentation strategy efforts among records creators, archivists, and potential users. Aside from travelling exhibits and other public understanding of science projects, however, it has not promoted documentation efforts with the general public as the model recommends. This aspect of the model may be more relevant for strategies focusing on public records. On the other hand, as physics—and science and technology in general—takes a more central and visible role in modern society, the documentation group may change its approach.

In some important ways, the documentation strategy process for physics has been more intense and first-hand than the model recommends. The model recognizes the need to gather together a broad range of concerned parties, and it suggests the usefulness of special studies. The AIP group, however, has felt it essential to go substantially beyond this with site visits and archival field research. Because of this significant difference with the model, a considerable portion of the case study focused on field work. A documentation group cannot be everywhere at all times, but periodic in-depth studies at the point of records creation have been essential to the success of the strategy for physics; the benefits to other subjects and functions—and therefore to a documentation strategy process model—should be considered.

The documentation strategy process for science and technology is no longer limited to American physics. During the past decade the AIP group has been joined by new discipline history centers, and the JCAST report and the MIT appraisal guidelines have been published. Also there are new and exciting initiatives such as a regional strategy designed by archivists and others at Stanford University to document Silicon Valley. Furthermore, strategies have spread to other countries, including Great Britain and Australia. Such growth and evolution is consistent with the model and naturally leads to the strengthening of cooperative links.

Thus despite minor differences, the documentation project for physics, implemented during the past twenty-five years by the AIP Center for the History of Physics, and the documentation strategy process model are remarkably consistent. The documentation strategy for physics does not present grand, final solutions to problems but rather evolving understanding of and approaches to addressing them. The AIP Center, by playing a coordinating role in the strategy and limiting its activities to those best done by a central organization, has broadened participation in appraisal and acquisition and has strengthened the role of archivists.

## Implications for Archival Principles and Practice

A variety of tests will be required beyond the physics case study to evaluate the model proposed in this article. If documentation strategies prove useful in addressing archival documentation needs, what are some of the implications for archivists, their repositories, and their profession? Some of the potential implications are worthy of exploration.

One consequence, if the model is viable, is to introduce the concept "adequacy of archival documentation" directly into archival theory. This will challenge archivists to work out in more detail its implications for existing theory and methods. Adequacy poses the questions of how best to measure adequacy and how best to categorize archival documentation when undertaking this measurement. Can standard functional

and subject categories, increasingly employed when sharing archival and library descriptions in automated systems, also be used in the assessment of archival documentation and in the development of documentation strategies?<sup>43</sup>

The documentation strategy process also brings to the forefront the questions of when in the life cycle records of enduring value should be designated as archival and when archivists should intervene, or influence others to intervene, in the life cycle to make certain that archival records are so designated and treated accordingly. The model suggests that archivists should use a variety of ways and means to influence practices throughout the life cycle, including perhaps in the very creation of records.

<sup>43</sup>A pilot project to assess and improve documentation of life in a six-county area of western New York began in early 1987 under the auspices of the New York Historical Records Advisory Board. In drafting a matrix for analysis, project staff reviewed a variety of topical and functional classification systems, largely from the library world, and also consulted with many archivists who had evaluated collection strengths and weaknesses within a single institution or within an archival network. None of the library classification systems seemed appropriate for an initial regional test; the approaches used by archivists in several states proved strikingly similar and appeared to be more practical. The New York project settled on a set of fifteen broad subject categories, each defined at length. A preliminary report on the methods and early experience of this regional documentation experiment should be available in 1988.



The documentation strategy model also requires that archivists employ a more activist attitude and a wider array of methods to influence records creators both directly and indirectly. Indeed, the documentation strategy process invites archivists to define their clientele to include beneficiaries of the use of archival documentation as well as actual users and potential users. Analysis of benefits and beneficiaries will help archivists identify a broader range of parties whose interests are affected by archival conditions and who, supplied with appropriate information and guidance, might act to protect those interests.<sup>44</sup>

One method of influencing records creators and other interested parties to support a sound documentation strategy is more effective use of public information techniques to explain the strategy's potential benefits and the potential disadvantages of not following it. Public information programs of national and regional archival associations should be strengthened, as should those of other bases—such as the National Archives, state archival agencies, and historical records advisory boards—that can gain the public's attention by reporting documentation conditions and needs. This same need to influence records creators and other key decision makers suggests the increased importance of forming alliances with potentially interested parties that generally have been inactive in archival issues. Included are civic and public interest groups and pro-

fessional and trade associations whose support and expertise can influence the archival documentation decisions made by both their members and by others desiring their approval. When using public information techniques and forming alliances, archivists must work harder to articulate and distinguish the primary and secondary values of archival documentation. Properly focused public relations programs are a vital part of sound documentation strategies.

In both the analysis and the implementation stages of the documentation strategy model, there is a need for still greater emphasis on cooperation within the archival community, not merely to avoid competition but for truly shared decision making and action. Any documentation strategy most certainly will recommend greater cooperation among archival repositories in similar records-creating institutions, among repositories collecting in the subject or functional area, and between these institutional archives and collecting repositories. Such a model also suggests the need for closer ties between archives and records programs at all levels of government and between government and non-government archives. Overall, there is a need for testing a variety of working relationships among repositories beyond the regional networks that now exist in several states. This network model itself needs to be refined to formalize cooperative decision making in the selection of archival records and in employing collective

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<sup>44</sup>Direct users of archival records, even given the *Roots* explosion, are too few to foster sufficient support for adequate archival programs. Archival users will always be extremely modest in number compared to users of libraries and museums. Almost every citizen, even those who do not use their services, understands the functions and services of libraries and museums. The same must be the case for archives. Archivists, therefore, need to articulate how archival records protect and serve the interests of members of the general public and specific sectors of it who do not directly use archives. By documenting and vigorously publicizing these benefits and beneficiaries, the archival community can better convince a variety of public and private resource allocators to provide appropriate support for archival work. For one attempt to list such benefits and beneficiaries, see "Historical Records and Social Needs" in *Toward A Usable Past: Historical Records In the Empire State* (Albany: State Historical Records Advisory Board, 1984): 19–24.



resources to influence creation, retention, and accessioning practices beyond the network itself.

Whether through existing networks and non-collecting centers, or new cooperative configurations, documentation strategies imply the need for archivists to collectively influence the creation of new institutional archives where needed. The profession, therefore, needs to consider more directly how to determine when a new institutional archives is viable and appropriate and to develop guidelines for an acceptable depository relationship between a collecting program and an ongoing institutional or organizational records creator.

An adequacy of documentation framework also has several implications for archival responsibilities. It is assumed, under such an approach, that an archival repository cannot meet minimally acceptable professional standards merely by identifying and preserving records vital to its parent institution. Responsible repositories also must operate with broader archival documentation needs in mind and in cooperation with other repositories. Another assumption of the documentation strategy model is that the individual archivist, as a member of the profession seeking to ensure the identification and preservation of all records of enduring value, has a responsibility to act to improve the adequacy of documentation overall, not merely to treat the materials in his or her individual repository. Finally, the model, and the mission of the archival community, call upon archivists to share collectively the responsibility for acting to foster directly adequacy of documentation, not merely to wait for individual archivists and repositories to act toward this end. Further testing of the documentation strategy model will require vigorous discussion of responsibilities of repositories, archivists, and professional groups.

Another central point, which flows from the heart of the documentation strategy process, is the interrelatedness of all documentation and all documentation decisions. This is not a new idea and is perhaps too obvious to require discussion. Its implication may be demonstrated, however, by acknowledging outright that it is impossible for records creators, archives, and collecting repositories to make sound records retention and archival appraisal decisions without ongoing, shared analysis of documentation conditions and needs. The view that there is an invisible hand guiding sound selection decisions and the assumption that every repository is entitled to *exclusively* develop and follow its own acquisition policy is untenable if the archival community is to address future documentation needs. No government archives can adequately appraise the government's records without adequate knowledge of the records created and retained in the non-government sector. Likewise, no corporate archives can make sound appraisal decisions without knowledge of records creation and retention in government and the acquisition policies and practices of non-government repositories. The same applies to non-government collecting programs. The relatedness and similarity of many unique records, particularly those of value beyond the interests of the creator, demand cooperative analysis and action. The lone appraiser is a contradiction.

The documentation strategy approach also suggests the need to build new mechanisms, or adapt existing ones, to insure the continuing analysis, information sharing, leadership, and coordination required for better documentation practices. Bases broader than a single archival program are best suited to support and perform such activities in a credible manner. Possible existing mechanisms include discipline history centers, other

research centers, state historical agencies and records advisory boards, regional archival associations, subject- and functionally-oriented professional associations, and university systems. The development of such bases and the documentation process model overall point to the need for the archival profession to value more highly leadership and program development skills. These are essential to initiate the documentation strategy process, to locate or provide an appropriate base for it, and to foster the support, participation, and cooperation needed throughout the process.

A documentation strategy approach to archival documentation also reaffirms the wisdom of two trends well underway. The first is the reporting of and access to information about archival documentation decisions. Important information for documentation strategy development includes, but is not confined to, repository acquisition policies, holdings and new accessions, appraisal case studies, and user analyses. Continued refinement of reporting formats and strengthening of such data bases as NUCMC, RLIN, OCLC, and the NHPRC's repository-level directory become especially important, not only to promote the use of records but also to serve as tools for cooperative analysis and decision making by the archival community. Statewide data bases of repositories and collection information such as those being developed in Kentucky, New York, and Washington can also serve as valuable tools for analysis and decision making. A second area, which is growing but needs expanding, is the opportunity for archivists and others to undertake broadly focused research

and writing on archival theory and practice, especially in the identification and selection of archival documentation. The Bentley Library Fellowship Program, with its emphasis on the appraisal of modern records, is a pilot project deserving refinement and replication.

Finally, an adequacy of archival documentation framework suggests that the effective and efficient identification and selection of archival documentation is the heart of archival work. The ability to perform this function and to guide others in the identification and selection process sets archivists apart from other occupations within the information and cultural communities. This role is our most demonstrably important contribution to the society of which we are a part.

Encouraging the archival community to reconsider established approaches to the identification and selection of archival documentation is the primary goal of this article. The documentation strategy model presented above may broaden and strengthen analysis of archival documentation conditions and needs while at the same time more effectively channeling resources to influence desirable selection practices by a range of important decision makers. The establishment, refinement, and expansion of a documentation strategy for modern physics by the AIP group provides one basis for assessment of the model and, coincidentally, for the potential documentation role of non-collecting centers. The case study makes obvious that a documentation strategy is never completed. Neither is the model outlined here viewed as finished; it requires serious testing and critique by archivists and other interested parties.